

DRAFT

SAN DIEGO STATE UNIVERSITY MISSION VALLEY CAMPUS MASTER PLAN ENVIRONMENTAL IMPACT REPORT

Prepared for:



SAN DIEGO STATE
UNIVERSITY



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August 2019

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
µg/L	micrograms per liter
AAQS	Ambient Air Quality Standard
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACOE	U.S. Army Corps of Engineers
ADT	average daily traffic
AEP	Association of Environmental Professionals
af	acre-feet
afy	acre-feet per year
ALUC	Airport Land Use Commission
ALUCP	airport land use compatibility plan
amsl	above mean sea level
APE	area of potential effect
ARPA	Archaeological Resources Protection Act
ATCM	Airborne Toxic Control Measure
AVO	average vehicle occupancy
BACT	Best Available Control Technology
Basin Plan	San Diego Water Quality Control Plan
BAU	Business-as-Usual
BMP	best management practice
BUG	Backlight, Uplight, and Glare
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CalOSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
CAO	Cleanup and Abatement Order
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGP	Construction General Permit

Acronym/Abbreviation	Definition
CH ₄	methane
CHP	California Highway Patrol
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPA	Community Planning Area
CPU	Community Plan Update
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSU	the California State University
CTMP	Construction Traffic Management Plan
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yards
dB	decibel
dBA	A-weighted decibel
DEH	San Diego County Department of Environmental Health
DIF	Development Impact Fee
DMA	Drainage Management Area
DO	dissolved oxygen
DOF	Department of Finance
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	environmental impact report
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESL	environmental screening level
EV	electric vehicle
FAA	Federal Aviation Administration
FC	foot candle
FE	federally endangered
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	fire hazard severity zone
FRAP	Fire Resource and Assessment Program
FTA	Federal Transit Administration
FTE	full-time equivalent
FTES	full-time equivalent student
GHG	greenhouse gas
gpd	gallons per day

Acronym/Abbreviation	Definition
GWP	global warming potential
HABS	Historic American Buildings Survey
HCD	Housing and Community Development
HCM	Highway Capacity Manual
HCP	habitat conservation plan
HERO	Human and Ecological Risk Office
HFC	hydrofluorocarbon
HI	chronic hazard index
HMBP	Hazardous Materials Business Plan
HMCP	hazardous materials contingency plan
HOV	high-occupancy vehicle
HRA	Health Risk Assessment
HRTR	Historical Resources Technical Report
HUC	hydrologic unit code
HVAC	heating, ventilation, and air conditioning
I	Interstate
IA	implementation action
IFC	International Fire Code
IPCC	Intergovernmental Panel on Climate Change
ISO	Insurance Services Office
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBtu	kilo British thermal units
KCRC	Kumeyaay Cultural Repatriation Committee
KMEP	Kinder Morgan Energy Partners
kW	kilowatt
kWh	kilowatt-hour
LBP	lead-based paint
LCD	liquid-crystal display
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent noise level
LID	Low Impact Development
LOS	level of service
LUST	leaking underground storage tank
LZ	Lighting Zone
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MHPA	Multi-Habitat Planning Area
MLS	Major League Soccer
MM	mitigation measure
MMT	million metric tons
mpg	miles per gallon
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone

Acronym/Abbreviation	Definition
MS4	Municipal Separate Storm Sewer System
MSCP	Multiple Species Conservation Program
MSWSMP	Master Storm Water System Maintenance Plan
MT	metric ton
MTS	Metropolitan Transit System
MUTCD	California Manual on Uniform Traffic Control Devices
MVCP	Mission Valley Community Plan
MVCPU	Mission Valley Community Plan Update
MVT	Mission Valley Terminal
MWD	Metropolitan Water District of Southern California
MWEL0	Model Water Efficient Landscape Ordinance
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCAA	National Collegiate Athletic Association
NCCP	natural community conservation plan
NFL	National Football League
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSLU	noise-sensitive land use
NTU	Nephelometric Turbidity Units
O ₃	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
Pb	lead
PCBs	polychlorinated biphenyls
PDF	project design feature
PEIR	Program Environmental Impact Report
PFC	perfluorocarbon
PFFP	Public Facilities Financing Plan
PM _{2.5}	fine particulate matter; particulate matter less than 2.5 microns
PM ₁₀	coarse particulate matter; particulate matter less than 10 microns
PPH	persons per household
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
PRS	pressure reducing station
psi	pounds per square inch
PUD	Public Utilities Department

Acronym/Abbreviation	Definition
PV	photovoltaic
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
RAQS	Regional Air Quality Strategy
RCP	reinforced-concrete pipe
RCP	Representative Concentration Pathway
REAP	Rain Event Action Plan
REC-1	Contact Recreation
RHNA	Regional Housing Needs Assessment
RPS	Renewables Portfolio Standard
RSL	regional screening level
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SANTEC	San Diego Regional Traffic Engineers Council
SB	Senate Bill
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDC	Seismic Design Category
SDCCU	San Diego County Credit Union
SDCWA	San Diego County Water Authority
SDFD	City of San Diego Fire-Rescue Department
SDG&E	San Diego Gas & Electric
SDMC	San Diego Municipal Code
SDNHM	San Diego Natural History Museum
SDPD	San Diego Police Department
SDSU	San Diego State University
SDUSD	San Diego Unified School District
SE	state endangered
SEMS	Standard Emergency Management System
SF ₆	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SO ₂	sulfur dioxide
SoCalGas	Southern California Gas
SOV	single-occupant vehicle
SO _x	sulfur oxides
SPL	sound pressure level
SR	State Route
SSC	California Species of Special Concern
SUAM	State University Administrative Manual
SWMP	Stormwater Management Plan

Acronym/Abbreviation	Definition
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	tribal cultural resource
TDM	Transportation Demand Management
TDS	total dissolved solids
TEA-21	Transportation Equity Act for the 21st Century
TIA	Transportation Impact Analysis
TISM	Transportation Impact Study Manual
TMDL	total maximum daily load
TNC	Transportation Network Company
TPA	Transit Priority Area
TPMP	transportation and parking management plan
TSS	total suspended solids
UPD	University Police Department
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VHFHSZ	Very High Fire Hazard Severity Zones
VISL	Vapor Intrusion Screening Level
VMT	vehicle miles traveled
VOC	volatile organic compound
VP	vertical plane
VW	Volkswagen
WDR	waste discharge requirement
WL	Watch List
WMA	Watershed Management Area
WQIP	water quality improvement plan
WSA	water supply assessment
WTP	water treatment plant
WUI	wildland–urban interface
WWTP	wastewater treatment plant
ZEV	zero-emission vehicle

ES Executive Summary

This chapter provides a summary of the Environmental Impact Report (EIR) for the proposed San Diego State University (SDSU) Mission Valley Campus Master Plan Project (project). This Summary (a) addresses the purpose of the Draft EIR; (b) summarizes the proposed project's location, setting, and existing uses, project description, and objectives; (c) identifies required permits and/or discretionary approvals; (d) summarizes environmental topics, impacts, mitigation measures, and the level of significance after mitigation in tabular form; (e) describes areas of controversy and issues to be resolved; and (f) summarizes reasonable and feasible alternatives to the proposed project.

ES.1 Document Purpose

This Draft EIR was prepared by the California State University (CSU), which is the State of California acting in its higher education capacity on behalf of SDSU, one of 23 CSU campuses throughout California. The CSU Board of Trustees is the lead agency responsible to decide whether to certify the adequacy and completeness of this EIR and approve the SDSU Mission Valley Campus Master Plan proposed project. The purpose of this EIR is to inform decision makers and the public of the potential significant environmental effects associated with the proposed project. This Draft EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and CEQA's implementing Guidelines (CEQA Guidelines; 14 CCR 15000 et seq.) published by the California Natural Resources Agency. CEQA Guidelines Section 15123 requires that the summary identify each significant impact, recommend mitigation measures, and identify reasonable and feasible alternatives to the proposed project that would avoid or substantially lessen the proposed project's significant physical impacts on the environment. The summary also is required to identify "areas of controversy," including issues raised by public agencies and the public, and the "issues to be resolved," including the choice among alternatives and whether or how to mitigate the identified significant impacts of the proposed project. This Executive Summary provides the brief summary required by CEQA Guidelines Section 15123.

ES.2 Project Location, Setting, and Existing Uses

The project site is located at 9449 Friars Road, San Diego, California 92008, at the current location of the San Diego County Credit Union (SDCCU) Stadium. The project site is in the northeast portion of the Mission Valley Community within the City of San Diego (see Figure ES-1, Vicinity Map, and Figure ES-2, Mission Valley Community Plan). Regionally, the City of San Diego covers approximately 206,989 acres in southwestern San Diego County, located approximately 17 miles north of the United States/Mexico border. The Mission Valley Community is located in the central portion of the San Diego metropolitan area (see Figure ES-2, Mission Valley Community Plan). Specifically, the project site is situated south of Friars Road, west of Interstate (I) 15, north of I-8, and east of the existing Fenton Marketplace shopping center. It is approximately 4 miles from downtown San Diego and approximately 2.5 miles west of the existing SDSU main campus situated along I-8 within the College Area Community of the City of San Diego.

Regional access to and from the project site is provided by four major freeways—I-15, I-8, I-805, and State Route 163—accessed via Friars Road (see Figure ES-3, Project Site and Surrounding Land Uses). Further, the existing Metropolitan Transit System (MTS) Green Line and Stadium Station are situated on the project site as shown on Figure ES-1, Vicinity Map.

The project area site is surrounded by major freeways, roadways, existing urban development, and the San Diego River. Higher density multifamily residential land uses are located to the northwest, southwest, and east, across I-15.

Friars Road, Mission Village Road, and San Diego Mission Road are located to the north. Kinder Morgan owns the existing Mission Valley Terminal, which is a fuel storage facility located just north of the project site at 9950 San Diego Mission Road. The San Diego River, part of the City of San Diego's Multiple-Species Conservation Program (as more fully described in Section 2.5.1.2, and Section 4.3, Biological Resources), is located immediately south of the project site. South of the San Diego River are additional office uses and I-8. To the north of Friars Road is San Diego Fire-Rescue Department Fire Station 45, undeveloped hillsides, and single-family residences situated atop the mesa, within the Serra Mesa planning area. To the west are office and large commercial retail uses as part of the Fenton Marketplace shopping center. I-15, located east of Murphy Canyon Creek, bounds the project site on the eastern edge. The SDSU existing main campus is three trolley stops from the trolley station situated on the project site.

The project site is composed of approximately 172 acres, largely consisting of the SDCCU Stadium and surrounding parking lot area. The property comprising the project site includes the following existing uses, as shown on Figure ES-3, Project Site and Surrounding Land Uses: (1) the SDCCU Stadium with an existing capacity of approximately 71,000 seats for football and other events; (2) an associated surface parking lot with approximately 18,870 parking spaces; (3) the existing San Diego MTS Stadium Trolley Station, accessible via the Green Line traversing the project site and running toward downtown San Diego to the west and Santee to the east; and (4) Murphy Canyon Creek, a partially earthen and concrete-lined channel that conveys flow into the San Diego River. (The proposed project is not proposing any improvement, facility, construction, or staging within any portion of Murphy Canyon Creek; therefore, while the existing creek is within the project boundary, no project element, component, improvement, nor feature is contemplated within the creek).

ES.3 Project Description

ES.3.1 Background and Proposed Project

The proposed project entails the acquisition, construction, and operation of an SDSU Mission Valley campus, stadium, parks, recreation, and innovation area to support SDSU's education, research, entrepreneurial, technology, and athletics programs. Specifically, the proposed campus would include:

1. approximately 86 acres of parks, recreation, and open space, including a River Park, which includes the 34 acres identified pursuant to the framework set forth in San Diego Municipal Code (SDMC) Section 22.0908, which shall be constructed by SDSU/California State University (CSU); with shared SDSU/community active and passive parks and recreation fields and open space; and pedestrian, hiking, and biking trails;¹
2. approximately 1.6 million square feet of campus uses for education, research, entrepreneurial, and technology programs;
3. construction of a new, multipurpose 35,000-capacity Stadium and the corresponding demolition of the existing SDCCU Stadium (formerly, "Qualcomm Stadium");
4. approximately 4,600 residences, including student, faculty, staff, workforce, and affordable housing, within a vibrant, transit-oriented university village setting;
5. approximately 400 hotel rooms to support campus visitors and Stadium-related events, provide additional conference facilities, and serve as an incubator for graduate and undergraduate students in SDSU's hospitality and tourism management program;

¹ The City of San Diego (City) would remain the owner of the approximate 34-acre River Park identified in SDMC Section 22.0908. As part of CSU's purchase of the property comprising the project site, CSU would revitalize and restore the 34-acre River Park.

6. approximately 95,000 square feet of community-serving retail space to support the campus, Stadium, and the community;
7. enhanced use of the MTS Green Line Stadium Trolley Station; thereby, minimizing vehicular traffic use; and accommodating the planned Purple Line on the project site; and
8. associated on-site and off-site infrastructure, utilities, facilities, and other amenities.

As part of the proposed project, CSU as lead agency would consider approval of the SDSU Mission Valley Campus Master Plan, which is the physical master plan to guide the future development of CSU facilities, based on academic goals and projected student enrollment levels, for an established time horizon. The SDSU Mission Valley Campus Master Plan would be able to accommodate up to 15,000 full-time equivalent students (FTES) over time, resulting in a total student headcount of approximately 20,000 students.²

For further information about the proposed project, please refer to Figure ES-4, Concept Design – Site Plan and Section 2.0, Project Description.

ES.3.2 Project Objectives

The underlying purpose of the proposed project is to implement an SDSU Mission Valley campus, including a new stadium, faculty/staff/student residences and homes, academic/office/innovation uses, hotel rooms and conference space, and commercial/retail uses to support SDSU's academic, educational and cultural mission through the demolition and redevelopment of the existing SDCCU Stadium; and the restoration and revitalization of a River Park pursuant to the framework set forth in San Diego Municipal Code Section 22.0908. For a listing of the specific project objectives, please refer to Section 2.0, Project Description,

ES.3.3 Required Permits and/or Approvals

Implementation of the proposed project would require permits and discretionary approvals as shown in Table ES-1, Project Approvals. Discretionary approvals would include certification of the Final EIR under CEQA, and approval of the proposed project by the CSU Board of Trustees.

Table ES-1. Project Approvals

Authorizing Jurisdiction or Agency	Action
<i>Federal Emergency Management Agency (FEMA)</i>	
Conditional Letter of Map Revision/Letter of Map Revision	Approval
<i>United States Army Corps of Engineers</i>	
Clean Water Act Section 404 permit	Approval
<i>United States Fish and Wildlife Service</i>	
Incidental Take Permit	Approval
<i>The California State University Board of Trustees</i>	
Certification of the Final EIR under CEQA	Certification

² One full-time equivalent student is defined as one student taking 15 course units (which is considered to be a “full course load”). Two part-time students, each taking 7.5 course units, also would be considered one FTES; and, therefore, the total student headcount enrolled at the university is higher than the FTES enrollment. At buildout, SDSU estimates that when enrollment reaches 15,000 FTES at the SDSU Mission Valley campus, total students enrolled at that campus site would be approximately 20,000 students.

Table ES-1. Project Approvals

Authorizing Jurisdiction or Agency	Action
Approval of the Campus Master Plan	Approval
Approval of Schematic Plans	Approval
Land Acquisition	Approval
CSU Building Official	
Building Permits	Issuance
Division of State Architect	
Accessibility compliance	Approval
State Fire Marshal	
Facility Fire and Life Safety review	Approval
California Department of Fish and Wildlife Service	
California Fish and Game Code Section 1600 permit;	Approval
Section 2080.1 Permit	Approval
Regional Water Quality Control Board – San Diego Region	
National Pollutant Discharge Elimination System Permit	Approval
Clean Water Act Section 401 water quality certification	Approval
San Diego Air Pollution Control District	
Authority to construct and/or permits to operate	Approval
City of San Diego	
Encroachment permits for construction within city rights-of-way, if necessary	Approval
Authority to connect to existing City-owned infrastructure, if necessary	Approval
Fire equipment access, if necessary	Approval
Vacation of City rights-of-way, if necessary	Approval
Execution of Purchase and Sale Agreement	Approval

ES.4 Summary of Environmental Impacts and Mitigation Measures

Table ES-2, Summary of Environmental Impacts and Mitigation Measures, provides a summary of the impact analysis related to the proposed project. Table ES-2 provides a summary of the potential significant environmental impacts expected to result from the proposed project pursuant to the CEQA Guidelines Section 15123(b)(1). For more detailed discussion, please see Section 4 of this EIR. Table ES-2 also lists the applicable mitigation measures related to the identified significant impacts, as well as the level of significance after mitigation is identified. The Initial Study prepared and circulated with the Notice of Preparation (NOP) for this EIR (see Appendix 1-1 of the Draft EIR) determined that the proposed project would not result in significant impacts to agriculture and forestry resources. As a result, this topic was not addressed in the Draft EIR and is not addressed in Table ES-2.

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Would the project have a substantial adverse effect on a scenic vista?	Less than Significant Impact	Not Applicable (N/A)	N/A
Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less than Significant Impact	N/A	N/A
Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant Impact	N/A	N/A
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on aesthetic resources?	Less than Significant Impact	N/A	N/A
Air Quality			
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Impact AQ-1 – The proposed project would conflict with or obstruct implementation of the applicable air quality plan.	MM-AQ-2: Regional Air Quality Plans. Within 6 months of the certification of the Final Environmental Impact Report, California State University/San Diego State University shall provide the San Diego Association of Governments (SANDAG) with population and employment projections for the project site, which should be used by: (1) SANDAG to update its regional growth projections and (2) the San Diego Air Pollution Control District to update the	Significant and Unavoidable Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		emission estimates and forecasts presented in its regional air quality plans. Use of the approved site-specific population and employment projections would allow regional planning data to more accurately reflect anticipated growth in the Mission Valley area.	
Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Impact AQ-2 – Construction of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	<p>MM-AQ-1: Construction Equipment Emissions Minimization. The project shall comply with the following standards during the specified phases of construction activity:</p> <p><u>Engine Requirements.</u> At a minimum, all off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 3 emission standards for non-road diesel engines promulgated by the U.S. Environmental Protection Agency. During the site preparation and grading construction phases, off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 3 with a diesel particulate filter emission standards. Where feasible, off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 emission standards.</p> <p>In addition, during the site preparation and grading construction phase, off-road diesel-powered construction equipment that are not Tier 4 shall be outfitted with diesel particulate filter Best Available Control Technology (BACT) devices certified by the California Air Resources Board (CARB), provided those devices are commercially available and: (1) achieve the standards of the California Division of</p>	Significant and Unavoidable Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>Occupational Safety and Health (Cal/OSHA), (2) are consistent with the construction equipment warranty requirements, (3) are compatible with equipment specifications of the construction equipment manufacturer, and (4) do not otherwise interfere with the proper functioning of the construction equipment. Any BACT devices used shall achieve emissions reductions equal to or greater than a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by CARB regulations, provided that the devices are commercially available and satisfy the four requirements enumerated above</p> <p><u>Idling Requirements.</u> All diesel engines, whether for on-road or off-road equipment, shall not be left idling for more than 5 minutes, at any location, except as provided in exceptions to the applicable regulations adopted by CARB regarding idling for such equipment. The construction contractor(s) shall post legible and visible signs in English and Spanish, in designated queuing areas and at the construction site, to remind equipment operators of the 5-minute idling limit.</p> <p><u>Maintenance Instructions.</u> The construction contractor(s) shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment, and shall require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications.</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p><u>Dust Control Plan.</u> Prior to the commencement of construction, a dust control plan shall be prepared to minimize dust from construction-related sources, such as windblown storage piles, off-site tracking of dust, debris loading, and truck hauling of debris. This plan shall include the following requirements:</p> <ul style="list-style-type: none"> • Watering of exposed construction areas shall occur three times per day; • All haul trucks transporting soil, sand, or other loose material off site shall be covered; • All vehicle speeds on unpaved roads shall be limited to 15 mph; and • A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond to such complaints and take corrective action, as needed, within 48 hours. The San Diego Air Pollution Control District's phone number shall be visible to ensure compliance with applicable regulations. <p><u>Implosion Execution Plan.</u> A blasting execution plan shall be prepared prior to any implosion event associated with the demolition of the existing Stadium. The plan shall evaluate the feasibility of staged implosion to minimize dust generation and exposure, and shall require that implosion be scheduled during periods of low/no wind speeds. Additionally, an ambient air quality monitoring program shall be</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		implemented as part of the plan, and proximate to the Stadium, over the course of any implosion event to measure actual particulate matter concentrations. Finally, a public notification program shall be instituted, as part of the plan, prior to any implosion event. The public notification program shall include recommendations as to how to minimize exposure to implosion-related airborne dust.	
	Impact AQ-3 – Operation of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	N/A	Significant and Unavoidable.
Would the project expose sensitive receptors to substantial pollutant concentrations?	Impact AQ-4 – Construction of the proposed project would result in a maximum cancer risk impact exceeding the SDAPCD notification requirement.	MM-AQ-1	Significant and Unavoidable Impact
Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on air quality resources?	Impact AQ-5 – The proposed project would result in a cumulatively considerable impact to air quality.	N/A	Significant and Unavoidable.
Biological Resources			
Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the	Impact BIO-1 – The project would have a substantial adverse effect on least Bell's vireo.	MM-BIO-1: TAKE AUTHORIZATION. Based on observations of least Bell's vireo (<i>Vireo bellii pusillus</i>), riparian habitat on site is considered occupied. Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>) is not currently occupying the proposed impact areas; however, there is suitable habitat within the San Diego	Less than Significant Impact.

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
California Department of Fish and Game or U.S. Fish and Wildlife Service?		<p>River. Habitat impacts will be mitigated at a 3:1 mitigation ratio (see MM-BIO-2) or as determined through the consultation process. Take authorization may be obtained through the federal Section 7 Consultation or Section 10 and state 2080.1 incidental take permit requirements. California State University/San Diego State University or its designee shall comply with any and all conditions, including pre-construction surveys, that the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) may require for take of these species pursuant to the federal Endangered Species Act and/or California Endangered Species Act. If required as a permit condition, pre-construction surveys will be conducted in accordance with USFWS protocols unless the USFWS authorizes a deviation from those protocols.</p> <p>MM-BIO-2: HABITAT MITIGATION. Temporary and permanent impacts to southern willow scrub and southern cottonwood–willow riparian forest will be mitigated at a 3:1 mitigation ratio, as determined during the permitting process (see MM-BIO-13). Additionally, temporary and permanent impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub shall be mitigated at a minimum of 1.5:1 mitigation ratio. Conservation of habitat shall be by on-site preservation, off-site creation and/or enhancement, and/or by purchase of appropriate credits at an approved mitigation bank in San Diego County. If required,</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		any invasive removal shall be completed using hand equipment and removal will be completed outside of the nesting bird season. If invasive removal cannot be completed outside of the nesting bird season, pre-work surveys shall be conducted per the nesting bird survey noted in MM-BIO-3 . The mitigation habitat shall include appropriate habitat for special-status amphibians, reptiles, mammals, and birds with potential to occur on site.	
	Impact BIO-2 – The project would have a substantial adverse effect on southwestern willow flycatcher.	MM-BIO-1 MM-BIO-2	Less than Significant Impact.
	Impact BIO-3 – The project would have a substantial adverse effect on other special-status birds.	MM-BIO-2	Less than Significant Impact.
	Impact BIO-4 – The project would have a substantial adverse effect on special-status amphibians and reptiles.	MM-BIO-2	Less than Significant Impact.
	Impact BIO-5 – The project would result in significant impacts to maternity bat roosts from the removal of suitable riparian trees on site.	MM-BIO-14 BAT SURVEYS AND ROOST AVOIDANCE OR EXCLUSION. Prior to construction activities, a bat biologist shall survey the existing buildings to confirm they contain no active maternity roosts. If a maternity roost is present, the following measures shall be implemented to reduce the potential impact to special-status bat species to a less-than-significant level: 1. Maternity Roosting Season Avoidance. All proposed project-related activities, including bat roost exclusion, shall occur outside the general bat maternity roosting season of March through	Less than Significant Impact.

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>August. Roost exclusion must only occur during the time when bats are most active (early spring or fall) to increase the potential to exclude all bats from trees and/or buildings and minimize the potential for a significant impact to occur by avoiding the maternity roosting season.</p> <p>2. Replacement Roost Installation. One month prior to the exclusion of bats from the buildings, the consultant will procure and install two bat boxes from a reputable vendor, such as Bat Conservation and Management, to allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed within close proximity to the trees and/or buildings and in an area that is within close proximity to suitable foraging habitat. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours) to allow the bat boxes to reach an optimum internal temperature (approximately 90 °F) to mimic the existing bat roost. The bat boxes will be suitable to house crevice-roosting bat species, and large enough to contain a minimum of 50 bats (e.g., Four Chamber Premium Bat House or Bat Bunker Plus). The bat boxes shall be installed on the side of the adjacent</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>structure that will be preserved by the proposed project, or installed on a 20-foot-tall steel pole.</p> <p>3. Roost Exclusion. Approximately 1 month after bat boxes have been installed, exclusion of the existing roost within the trees and/or buildings will occur. The primary exit points for roosting bats will be identified, and all secondary ingress/egress locations on the trees and/or buildings will be covered with a tarp or wood planks to prevent bats from leaving from other locations. The primary exit point will remain uncovered to allow exclusion devices to be installed. Exclusion devices will consist of a screen (poly netting, window screen, or fiberglass screening) with mesh 1/6 of an inch or smaller, installed at the top and sealed along the sides of the window frame, covering the entire window and passing 2 feet below the bottom of the window. The exclusion devices will be installed at night to increase the potential that bats have already left the roost and are less likely to return. Exclusion devices will be left in place for a 1-week period to ensure that any remaining bats in the buildings are excluded. A passive acoustic monitoring detector will also be deployed during the exclusion period in order to verify excluded species and monitor if bat activity has decreased</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		during the exclusion period. Periodic monitoring during the exclusion period should also be conducted to observe if any bats are still emerging from the trees and/or buildings, and an active monitoring survey conducted on the final night of exclusion to ensure that no bats are emerging from the trees and/or buildings and determine that exclusion has been successful. Any continued presence of roosting bats will require an adjustment to the exclusion devices and schedule.	
	Impact BIO-6 – The project would have a substantial adverse effect on migratory birds.	MM-BIO-3 NESTING BIRD SURVEY: Construction activity that occurs during the breeding season (typically February 1 through September 15) shall require a one-time biological survey for nesting bird species to be conducted within the proposed impact area and a 500-foot buffer within 72 hours prior to construction. This survey is necessary to assure avoidance of impacts to nesting raptors (e.g., Cooper's hawk [<i>Accipiter cooperii</i>] and red-tailed hawk [<i>Buteo jamaicensis</i>]) and/or birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code, Sections 3503 and 3513. If any active nests are detected, the area shall be flagged and mapped on the construction plans. If occupied nests are found, then limits of construction (e.g., 250 to 500 feet) to avoid occupied nests shall be established by the project biologist in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be	Less than Significant Impact.

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>instructed on the sensitivity of nest areas. The project biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to avoid inadvertent impacts to these nests. The project biologist may adjust the 250-foot or 500-foot setback at his or her discretion depending on the species and the location of the nest (e.g., if the nest is well protected in an area buffered by dense vegetation). Once the nest is no longer occupied for the season, construction may proceed in the setback areas.</p> <p>If construction activities, particularly clearing/grubbing, grading, and other intensive activities, stop for more than 3 days, an additional nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer.</p>	
	<p>Impact BIO-7 – The project would result in significant short-term indirect impacts to special-status plants and sensitive natural communities.</p>	<p>MM-BIO-4: TEMPORARY INSTALLATION OF FENCING. To prevent inadvertent disturbance to areas outside the limits of grading for each phase, the contractor shall install temporary fencing along the limits of grading.</p> <p>MM-BIO-5: CONSTRUCTION MONITORING AND REPORTING. To prevent inadvertent disturbance to areas outside the limits of grading for each phase, all grading of native habitat shall be monitored by a biologist. The biological monitor shall be contracted to perform biological monitoring during all clearing and grubbing activities.</p>	<p>Less than Significant Impact.</p>

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>The project biologist also shall perform the following duties:</p> <ul style="list-style-type: none"> a. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing and grubbing to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds). b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas and of minimizing harm to or harassment of wildlife prior to clearing and grubbing. c. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing and grubbing. d. Supervise and monitor vegetation clearing and grubbing weekly to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved and to document that protective fencing is intact. e. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing activities. f. Periodically monitor the construction site to verify that the project is 	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>implementing the following stormwater pollution prevention plan best management practices: dust control, silt fencing, removal of construction debris and a clean work area, covered trash receptacles that are animal-proof and weather-proof, prohibition of pets on the construction site, and a speed limit of 15 miles per hour during the daylight and 10 miles per hour during hours of darkness.</p> <p>g. Periodically monitor the construction site after grading is completed and during the construction phase to see that artificial security light fixtures are directed away from open space and are shielded, and to document that no unauthorized impacts have occurred.</p> <p>h. Keep monitoring notes for the duration of the proposed project for submittal in a final report to substantiate the biological supervision of the vegetation clearing and grading activities and the protection of the biological resources.</p> <p>i. Prepare a monitoring report after the construction activities are completed, which describes the biological monitoring activities, including a monitoring log; photos of the site before, during, and after the grading and clearing activities; and a list of special-status species observed.</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>MM-BIO-6: AIR QUALITY STANDARDS. The following guidelines shall be adhered to:</p> <ol style="list-style-type: none"> 1. No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period. 2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall: <ol style="list-style-type: none"> a. Be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation: track-out grates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks: using secured tarps or cargo covering, watering, or treating of transported material; and b. Be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous 	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		operations. If a street sweeper is used to remove any track-out/carry-out, only coarse particulate matter (PM ₁₀)-efficient street sweepers certified to meet the most current South Coast Air Quality Management District Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.	
	Impact BIO-8 – The project would result in significant long-term indirect impacts to special-status plants and sensitive natural communities.	<p>MM-BIO-7: SIGNAGE AND BARRIERS. To prevent long-term inadvertent disturbance to sensitive vegetation and species adjacent to the project site, signage and visual barriers shall be installed along the River Park and Shared Parks and Open Space interface with the San Diego River and Murphy Canyon Creek. The signage shall state that these areas are native habitat areas, and no trespassing is allowed. Barriers shall be installed where appropriate to deter access into the river and creek.</p> <p>MM-BIO-8: INVASIVE SPECIES PROHIBITION. The final landscape plans shall be reviewed by the project biologist to confirm they comply with the following: (1) no invasive plant species as included on the most recent version of the California Invasive Plant Council California Invasive Plant Inventory for the project region shall be included and (2) the plant palette shall</p>	Less than Significant Impact.

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		be composed of species that do not require high irrigation rates. The project biologist shall periodically check landscape products for compliance with this requirement.	
	Impact BIO-9 – The project would result in significant short-term indirect impacts to special-status wildlife species.	MM-BIO-4 MM-BIO-5 MM-BIO-9: NOISE. Pre-construction surveys shall be conducted for any work between February 1 and September 15. Prior to start of construction activities, a qualified biologist shall conduct a pre-construction survey for the least Bell's vireo (<i>Vireo bellii pusillus</i>) and, if needed, southwestern willow flycatcher (<i>Empidonax traillii extimus</i>) to document presence/absence and the extent of occupied habitat. The pre-construction survey area for these species shall encompass all suitable habitats within the impact area, as well as suitable habitat within a 300-foot buffer of the construction activities. If active nests for any of these species are detected, on-site noise reduction techniques shall be implemented to ensure that construction noise levels do not exceed 60 A-weighted decibels (dBA) hourly equivalent noise level (or the existing ambient noise level if already above 60 dBA during the breeding season) at the nest location.	Less than Significant Impact.
	Impact BIO-10 – The project would result in significant long-term indirect impacts to special-status wildlife species.	MM-BIO-7 MM-BIO-8 MM-BIO-10: INDIRECT EDGE EFFECTS. The proposed project shall be designed so that any sports or recreational fields and courts shall be set back a minimum of 100 feet from the	Less than Significant Impact.

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>floodway of the San Diego River to reduce noise and lighting impacts.</p> <p>MM-BIO-11: LIGHTING PLAN. Lighting shall be designed to minimize light pollution within native habitat areas, while enhancing safety, security, and functionality. All artificial outdoor light fixtures shall be installed so they are directed away from the San Diego River and Murphy Canyon Creek. The lighting in the River Park and Shared Parks and Open Space shall be designed so there is no light spillage into the River Corridor Area. Lighting should be directed away from sensitive areas to ensure compliance with the Multiple Species Conservation Program's Land Use Adjacency Guidelines and to be in accordance with the Land Development Code Section 142.0740 (Outdoor Lighting Regulations). Light fixtures shall be installed in conformance with the County Light Pollution Code, the Building Code, the Electrical Code, and any other related state and federal regulations such as California Title 24.</p>	
Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Impact BIO-7	MM-BIO-4 MM-BIO-5 MM-BIO-6	Less than Significant Impact
	Impact BIO-8	MM-BIO-7 MM-BIO-8	Less than Significant Impact
	Impact BIO-11 – The project would result in temporary direct impacts to southern cottonwood–willow riparian forest, Baccharis-dominated Diegan coastal sage	MM-BIO-12: RESTORE TEMPORARY IMPACTS. Temporary impacts to Diegan coastal sage scrub and southern cottonwood–willow riparian forest (federally and state-regulated wetlands) shall be restored to their original condition. California	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	scrub, and restored Diegan coastal sage scrub.	State University/San Diego State University or its designee shall prepare a conceptual restoration plan outlining the restoration of these communities and implement the restoration plan, including monitoring and maintenance for a period of at least 3 years to ensure 80% coverage.	
	Impact BIO-12 – The project would result in permanent direct impacts to sensitive vegetation communities and land covers.	MM-BIO-2	Less than Significant Impact
	Impact BIO-13 – The project would result in temporary direct impacts to federally and state-regulated wetlands/riparian areas	MM-BIO-12 MM-BIO-13: WETLAND MITIGATION/FEDERAL AND STATE AGENCY PERMITS. The overall ratio of wetland/riparian habitat mitigation shall be 3:1. Impacts shall be mitigated at a 1:1 impact-to-creation ratio by either the creation, or purchase of credits for the creation, of jurisdictional habitat of similar functions and values. An additional 2:1 enhancement-to-impact ratio shall be required to meet the overall 3:1 impact-to-mitigation ratio for impacts to wetlands/riparian habitat. Impacts to unvegetated and ephemeral stream channels shall occur at a 1:1 or 2:1 mitigation ratio, with a 1:1 impact-to-creation ratio. Additional mitigation for unvegetated channels will occur through preservation. Mitigation may occur as on-site creation, off-site enhancement and restoration (e.g., at the San Diego State University-owned Adobe Falls property), and/or purchase of credits at an approved mitigation bank. If mitigation is proposed outside of an approved mitigation bank, a conceptual wetlands	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		mitigation and monitoring plan shall be prepared and implemented. The conceptual wetlands mitigation and monitoring plan shall, at a minimum, prescribe site preparation, planting, irrigation, and a 5-year maintenance and monitoring program with qualitative and quantitative evaluation of the revegetation effort and specific criteria to determine successful revegetation. Prior to impacts occurring to Resource Agency jurisdictional aquatic resources, California State University/San Diego State University or its designee shall obtain the following permits: ACOE 404 permit, RWQCB 401 Water Quality Certification, and CDFW 1600 Streambed Alteration Agreement.	
	Impact BIO-14 – The project would result in permanent direct impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters.	MM-BIO-2 MM-BIO-13	Less than Significant Impact
	Impact BIO-15 – The project would result in significant short-term indirect impacts to sensitive vegetation communities.	MM-BIO-4 MM-BIO-5 MM-BIO-6	Less than Significant Impact
	Impact BIO-16 – The project would result in significant long-term indirect impacts to sensitive vegetation communities.	MM-BIO-7 MM-BIO-8	Less than Significant Impact
Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impact BIO-13	MM-BIO-12 MM-BIO-13	Less than Significant Impact.
	Impact BIO-14	MM-BIO-2 MM-BIO-13	Less than Significant Impact.
	Impact BIO-15	MM-BIO-4 MM-BIO-5 MM-BIO-6	Less than Significant Impact.

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	Impact BIO-16	MM-BIO-7 MM-BIO-8	Less than Significant Impact.
Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impact BIO-5	MM-BIO-14	Less than Significant Impact
	Impact BIO-17 – The project would result in significant impacts to migratory birds from bird strikes with the proposed buildings on site.	MM-BIO-15: GLARE REDUCTION. Measures proposed to reduce the impact of bird strikes to windows at the proposed project's buildings include the following methods: <ol style="list-style-type: none"> 1. Create visual markers on the building glass surfaces. These markers function to indicate to birds that the surface is solid, thus preventing strikes to the object (City of Toronto 2007; Ocampo-Peñuela et al. 2016). Application to the lower portion of the buildings are most important and should match the average height of the surrounding landscaping or vegetation. These visual markers may include but are not limited to (City of Toronto 2007): <ol style="list-style-type: none"> a. Patterned, fritted glass b. Film that illustrates products or provides advertising c. Patterns provided by decals d. Fenestration patterns that are provided structurally or by application of decals or etching of the glass e. Decorative grilles or louvers f. Artwork Avoid use of reflective glass or application of reflective coatings on any window surface.	Less than Significant Impact
	Impact BIO-18 – The project would result in short-term indirect impacts to native habitat,	MM-BIO-4 MM-BIO-5	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	including the San Diego River and Murphy Canyon Creek.		
	Impact BIO-19 – The project would result in long-term indirect impacts to native habitat, including the San Diego River and Murphy Canyon Creek.	MM-BIO-7 MM-BIO-8 MM-BIO-10 MM-BIO-11	Less than Significant Impact
Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact	N/A	N/A
Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact	N/A	N/A
Would the project have a cumulative effect on biological resources?	Less than Significant Impact	N/A	N/A
Cultural Resources			
Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	Impact CUL-1 – A significant impact to a historical resource would occur as a result of the proposed project due to the demolition of SDCCU Stadium, which is considered a historical resource.	MM-CUL-1: Documentation. Prior to commencement of construction, the historical resource would be documented according to Historic American Buildings Survey (HABS) standards as detailed by the National Park Service Heritage Documentation Programs. The documentation would include a written report done in the outline format; HABS-quality photography of the exterior, interior, and overview shots of the historical resource; measured drawings; and video documentation. The documentation materials would be prepared by a qualified Architectural Historian(s) and an experienced HABS photographer(s).	Significant and Unavoidable Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>Copies of the resulting documentation would be submitted to the Library of Congress, the California State Historic Preservation Officer, the San Diego History Center, and the San Diego Public Library. Under this mitigation option, survey work must be conducted prior to any ground disturbance or demolition. The documentation must be completed within 1 year of the initial date of demolition of the structure.</p> <p>MM-CUL-2: Interpretive Displays. Interpretive displays shall be installed in a publicly visible and accessible location(s) within the project site that describe the history and significance of the historical resource. Documentation prepared under MM-CUL-2 can be utilized in the interpretative displays. The content, design, and location of such signage may be done in consultation with the City's Historical Resources staff. Work on the interpretative displays should be conducted in tandem with design and construction of the new facility to determine the appropriate location and size for the displays. The interpretative displays must be in place upon completion of the new facility located at the project site.</p> <p>MM-CUL-3: Salvage of Materials. Prior to demolition, representative architectural features may be identified by a qualified Architectural Historian and, if feasible, salvaged for use within the future redevelopment (i.e., new stadium, future buildings, or open space areas, etc.). Should use of some or all of the salvaged</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		architectural features within the project site not be feasible, the remaining architectural features may be donated to various historical and/or archival institutions.	
	Impact CUL-2 – A significant impact to a historical resource would occur as a result of the proposed project due to the construction and operation of proposed facilities.	MM-CUL-2 MM-CUL-3	Significant and Unavoidable
Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Impact CUL-3 – A significant impact to an archaeological resource would occur as a result of the proposed project due to the possibility of encountering historical, archaeological or Native American cultural material within the proposed project area during construction. Therefore, mitigation is provided (see Section 4.4.6, Mitigation Measures, specifically mitigation measure MM-CUL-4).	MM-CUL-4: In order to mitigate impacts to cultural resources to a level that is less than significant, procedures for proper treatment of unanticipated archaeological finds must comply with the California Environmental Quality Act (CEQA) Guidelines. Adherence to the following requirements during initial earth-disturbing activities will ensure the proper treatment of unanticipated archaeological or Native American cultural material: <ol style="list-style-type: none"> 1. An archaeological monitor and a Kumeyaay Native American monitor shall be present full-time during all initial ground-disturbing activities. If proposed project excavation later presents evidence suggesting a decrease in cultural sensitivity, the monitoring schedule can be reduced pending archaeological, Native American, and San Diego State University (SDSU) consultation. 2. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeological monitor, Native American monitor, 	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>construction or other personnel shall have the authority to divert or temporarily halt ground disturbance operations in the area of the find. The archaeological monitor shall evaluate and minimally document isolates and clearly insignificant deposits in the field. More significant deposits shall be evaluated by the cultural Primary Investigator in consultation the Native American monitor and SDSU staff. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the qualified archaeologist and approved by SDSU, then carried out using professional archaeological methods. The Research Design and Data Recovery Program shall include (1) reasonable efforts to preserve (avoidance) “unique” cultural resources or Sacred Sites pursuant to CEQA Section 21083.2(g) as the preferred option; (2) the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap, if avoidance is infeasible; and (3) data recovery for non-unique cultural resources. Construction activities will be allowed to resume in the affected area only after proper evaluation.</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Impact CUL-4 – A significant impact to human remains would occur as a result of the proposed project should construction or other personnel encounter any previously undocumented human remains. Therefore, mitigation is provided (see Section 4.4.6, Mitigation Measures, specifically mitigation measure MM-CUL-5).	<p>MM-CUL-5: In order to mitigate impacts to human remains to a level that is less than significant, procedures for proper treatment of unanticipated finds must comply with the California Environmental Quality Act (CEQA) Guidelines. In the event of discovery of unanticipated human remains, personnel shall comply with California Public Resources Code Section 5097.98, CEQA Section 15064.5, and Health and Safety Code Section 7050.5 during earth-disturbing activities:</p> <ul style="list-style-type: none"> a. If any human remains are discovered, the construction personnel or the appropriate representative shall contact the County Coroner and SDSU. Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. If the remains are determined to be of Native American origin, the most likely descendent, as identified by the Native American Heritage Commission, shall be contacted by the property owner or their representative in order to determine proper treatment and disposition of the remains. The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development 	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		activity until consultation with the most likely descendent regarding their recommendations as required by California Public Resources Code Section 5097.98 has been conducted. California Public Resources Code Section 5097.98, CEQA Section 15064.5, and Health and Safety Code Section 7050.5 shall be followed.	
Would the project have a cumulative effect on cultural resources?	Less than Significant Impact	N/A	N/A
Energy			
Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant Impact	N/A	N/A
Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on energy resources?	Less than Significant Impact	N/A	N/A
Geology and Soils			
Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer	Less than Significant Impact	N/A	N/A

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
to Division of Mines and Geology Special Publication 42?			
b) Strong seismic ground shaking?	Less than Significant Impact	N/A	N/A
c) Seismic related ground failure including liquefaction?	Impact GEO-1 – Liquefiable soils and seismic-related ground failure could potentially impact the proposed project's construction.	<p>MM-GEO-1: Prior to the commencement of construction of any of the proposed project's vertical components, California State University (CSU)/San Diego State University or its designee shall retain a qualified geotechnical engineer to prepare a final geotechnical report (or reports) for the portions of the project site proposed for construction, which shall include, at minimum, the following analyses of the project site's soils for the vertical footprint of each development component of the project:</p> <ol style="list-style-type: none"> 1. Corrosivity of soils, 2. Liquefiable soils, 3. Potentially unstable soils, including compressible, expandable soils, and 4. Suitability of fill materials to be used. <p>The final geotechnical report shall also include recommendations on the types of methods that should be utilized to improve soil quality in the footprint of each vertical development component. The final geotechnical report shall be submitted to, and approved by, the CSU Building Official or its designee prior to the issuance of construction permits for any phase of the project. The final geotechnical report shall conform to all applicable laws, regulations, and requirements. All geotechnical recommendations provided in the final geotechnical report shall be followed during grading and construction at the project site.</p>	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-GEO-2: A geotechnical consultant in the field shall perform geotechnical observation and/or laboratory testing during grading to identify areas of potential liquefaction and unstable soils, and shall develop conclusions and recommendations. All soils in areas of proposed development or future fill subject to potential liquefaction and/or instability shall be treated per the recommendations of the final geotechnical report and field observations. Prior to approval of final inspection of site grading for each phase of the affected areas of the proposed project, the recommendations shall be reviewed and approved by the California State University Building Official or its designee.	
	Impact GEO-2 – Liquefiable soils and seismic-related ground failure could potentially impact the proposed project's operation.	MM-GEO-1 MM-GEO-2	Less than Significant Impact
d) Landslides?	Less than Significant Impact	N/A	N/A
Would the project result in substantial soil erosion or the loss of topsoil?	Less than Significant Impact	N/A	N/A
Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Impact GEO-3 – The proposed project has the potential to be significantly impacted by potentially unstable soils located on the project site.	MM-GEO-2	Less than Significant Impact
Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less than Significant Impact	N/A	N/A

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact	N/A	N/A
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impact GEO-4 – During construction activities, the proposed project has the potential to create a significant impact to paleontological resources that may be present on the project site.	MM-GEO-3: Prior to the commencement of any grading activity, California State University (CSU)/San Diego State University or its designee shall retain a qualified paleontologist to ensure the implementation of a paleontological monitoring program. The Society of Vertebrate Paleontology defines a qualified paleontologist as having the following: <ol style="list-style-type: none"> 1. A graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; and demonstrated competence in field techniques, preparation, identification, curation, and reporting in the state or geologic province in which the project occurs. An advanced degree is less important than demonstrated competence and regional experience. 2. At least two full years professional experience as assistant to a Project Paleontologist with administration and project management experience; supported by a list of projects and referral contacts. 3. Proficiency in recognizing fossils in the field and determining significance. 4. Expertise in local geology, stratigraphy, and biostratigraphy. 	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>5. Experience collecting vertebrate fossils in the field.</p> <p>The qualified paleontologist shall attend any preconstruction meetings, present a worker environmental training to construction personnel, and manage the paleontological monitor(s) if he or she is not doing the monitoring. A paleontological monitor shall be on site during all excavations below the depth of previously disturbed sediments. The Society of Vertebrate Paleontology defines a qualified paleontological monitor as having the following:</p> <ol style="list-style-type: none"> 1. BS [bachelor of science] or BA [bachelor of arts] degree in geology or paleontology and one year experience monitoring in the state or geologic province of the specific project. An associate degree and/or demonstrated experience showing ability to recognize fossils in a biostratigraphic context and recover vertebrate fossils in the field may be substituted for a degree. An undergraduate degree in geology or paleontology is preferable, but is less important than documented experience performing paleontological monitoring, or 2. AS [associate of science] or AA [associate of arts] in geology, paleontology, or biology and demonstrated two years experience collecting and salvaging fossil materials in the state or geologic province of the specific project, or 	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>3. Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in the state or geologic province of the specific project.</p> <p>4. Monitors must demonstrate proficiency in recognizing various types of fossils, in collection methods, and in other paleontological field techniques.</p> <p>The paleontological monitor shall be equipped with necessary tools for the collection of fossils and associated geological and paleontological data. The monitor shall complete daily logs detailing the day's excavation activities and pertinent geological and paleontological data. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find.</p> <p>Following the paleontological monitoring program, a final monitoring report shall be submitted to CSU for approval. The report shall summarize the monitoring program and include geological observations and any paleontological resources recovered during paleontological monitoring for the proposed project.</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have a cumulative effect on geology and soils resources?	Less than Significant Impact	N/A	N/A
Greenhouse Gases			
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant Impact	N/A	N/A
Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on greenhouse gas emissions?	Less than Significant Impact	N/A	N/A
Hazards and Hazardous Materials			
Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Impact HAZ-1 – Demolition, implosion, and construction activities have the potential to disturb ACM, LBP, PCB-containing items, universal wastes, and remaining hazardous materials and hazardous wastes in existing building materials on the project site. A significant impact to the public or the environment due to routine disposal, transport, and/or release of hazardous materials would occur.	MM-HAZ-1: Pre-Demolition Hazardous Materials Abatement. Demolition or renovation plans and contract specifications shall incorporate abatement procedures for the removal of materials containing asbestos, lead, polychlorinated biphenyls, hazardous material, hazardous wastes, and universal waste items, including decommissioning and removal of aboveground storage tanks and drums. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the U.S. Environmental Protection Agency (which regulates disposal), Occupational Safety and Health Administration, U.S. Department of Housing and Urban Development, California Occupational Safety and Health Administration (which regulates employee exposure), and the South Coast Air Quality Management District.	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	Impact HAZ-2 – The use of explosives during demolition and implosion activities on the project site would create noise, dust, and potential debris. A significant impact to the public or environment would occur due to routine use of hazardous materials.	MM-HAZ-2: Demolition and Implosion Plan. Prior to demolition of the existing San Diego County Credit Union Stadium, a Demolition (and Implosion) Plan shall be prepared and submitted to City of San Diego Fire-Rescue Department Fire Prevention Bureau for review. The plan shall include the following, at a minimum: <ul style="list-style-type: none"> • Project-specific demolition methods and explosives. • Dust mitigation and monitoring. • Noise mitigation. • Enforcement of a human safety standoff distance of approximately 1,000 feet during the implosion. 	Less Than Significant Impact
Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Impact HAZ-1	MM-HAZ-1	Less than Significant Impact
	Impact HAZ-3 – Contaminated soil, groundwater, and soil vapor may be present on the project site. Construction and operation activities would potentially disturb these materials. A significant impact to the public or the environment due to accidental release of hazardous material would occur.	MM-HAZ-3: Hazardous Materials Contingency Plan. Prior to commencement of any demolition or construction activities, a Hazardous Materials Contingency Plan (HMCP) shall be developed that addresses potential impacts in soil, soil vapor, and groundwater from releases on or near the project site, as well as the potential for existing hazardous materials on site (e.g., drums and tanks). The HMCP shall include training procedures for identification of contamination. The HMCP shall describe procedures for assessment, characterization, management, and disposal of hazardous constituents,	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		materials, and wastes, and notification and decommissioning procedures for tanks, in accordance with all applicable state and local regulations. Contaminated soils and/or groundwater shall be managed and disposed of in accordance with local and state regulations. The HMCP shall include health and safety measures, which may include but are not limited to periodic work breathing zone monitoring and monitoring for volatile organic compounds using a handheld organic vapor analyzer in the event impacted soils are encountered during excavation activities. California State University/San Diego State University or its designee shall implement the HMCP during construction activities for the proposed project. The HMCP shall be submitted to the County of San Diego Department of Environmental Health for review.	
	Impact HAZ-4 – Environmental monitoring wells are located on the project site which were installed and monitored under RWQCB CAO 92-01. Damage, destruction, or removal without proper procedure or authorization would violate CAO 92-01 and potentially release hazardous materials to the environment. A significant impact to the public or the environment due to accidental release of hazardous materials would occur.	MM-HAZ-4: Sentinel Well Decommissioning/Protection. The four sentinel wells on the project site ordered to remain under Addendum No. 8 of CAO 92-01 may require removal, protection, or replacement. A well decommissioning and destruction plan shall be prepared for the management of the monitoring wells. The decommissioning and destruction plan, which may also include protection and/or replacement, would be written in accordance with applicable state and local laws and submitted to the Regional Water Quality Control Board for approval. The approved plan shall be followed and on-site wells would be removed or protection measures emplaced prior to	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>construction in accordance with applicable laws and regulations.</p> <p>MM-HAZ-5: Well Decommissioning, Other Wells. Other wells identified on the project site related to the former Mission Valley Terminal contamination plume are assumed approved for removal or transfer by the Regional Water Quality Control Board under Addendum No. 8 of CAO 92-01. A well decommissioning and destruction plan shall be prepared for the removal or abandonment of on-site environmental wells, groundwater monitoring wells, remediation wells, and associated piping. The decommissioning and destruction plan shall be written in accordance with applicable regulations and submitted to the Regional Water Quality Control Board for approval. The approved plan shall be followed and on-site wells would be removed, transferred, or abandoned prior to construction in accordance with applicable laws and regulations.</p>	
	<p>Impact HAZ-5 – A 10-inch-diameter active underground fuel transportation pipeline traverses the eastern portion of the project site. Excavation and construction activities in the area near this pipeline have the potential to damage the pipeline. A significant impact to the public or environment due to a release of hazardous materials would occur.</p>	<p>MM-HAZ-6: Safety of Fuel Pipeline. Kinder Morgan Energy Partners shall be consulted prior to commencement of construction, demolition, and implosion activities to ensure safety and to avoid damage of the 10-inch-diameter fuel pipeline. San Diego State University and Kinder Morgan Energy Partners shall determine appropriate setbacks, safety measures, and procedures that will be put in place to avoid conflict with the fuel pipeline in accordance with all applicable state and local regulations.</p>	<p>Less than Significant Impact</p>

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	Impact HAZ-6 – Soil vapor contamination, specifically benzene, ethylbenzene, and methyl tert-butyl ether, is present on the project site above EPA VISLs. As operation of the proposed project would introduce residential housing and public use spaces onto the project site, a significant impact to the public due to the presence of this soil vapor contamination would occur.	MM-HAZ-7: Vapor Mitigation. Prior to commencement of vertical construction of each residential, educational, and commercial building at the project site, San Diego State University or its designee shall conduct a soil vapor investigation within the proposed building footprint. If soil vapor is detected within the footprint of a proposed building or enclosed structure, vapor mitigation measures shall be implemented in accordance with the Department of Toxic Substances Control Vapor Intrusion Mitigation Advisory for all such future buildings and enclosed structures. The construction contractor shall develop vapor mitigation measures that adequately mitigate potential vapor intrusion in buildings and enclosed structures on the project site. Typical vapor mitigation systems comprise of a sub-slab geomembrane or vapor barrier installed throughout the entire footprint of the building. Sub-slab ventilation piping is installed below the geomembrane layer for capturing VOCs in the soil gas and discharging them above the building roof through vent stacks. Optional blowers can be connected to the vent piping at the roofline for conversion of a passive venting system into an active system, if necessary. Operation of the project shall maintain functionality of these features as required to continue protection from vapor intrusion.	Less than Significant Impact
	Impact HAZ-7 – Diesel contamination was identified in groundwater that is above the Tier 1 ESL for residential use. As operation of the proposed project would introduce	MM-HAZ-3	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	residential housing onto the project site, a significant impact to the public due to the presence of this contamination would occur.		
Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impacts	N/A	N/A
Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impact HAZ-3	MM-HAZ-3	Less than Significant Impact
	Impact HAZ-4	MM-HAZ-4 MM-HAZ-5	Less than Significant Impact
	Impact HAZ-6	MM-HAZ-7	Less than Significant Impact
	Impact HAZ-7	MM-HAZ-3	Less than Significant Impact
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Impact HAZ-8 – In the event the FAA does not issue their Determination of No Hazard to Air Navigation, the proposed project would be in violation of applicable FAA regulations. A significant impact due to a safety hazard or excessive noise for people residing or working in the project area would occur.	MM-HAZ-8: Obtain FAA Determination of No Hazard to Air Navigation. Upon finalization of the proposed project design and site and grading plans, Notices of Proposed Construction or Alteration with the FAA (FAA Form 7460-1) shall be filed due to the proposed project's proximity to Montgomery Field Airport, the policies of the Montgomery Field Airport Land Use Compatibility Plan, and the anticipated maximum heights of the proposed stadium and construction equipment. Proposed Project development shall not proceed until a Determination of No Hazard to Air Navigation is made by the FAA.	Less than Significant Impact
Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Impact HAZ-9 – The proposed project would conflict with existing emergency response and evacuation plans. A significant impact to implementation of an emergency	MM-HAZ-9: Emergency Response and Evacuation Planning. Plans and policies pertaining to emergency response and evacuation procedures shall be updated to	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	response plan or emergency evacuation plan would occur.	reflect the location and design of the new stadium, new buildings, and other proposed project features. San Diego State University or its designee shall submit plans to the City of San Diego Fire-Rescue Department Fire Prevention Bureau and Unified San Diego County Emergency Services Organization for review. Plans shall include, but not be limited to, maps of evacuation routes for both pedestrians and vehicle traffic; locations of hospitals, fire stations, and police stations; locations of fire extinguishers; and designation of responsible personnel and agencies. To the extent feasible, California State University/San Diego State University or its designee shall consult the U.S. Department of Homeland Security's Evacuation Planning Guide for Stadiums and implement measures recommended therein, as necessary.	
Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Impact WLD-2 – Construction activity within the southern and eastern portions of the property adjacent to the San Diego River and Murphy Canyon Creek, respectively, could be subject to increased ignition potential resulting from construction equipment due to the proximity of native vegetation communities.	MM-HAZ-9 MM-WLD-1: Implement MM-HAZ-9, identified in Section 4.8, Hazards and Hazardous Materials. MM-WLD-2: To avoid impeding emergency vehicle and evacuation traffic around construction vehicles and equipment, prior to commencement of construction activities California State University/San Diego State University or its designee shall develop an Emergency Vehicle Access Plan that includes the following: <ul style="list-style-type: none"> Evidence of advanced coordination with emergency service providers, including but not necessarily limited to the University Police Department, San 	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>Diego Police Department, San Diego Fire-Rescue Department, ambulance services, and paramedic services;</p> <ul style="list-style-type: none"> • Notification to emergency service providers of the proposed project locations, nature, timing, and duration of any construction activities, and request for advice about any road access restrictions that could impact their response effectiveness; and • Project construction schedules and routes designed to avoid restricting movement of emergency vehicles to the best extent possible. Provisions to be ready at all times to accommodate emergency vehicles. Provisions could include the use of platings over excavations, short detours, and/or alternate routes. <p>MM-WLD-3: Throughout the duration of construction, the construction contractor shall ensure that adequate access to all buildings on the project site be provided for emergency vehicles during all building construction phases.</p> <p>MM-WLD-4: Throughout the duration of construction, the construction contractor shall ensure that adequate water is available to service all construction activities during all phases.</p> <p>MM-WLD-5: The construction contractor shall ensure the implementation of all construction-</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>phase defensible space, landscape, and irrigation plan components prior to combustible building materials being delivered to the project site.</p> <p>MM-WLD-6: Prior to commencement of construction activities, California State University/San Diego State University or its designee shall develop a Construction Fire Prevention Plan that addresses training of construction personnel and provides details of fire-suppression procedures and equipment to be used during construction. Information contained in the plan shall be included as part of project-related environmental awareness training. At minimum, the plan shall include the following:</p> <ul style="list-style-type: none"> • Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, use of spark arrestors, and hot work restrictions; • Work restrictions during Red Flag Warnings and High to Extreme Fire Danger days; • Fire coordinator role and responsibility; • Worker training for fire prevention, initial attack firefighting, and fire reporting; • Emergency communication, response, and reporting procedures; 	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Coordination with local fire agencies to facilitate agency access through the project site; • Emergency contact information; • Demonstrate compliance with applicable plans and policies established by state agencies <p>MM-WLD-7: California State University/San Diego State University or its designee shall prepare a defensible space plan to address landscape requirements for the perimeter structures along the northern, eastern, and southern edges of development. The defensible space plan shall conform to the standards outlined in California Public Resources Code Section 4291, at a minimum.</p>	
Would the project have a cumulative effect on hazards or hazardous materials?	Less than Significant Impact	N/A	N/A
Hydrology and Water Quality			
Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Less than Significant Impact	N/A	N/A
Would the project substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant Impact	N/A	N/A
Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through			

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
the addition of impervious surfaces, in a manner which would:			
a) Result in substantial erosion or siltation on-or offsite?	Less than Significant Impact	N/A	N/A
b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	Less than Significant Impact	N/A	N/A
c) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Less than Significant Impact	N/A	N/A
d) Impede or redirect flood flows?	Less than Significant Impact	N/A	N/A
Would the project, if in flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?	Less than Significant Impact	N/A	N/A
Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact	N/A	N/A
Would the project result in cumulatively considerable impacts to hydrology and water quality?	Less than Significant Impact	N/A	N/A
Land Use and Planning			
Would the project physically divide an established community?	Less than Significant Impact	N/A	N/A
Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less than Significant Impact	N/A	N/A

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have a cumulative effect on land use resources?	Less than Significant Impact	N/A	N/A
Mineral Resources			
Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Less than Significant Impact	N/A	N/A
Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on mineral resources?	Less than Significant Impact	N/A	N/A
Noise			
Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Impact NOI-1 – The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies if construction occurs between 7:00 p.m. and 7:00 a.m.	MM-NOI-1: The project (via construction contractor) shall established a telephone hot-line for use by the public to report any significant adverse noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours per day, the contractor shall be required to include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This hot-line telephone number shall be posted at the project site during construction in a manner visible to passersby and on the project website sdsu.edu/missionvalley . This telephone number shall be maintained until the project has been considered commissioned and ready for operation.	Significant and Unavoidable Impact (During night-time construction activities) Less than significant Impact (During on-site, daytime-only construction activities)

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>Throughout the construction of the project, the contractor shall be required to document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The contractor or its authorized agent shall be required to:</p> <ul style="list-style-type: none"> • Use a Noise Complaint Resolution Form to document and respond to each noise complaint. • Contact the person(s) making the noise complaint within 24 hours. • Conduct an investigation to attempt to determine the source of noise related to the complaint. • Take all reasonable measures to reduce the noise at its source. <p>MM-NOI-2: The project shall implement project design features PDF-N-1 through PDF-N-9.</p>	
	Impact NOI-2 – The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies due to construction of off-site improvements.	MM-NOI-1 MM-NOI-2	Significant and Unavoidable Impact
	Impact NOI-3 – The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of	MM-NOI-1 MM-NOI-2	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	other agencies to on-site residents due to on-going construction as a result of project phasing.		
	Impact NOI-4 – The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies as a result of on-site rock crushing and processing.	MM-NOI-1 MM-NOI-2	Less than Significant Impact
	Impact NOI-5 – The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies as a result of implosion of SDCCU Stadium.	MM-NOI-1 MM-NOI-2	Less than Significant Impact
	Impact NOI-6 – The project would result in generation of a substantial increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies as a result of well attended events at the new stadium.	MM-NOI-3: Implement Sound Amplification Controls. Incorporate electronic controls or limits into the final design of the new Stadium's audio/visual sound system, as well as tie-ins from hosted performers to control amplified speech and music noise at the source, and thus offer some degree of expected sound-level reduction at the potentially affected noise-sensitive receiver positions.	Significant and Unavoidable Impact
Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impact NOI-7 – The project would result in generation of excessive groundborne vibration during construction.	MM-NOI-4: Prior to breaking ground on any portion of the proposed project, California State University/San Diego State University (CSU/SDSU) or its designee shall prepare, or	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>cause to be prepared, a blasting/drilling monitoring plan. The plan shall include estimates of the drill noise levels, maximum noise levels (L_{max}), air-blast overpressure levels, and groundborne vibration levels at each residence within 1,000 feet of the blasting location. Where potential exceedances of the City of San Diego's Noise Ordinance are identified, the blasting/drilling monitoring plan shall identify mitigation measures shown to effectively reduce noise and vibration levels (e.g., altering orientation of blast progression, increased delay between charge detonations, pre-splitting) to be implemented in order to comply with the noise level limits of the City's Noise Ordinance, and a vibration-velocity limit of 0.5 inches per second (ips) peak particle velocity (PPV). The identified mitigation measures shall be implemented by CSU/SDSU, or its designee, prior to breaking ground. Additionally, all project phases involving blasting shall conform to the following requirements:</p> <ul style="list-style-type: none"> • All blasting shall be performed by a blast contractor and blasting personnel licensed to operate per appropriate regulatory agencies. • Each blast shall be monitored and recorded with an air-blast overpressure monitor and groundborne vibration accelerometer that is located outside the closest residence to the blast. This data shall be recorded, and a post-blast summary report shall be prepared and 	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>be available for public review or distribution as necessary.</p> <ul style="list-style-type: none"> Blasting shall not exceed 0.5 ips PPV at the nearest occupied residence, in accordance with the California Department of Transportation's <i>Transportation and Construction Vibration Guidance Manual</i> guidance. <p>MM-NOI-5: Prior to beginning construction of any project component within 200 feet of an existing or future occupied residence, California State University/San Diego State University (CSU/SDSU), or its designee, shall require preparation of a vibration monitoring plan. At a minimum, the vibration monitoring plan shall require data be sent to a University noise control officer or designee on a weekly basis or more frequently as determined by the noise control officer. The data shall include vibration level measurements taken during the previous work period. In the event that there is reasonable probability that future measured vibration levels would exceed allowable limits, CSU/SDSU shall take the steps necessary to ensure that future vibration levels do not exceed such limits, including suspending further construction activities that would result in excessive vibration levels until either alternative equipment or alternative construction procedures can be used that generate vibration levels that do not exceed 0.2 inches per second (ips) peak particle velocity (PPV) at the nearest residential structure.</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>Construction activities not associated with vibration generation could continue.</p> <p>The vibration monitoring plan shall be prepared and administered by a state-approved (or approval delegated to appropriate county or municipal jurisdiction or agency) noise/vibration consultant. In addition to the data described previously, the vibration monitoring plan shall also include the location of vibration monitors, the vibration instrumentation used, a data acquisition and retention plan, and exceedance notification and reporting procedures. A description of these plan components is provided in the following text.</p> <p>The vibration monitoring plan shall include a scaled plan indicating monitoring locations, including the location of measurements to be taken at construction site boundaries and at nearby residential properties.</p> <p>Vibration monitors shall be capable of measuring maximum unweighted root-mean square and PPV levels triaxially (in three directions) over a frequency range of 1 to 100 Hertz. The vibration monitor shall be set to automatically record daily events during working hours and to record peak triaxial PPV values in 5-minute interval histogram plots. The method of coupling the geophones to the ground shall be described and included in the report. The vibration monitors shall be calibrated within 1 year of the measurement, and a certified laboratory conformance report shall be included in the report.</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		The information to be provided in the data reports shall include, at a minimum, daily histogram plots of PPV versus time of day for three triaxial directions, and maximum peak vector sum PPV and maximum frequency for each direction. The reports shall also identify the construction equipment operation during the monitoring period and their locations and distances to all vibration measurement locations. A description of the notification of exceedance and reporting procedures shall be included, and the follow-up procedures taken to reduce vibration levels to below the allowable limits.	
	Impact NOI-8 – The project would result in a temporary generation of excessive groundborne vibration during implosion of SDCCU Stadium.	MM-NOI-4 MM-NOI-5	Less than Significant Impact
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on noise resources?	Impact NOI-9 – The project would result in a cumulative impact to noise.	MM-NOI-1 through MM-NOI-3	Significant and Unavoidable Impact
Population and Housing			
Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly	Less than Significant Impact	N/A	N/A

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
(for example, through extension of roads or other infrastructure)?			
Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	N/A	N/A
Would the project have a cumulative effect on housing and/or population resources?	Potentially Cumulatively-Considerable Impact	N/A	Significant and Unavoidable Impact
Public Services and Recreation			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:			
Fire protection and Emergency Services?	Less than Significant Impact	N/A	N/A
Police protection?	Less than Significant Impact	N/A	N/A
Schools?	Less than Significant Impact	N/A	N/A
Parks and Recreation	Less than Significant Impact	N/A	N/A
Other public facilities?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on public services resources?	<p>Impact PS-1: The proposed project would contribute to a cumulatively considerable impact to fire protection and emergency medical services because the impacts associated with construction and operation of future fire protection and emergency medical services facilities within the Mission Valley Community Plan Area by the City of San Diego are not known at this time.</p> <p>Impact PS-2: The proposed project would contribute to a cumulatively considerable impact to schools because the impacts associated with construction and operation of future school facilities within the Mission</p>	N/A	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	Valley Community Plan Area by SDUSD are not known at this time.		
Transportation and Traffic			
Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Impact TR-1 – Existing Plus Stadium Event. While a single event at the new Stadium would result in traffic operations that are the same or better than existing conditions, the new Stadium may hold more total events in a given year with attendance levels of 20,000 patrons or more. While no significance threshold is available to assess impacts of this type that would occur on an infrequent and irregular basis, the anticipated increase in the number of Stadium events would result in a potentially significant impact	N/A	Significant and Unavoidable
	Intersections		
	Impact TR-2 / Impact 28A - SR-163 Southbound Ramps/Ulric Street & Friars Road	MM-TRA-1 Intersection 1: SR-163 Southbound Ramps/Ulric Street & Friars Road (Caltrans) – The recommended improvement would be to re-optimize the coordinated signal offset. This action would result in a less than significant impact per the CSU TISM. Signal timing modifications would normally be implemented periodically at an intersection in order to optimize operations and address changing traffic volumes regardless of the addition of project traffic. Regarding the recommended signal offset optimization, CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvement from the Legislature or other available funding sources. However, because CSU cannot guarantee that	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Caltrans will be able to obtain such funds, the improvement is considered infeasible.	
	Impact TR-3 / Impact TR-28C - River Run Drive & Friars Road	MM-TRA-2 Intersection 8: River Run Drive & Friars Road (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 5,160 DUEs, CSU/SDSU shall pay its fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) in order to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. Alternative mitigation would be to widen Friars Road eastbound to add a fourth through lane, although widening this segment of Friars Road is not consistent with the 1985 Mission Valley Community Plan or the proposed Mission Valley Community Plan update (June 2019); therefore, for CEQA purposes, such physical mitigation is considered infeasible. The recommended mitigation to pay a fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) would improve operations in the PM peak hour to 32.9 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the recommended improvement. Accordingly, the mitigation is considered infeasible.	Significant and Unavoidable
	Impact TR-4 / Impact TR-28D Fenton Pkwy & Friars Road	MM-TRA-3 Intersection 9: Fenton Pkwy & Friars Road (City of San Diego) – Prior to the	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>issuance of the applicable CSU building permit for, or occupancy of, 4,150 DUEs, CSU/SDSU shall pay its fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic.</p> <p>Alternative mitigation would be to widen Friars Road eastbound to add a fourth through lane, although widening this segment of Friars Road is not consistent with the 1985 Mission Valley Community Plan or the proposed Mission Valley Community Plan update (June 2019); therefore, for CEQA purposes, such physical mitigation is considered infeasible. The recommended mitigation to pay a fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) would improve operations in the PM peak hour to 83.2 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the recommended improvement. Accordingly, the mitigation is considered infeasible.</p>	
	Impact TR-5 / Impact TR-28E - Northside Drive & Friars Road	MM-TRA-4 <u>Intersection 10: Northside Drive & Friars Road</u> (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 5,270 DUEs, CSU/SDSU shall pay its fair-share towards the cost to add a second northbound right-turn lane and optimize the traffic signals along the Friars Road corridor	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>extending from River Run Drive to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic.</p> <p>Alternative mitigation would be to widen Friars Road eastbound to add a fourth through lane, although widening this segment of Friars Road is not consistent with the 1985 Mission Valley Community Plan or the proposed Mission Valley Community Plan update (June 2019). The recommended mitigation to pay a fair-share towards the cost to add a second northbound right-turn lane is warranted by the projected right-turn volume of approximately 800 vehicles in the PM peak hour for this movement. The existing width for the northbound approach is approximately 50 feet, so the landscape strip could be converted to widen the road by four feet to provide a 13' outside right turn lane and an 11' inside right turn-lane (assuming the left-turn and through lanes are 10' wide). To address potential pedestrian safety related impacts, it also is recommended that a protected pedestrian phase be provided with this improvement to avoid the dual threat conflict. This option would improve operations in the PM peak hour to 51.8 seconds of delay. However, as to the physical improvement, there is no plan or program in place to provide the necessary additional funding and construct the improvement; therefore, the addition of a second northbound right-turn lane is infeasible. As to optimization of the traffic signals along the Friars Road corridor extending from River Run</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Drive to Stadium Way (Street A), while CSU would be responsible for the full cost of this improvement, because CSU does not have jurisdiction over this City of San Diego facility it cannot guarantee implementation of the improvement. Accordingly, the mitigation is considered infeasible.	
	Impact TR-6 / Impact TR-28H - I-15 SB Ramps & Friars Road	MM-TRA-5 <u>Intersection 17: I-15 SB Ramps & Friars Road</u> (Caltrans) – The recommended improvement would be to reconstruct the intersection to add a second eastbound left-turn lane, a second eastbound right-turn lane, and a second westbound right-turn lane. Implementation of these improvements would require widening both on-ramps to allow for two receiving lanes. If this improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of pedestrian and bicycle enhancements. Accordingly, the westbound right-turn lane would be squared off to improve pedestrian safety, and the westbound right-turn would be provided with an overlap phase. It should be noted that the Civita (Quarry Falls) development is also required to implement a portion of these improvements, including the addition of the second eastbound left-turn lane and squaring up the westbound right-turn movement; the SDSU Mission Valley Campus improvements would provide substantially more vehicle queuing approaching the ramp intersections, including on the bridge. Caltrans is	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		expected to additionally require that sidewalks and buffered bike lanes are provided as part of this improvement, and that a blank-out No Right Turn sign be installed at the dual eastbound and westbound right turn lanes. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian calls will be very rare and, accordingly, were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. Implementation of these improvements would result in operations in the AM and PM peak hours of 52.0 and 67.0 seconds of delay, respectively. These calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queuing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the improvement is considered infeasible.	
	Impact TR-7 / Impact TR-28I - I-15 NB Ramps & Friars Road	MM-TRA-6 <u>Intersection 18: I-15 NB Ramps & Friars Road</u> (Caltrans) – The recommended improvement would be to reconstruct the intersection to add a second eastbound left-turn lane. It should be noted that the Civita (Quarry	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>Falls) development is also required to implement this improvement but that it does not include any widening of the Friars Road bridge; the SDSU Mission Valley Campus improvements would provide substantially more vehicle queuing approaching the ramp intersections, including on the bridge. If this improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of sidewalks and buffered bike lanes be provided as part of this improvement, which would require widening the Friars Road overpass to I-15. Caltrans is expected to additionally require that the southbound approach be squared off and converted to two right-turn lanes provided with an overlap phase, and that a blank-out No Right Turn sign be installed for the westbound approach to improve pedestrian safety. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian calls will be very rare and, accordingly, were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. In the PM peak hour, re-optimization would include coordinating the signal with the adjacent I-15 Southbound Ramps & Friars Road intersection and the adjacent Rancho Mission Road & Friars Road intersection, where coordination is already in place in the AM peak hour. These improvements would result in operations in the AM and PM peak hours of 80.7 and 53.5 seconds of delay,</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		respectively. These calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queuing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the improvement is considered infeasible.	
	Impact TR-8 / Impact TR-28J - Rancho Mission Road & Friars Road	MM-TRA-7 <u>Intersection 19: Rancho Mission Road & Friars Road</u> (City of San Diego) – The recommended improvement is signal optimization at the adjacent I-15 Northbound Ramps & Friars Road intersection (Intersection 18), where coordination is already in place in the AM peak hour. This mitigation would improve operations at Intersection 19 in the PM peak hour to 67.2 seconds of delay. These calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queuing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. However, as stated above with respect to Intersection 18, because CSU cannot guarantee that Caltrans will be able to obtain the funds necessary to implement signal	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		optimization at Intersection 18, the improvement is considered infeasible.	
	Impact TR-9 / Impact TR-28L - Fairmount Avenue & San Diego Mission Road/Twain Avenue	MM-TRA-8 <u>Intersection 27: Fairmount Avenue & San Diego Mission Road/Twain Avenue (City of San Diego)</u> – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 8,940 DUEs, CSU/SDSU shall pay its fair-share to re-stripe San Diego Mission Road to add a separate eastbound left-turn lane. This re-striping would result in an 11'-wide right-turn lane and 10' left-turn and through lanes for the eastbound approach. To properly align the east-west approaches, the westbound approach of Twain Avenue should also be re-striped to provide a separate left-turn lane. On this approach, the re-striping would result in a 12' curb lane that is a shared right-turn and through lane, an 11' exclusive through lane, and a 10' left-turn lane. Protected left-turn phasing is assumed to be provided for both eastbound and westbound approaches. This mitigation would improve operations in the AM peak hour to 35.3 seconds of delay and in the PM peak hour to 33.1 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.	Significant and Unavoidable
	Impact TR-10 / Impact TR-28M - Texas Street & Camino del Rio North	MM-TRA-9 <u>Intersection 31: Texas Street & Camino del Rio S (City of San Diego)</u> – Prior to the issuance of the applicable CSU building	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		permit for, or occupancy of, 5,130 DUEs, CSU/SDSU shall restripe both the eastbound and westbound through lanes to be shared left-turn and through lanes and performing signal re-optimization, which is standard practice with intersection reconfiguration. This mitigation would improve operations in the AM peak hour to 108.4 seconds of delay and in the PM peak hour to 86.9 seconds of delay, and would result in a less than significant impact per the CSU TISM. However, CSU does not have jurisdiction over this City of San Diego facility, and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.	
	Impact TR-11 / Impact TR-28N - Ward Road & Rancho Mission Road	MM-TRA-10 <u>Intersection 32: Ward Road & Rancho Mission Road</u> (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 3,950 DUEs, CSU/SDSU shall install a traffic signal at this intersection. This improvement would improve operations in the AM and PM peak hours to 4.2 and 6.3 seconds of delay, respectively. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.	Significant and Unavoidable
	Impact TR-12 / Impact TR-28O - Fairmount Avenue & Mission Gorge Road	MM-TRA-11 <u>Intersection 34: Fairmount Avenue & Mission Gorge Road (City of San Diego)</u> – Prior to the issuance of the applicable CSU building permit for, or occupancy of,	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		10,160 DUEs, CSU/SDSU shall optimize the signal timing to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This mitigation would improve operations in the PM peak hour to 54.1 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.	
	Impact TR-13 / Impact TR-28P- Fairmount Avenue & Camino del Rio North	MM-TRA-12 <u>Intersection 35: Fairmount Avenue & Camino del Rio North (Caltrans)</u> – The required improvement would be to restripe the eastbound approach to provide a second eastbound right-turn lane as an approximately 150-foot pocket lane and increase the traffic signal cycle length from 130 to 150 seconds. Signal re-optimization is standard practice with intersection reconfiguration. Note that this signal is coordinated with the signal at Fairmount Avenue & Mission Gorge Road. Northbound and southbound through volumes are high enough to warrant additional capacity at this intersection, and a road widening to add lanes is recommended in the current Navajo Community Plan (adopted 2015). However, this mitigation is currently considered infeasible due to physical limitations beneath the adjacent bridges serving the I-8 mainline, I-8 ramp, and trolley. It also should be noted that the Mission Valley Community Plan Update Final PEIR (May 2019) identified mitigation at this intersection but	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		determined that roadway widening was infeasible due to limited right-of-way. The mitigation to add a second eastbound right-turn lane would improve operations to 95.2 and 109.0 seconds of delay in the AM and PM peak hours, respectively. To the extent Caltrans seeks to pursue the improvements, CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, and for the other reasons noted above relating to physical and regulatory obstacles, the recommended improvements are considered infeasible.	
	Impact TR-14 / Impact TR-28Q - Ruffin Road & Aero Drive	MM-TRA-13 <u>Intersection 41: Ruffin Road & Aero Drive</u> (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 9,780 DUEs, CSU/SDSU shall optimize the signal timing at the intersection to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This mitigation would improve operations in the PM peak hour to 49.8 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	Impact TR-28B - Frazee Road & Friars Road	N/A	Significant and Unavoidable
	Impact TR-28F - River Run Drive & Friars Road	N/A	Significant and Unavoidable
	Impact TR-28G - Mission Village Drive/Aztec Way (Street D) & Street 2	N/A	Significant and Unavoidable
	Impact TR-28K - Mission Gorge Road & Friars Road	N/A	Significant and Unavoidable
	Freeway Segments		
	Impact TR-15 / Impact TR-29G - I-15 from Adams Avenue to I-8	N/A	Significant and Unavoidable
	Impact TR-16 / Impact TR-29H - I-15 from I-8 to Friars Road	N/A	Significant and Unavoidable
	Impact TR-17 / Impact TR-29I - I-15 from Friars Road to Aero Drive	N/A	Significant and Unavoidable
	Impact TR-18 / Impact TR-29J - I-15 from Aero Drive to Balboa Avenue/Tierrasanta Boulevard	N/A	Significant and Unavoidable
	Impact TR-19 / Impact TR-29K - I-8 from Morena Boulevard to Taylor Street	N/A	Significant and Unavoidable
	Impact TR-20 / Impact TR-29L - I-8 from Taylor Street to SR-163	N/A	Significant and Unavoidable
	Impact TR-21 / Impact TR-29M & TR-29N - I-8 from SR-163 to Texas Street	N/A	Significant and Unavoidable
	Impact TR-22 / Impact TR-29P - I-8 from I-805 to I-15	N/A	Significant and Unavoidable
	Impact TR-23 / Impact TR-29R - I-8 from Fairmount Avenue to College Avenue	N/A	Significant and Unavoidable
	Impact TR-29A - SR-163 from 6th Avenue to I-8	N/A	Significant and Unavoidable
	Impact TR-29B - SR-163 I-8 to Friars Road	N/A	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	Impact TR-29C - SR-163 from I-8 to I-805	N/A	Significant and Unavoidable
	Impact TR-29D - I-805 from Madison Avenue to I-8	N/A	Significant and Unavoidable
	Impact TR-29E - I-805 from Mesa College/Kearny Villa Road to Balboa Avenue	N/A	Significant and Unavoidable
	Impact TR-29F - I-805 from SR-163 to Balboa Avenue	N/A	Significant and Unavoidable
	Impact TR-290 - I-8 from Texas Street to I-805	N/A	Significant and Unavoidable
	Impact TR-29Q - I-8 from I-15 to Fairmount Avenue	N/A	Significant and Unavoidable
	Ramp Metering		
	Impact TR-24 / Impact TR-30A - I-15 NB On-ramp from Friars Road	N/A	Significant and Unavoidable
	Impact TR-25 / Impact TR-30B - I-15 SB/I-8 Loop On-ramp from Friars Road	MM-TRA-14 <u>I-15 SB Loop On-Ramp at Friars Road</u> - Delays could be reduced to below 15 minutes by the addition of a second mixed flow lane on this ramp. To provide a second lane on this ramp would require widening a bridge structure over both the multi-use path connecting the site to Murphy Canyon Road and a drainage channel. CSU will support Caltrans in its effort to obtain funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended mitigation is considered infeasible.	Significant and Unavoidable
	Impact TR-26 / Impact TR-30C - I-15 SB Direct On-ramp from Friars Road	MM-TRA-15 <u>I-15 SB On-Ramp at Friars Road</u> - Delays could be reduced to below 15 minutes by the addition of a second mixed flow	Significant and Unavoidable

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		lane on this ramp. To provide a second lane on this ramp will require widening of a bridge structure over the multi-use path connecting the site to Murphy Canyon Road. CSU will support Caltrans in its effort to obtain funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended mitigation is considered infeasible.	
	Impact TR-27 / Impact TR-30D - I-8 EB On-ramp from SB Fairmount Avenue	N/A	Significant and Unavoidable
	Stadium Parking Supply and Demand		
	Impact TR-31	N/A	Significant and Unavoidable
	Construction-Related Impacts		
	Impact TR-32	N/A	Significant and Unavoidable
Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Below the applicable threshold [for informational purposes only]	N/A	N/A
Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant Impact	N/A	N/A
Would the project result in inadequate emergency access?	Impact TR-33	MM-TRA-16 As part of the building construction and occupancy permitting process, emergency access to each building will be reviewed for consistency with and adherence to standards identified in applicable regulatory	Less Than Significant

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		documents including but not limited to the Uniform Building Code and California Fire Code. In addition, buildings will be inspected by emergency responder entities including the City of San Diego Fire Department, which has a station located on the north side of Friars Road just east of the Stadium Way (Street A) intersection.	
Would the project have a cumulative effect on transportation resources?	See Impacts TR-2 through TR-30 , above.	MM-TRA-1 through MM-TRA-15	Significant and Unavoidable
Tribal Cultural Resources			
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Impact TCR-1 - A significant impact to previously unidentified CRHR-eligible cultural resources could occur as a result of proposed project construction. Should construction or other personnel encounter any CRHR-eligible cultural resources within the proposed project area, the proposed project would result in potentially significant impacts. Therefore, mitigation is provided. (Please refer to mitigation measure MM-CUL-4 outlined in Section 4.4, Cultural Resources, of this EIR.)	MM-CUL-4	Less than Significant Impact
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying	Impact TCR-2 - A significant impact to previously unidentified TCRs, or previously undocumented human remains, could occur as a result of proposed project construction. Should construction or other personnel encounter any historical, archaeological, or TCR material within the	MM-CUL-4 MM-CUL-5	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	proposed project area, the proposed project would result in potentially significant impacts. Therefore, mitigation is provided. (Please refer to mitigation measures MM-CUL-4 and MM-CUL-5 outlined in Section 4.4, Cultural Resources, of this EIR.)		
Would the project have a cumulative effect on tribal cultural resources?	Potentially Cumulatively Considerable Impact	MM-CUL-4 MM-CUL-5	Less than Significant Impact
Utilities and Service Systems			
Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant Impact	N/A	N/A
Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Impact UTL-1 – For planning purposes, the proposed project’s water demand should be included in the required 2020 Urban Water Management Plan Updates of the City of San Diego and the San Diego County Water Authority. With inclusion of the project’s water demand into such plans, and based on the supply and demand information in the Mission Valley Community Plan WSA, the available water supplies will be sufficient during normal, single-dry, and multiple-dry water years over a 20-year projection to meet the projected demands of the Mission Valley Community Plan Update (including the project site), in addition to the existing and other planned	MM-UTL-1: At or prior to project approval, the San Diego County Water Authority and the City of San Diego can and should include the proposed project’s water demand in their required 2020 urban water management plan updates	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	development within the City's Public Utilities Department service area.		
Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less than Significant Impact	N/A	N/A
Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Impact UTL-2 – The proposed project would result in the generation of significant amounts of construction waste, which could result in significant impacts	MM-UTL-2: During construction of the proposed project, California State University (CSU)/San Diego State University (SDSU), or its designee, shall reuse all demolition waste to the extent feasible. CSU/SDSU, or its designee, shall dispose of all recyclable demolition waste products at a construction waste recycling facility. Following occupancy of the proposed project, CSU/SDSU, or its designee, shall maintain an active recycling program to reduce solid waste generated by the proposed project	Less than Significant Impact
Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impact UTL-2	MM-UTL-2	Less than Significant Impact
Would the project have a cumulative effect on utilities and/or service systems resources?	Less than Significant Impact	N/A	N/A
Wildfire			
Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impact WDF-1 - The proposed project would have the potential to substantially impair an adopted emergency response plan or emergency evacuation plan	MM-WLD-1: Implement MM-HAZ-9 , identified in Section 4.8, Hazards and Hazardous Materials	Less than Significant Impact
Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project	Impact WLD-2 - Construction activity within the southern and eastern portions of the property adjacent to the San Diego River	MM-WLD-2: To avoid impeding emergency vehicle and evacuation traffic around construction vehicles and equipment, prior to	Less than Significant Impact

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	and Murphy Canyon Creek, respectively, could be subject to increased ignition potential resulting from construction equipment due to the proximity of native vegetation communities	<p>commencement of construction activities California State University/San Diego State University or its designee shall develop an Emergency Vehicle Access Plan that includes the following:</p> <ul style="list-style-type: none"> • Evidence of advanced coordination with emergency service providers, including but not necessarily limited to the University Police Department, San Diego Police Department, San Diego Fire-Rescue Department, ambulance services, and paramedic services; • Notification to emergency service providers of the proposed project locations, nature, timing, and duration of any construction activities, and request for advice about any road access restrictions that could impact their response effectiveness; and • Project construction schedules and routes designed to avoid restricting movement of emergency vehicles to the best extent possible. Provisions to be ready at all times to accommodate emergency vehicles. Provisions could include the use of plantings over excavations, short detours, and/or alternate routes. <p>MM-WLD-3: Throughout the duration of construction, the construction contractor shall ensure that adequate access to all buildings on the project site be provided for emergency vehicles during all building construction phases.</p>	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>MM-WLD-4: Throughout the duration of construction, the construction contractor shall ensure that adequate water is available to service all construction activities during all phases.</p> <p>MM-WLD-5: The construction contractor shall ensure the implementation of all construction-phase defensible space, landscape, and irrigation plan components prior to combustible building materials being delivered to the project site.</p> <p>MM-WLD-6: Prior to commencement of construction activities, California State University/San Diego State University or its designee shall develop a Construction Fire Prevention Plan that addresses training of construction personnel and provides details of fire-suppression procedures and equipment to be used during construction. Information contained in the plan shall be included as part of project-related environmental awareness training. At minimum, the plan shall include the following:</p> <ul style="list-style-type: none"> Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, 	

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>use of spark arrestors, and hot work restrictions;</p> <ul style="list-style-type: none"> • Work restrictions during Red Flag Warnings and High to Extreme Fire Danger days; • Fire coordinator role and responsibility; • Worker training for fire prevention, initial attack firefighting, and fire reporting; • Emergency communication, response, and reporting procedures; • Coordination with local fire agencies to facilitate agency access through the project site; • Emergency contact information; • Demonstrate compliance with applicable plans and policies established by state agencies. <p>MM-WLD-7: California State University/San Diego State University or its designee shall prepare a defensible space plan to address landscape requirements for the perimeter structures along the northern, eastern, and southern edges of development. The defensible space plan shall conform to the standards outlined in California Public Resources Code Section 4291, at a minimum.</p>	
Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or	Less than Significant Impact	N/A	N/A

Table ES-2. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
that may result in temporary or ongoing impacts to the environment?			
Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less than Significant Impact	N/A	N/A
Would the project have a cumulative effect on wildfire?	Less than Significant Impact	N/A	N/A

ES.5 Areas of Controversy/Issues to be Resolved

Section 15123(b)(2) of the CEQA Guidelines requires that areas of controversy known to the lead agency be stated in the EIR summary. To determine the number, scope, and extent of the environmental topics to be addressed in this EIR, SDSU prepared an NOP and Initial Study and circulated them to interested public agencies, organizations, community groups, and individuals in order to receive input on the proposed project. SDSU also held a scoping/public information meeting to obtain agency and public input on the proposed project. Based on the NOP and Initial Study scoping process and comments received, among the issues that are addressed in the Draft EIR are the following (the EIR section that addresses the issue raised is provided in parentheses):

1. Biological resource impacts, including consideration of the San Diego Multiple Species Conservation Plan (MSCP) and City of San Diego's MSCP Subarea Plan (Section 4.3, Biological Resources)
2. Cultural resources, including tribal cultural resources and outreach to Native American tribes (Section 4.4, Cultural Resources, and 4.16, Tribal Cultural Resources)
3. Increased energy consumption (Section 4.5, Energy)
4. Greenhouse gas (GHG) emissions and the City of San Diego Climate Action Plan (Section 4.7, Greenhouse Gas Emissions)
5. Hazards and previous contamination and remediation actions on the project site (Section 4.8, Hazards and Hazardous Materials)
6. Runoff/drainage, flooding, impacts to groundwater, and water quality and proximity to Murphy Canyon Creek and the San Diego River (Section 4.9, Hydrology and Water Quality)
7. Community compatibility related to increased density near single family residential neighborhoods (Section 4.10, Land Use and Planning; 4.13, Population and Housing; and 5.1, Growth Inducement)
8. Impacts to public services, provision of parkland including the San Diego River Park and consistency with the San Diego River Park Master Plan (Section 4.14, Public Services and Utilities, and Section 4.10, Land Use and Planning)
9. Potential impacts associated with increased traffic congestion and traffic/pedestrian safety issues (Section 4.15, Transportation)
10. Demand for utilities including sewer and water demand (Section 4.17, Utilities and Service Systems)
11. Alternatives (Section 6, Alternatives)

ES.6 Summary of Project Alternatives

Section 15126.6 of the CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to the project should occur. Alternatives are to include those that are reasonably feasible and would attain most of the basic objectives of the project. Alternatives should be capable of avoiding or substantially lessening significant effects of the proposed project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required.

The EIR identifies five project alternatives developed during the conceptual planning phase of the proposed project.

- (1) "No Project Alternative." The No Project Alternative assumes that the proposed project would not be developed and the existing environmental conditions in the project area would remain in their current

state. As such, the project area would continue to be a parking lot and 68,000-seat stadium. Note, however, that CEQA also recommends that the No Project Alternative analysis analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (CEQA Guidelines Section 15126.6(e)(3)(C)). In this case, the No Project Alternative would be inconsistent with the City's current planning efforts, including the draft Mission Valley Community Plan Update and San Diego River Master Plan, which call for development of the project site with a variety of land uses similar to the proposed project. Similarly, the No Project Alternative would not be consistent with the City's CAP, which establishes transit priority areas, such as the project site, and directs that development of these sites to include a mix of land uses at densities and intensities that support adjacent transit. The No Project Alternative would be inconsistent with these recent planning efforts. Under the existing Mission Valley Community Plan (1984), the current land use is the proposed project would not deviate materially from the land uses permitted by the existing Mission Valley Community Plan for commercial recreation and public recreation....

- (2) "Stadium Re-Use Alternative." The Stadium Re-Use Alternative would restore SDCCU Stadium to the original configuration of approximately 51,000 seats, as first constructed in 1968. Under this alternative, the proposed project would be re-configured around the existing s\Stadium to achieve similar land uses and intensities as the proposed project to the extent feasible based on existing grades and topography, and accommodating the floodplain.
- (3) "Reduced Density Alternative." The Reduced Density Alternative would develop similar land uses in the same configuration as the proposed project and have the same physical impacts as the proposed project; however, the Reduce Density Alternative would reduce the intensity of developments. Under this alternative the following intensities of uses would be developed:
 - Stadium with a capacity of 35,000 (same as the proposed project)
 - Up to 550 apartment units
 - Up to 10,000 square feet of neighborhood commercial
 - Up to 130,000 square feet of campus/office
 - Up to 100 hotel rooms
 - Similar parks, recreation, and open space uses as the proposed project.
- (4) "Stadium and River Park Only Alternative." The Stadium and River Park Only Alternative was developed in response to comments received on the NOP, which called for the project site to only be developed with a new stadium and the remainder of the project site to be developed as a park. Under the Stadium and River Park Alternative, the project site would be developed with a 35,000-capacity multipurpose stadium, surface parking lot containing approximately 6,050 parking spaces, and a 34-acre River Park. This alternative would generally be consistent with the 1984 Mission Valley Community Plan land uses and zoning for the project site, prior to the adoption of San Diego Municipal Code Section 22.0908 and the 2019 Mission Valley Community Plan Update.
- (5) "Alternative Stadium Location Alternative." Under the Alternative Stadium Location Alternative, the proposed stadium would be built on campus, east of College Avenue. Under this alternative, the remaining uses would be constructed on the project site and could be developed at lower intensities and spread over the footprint of the proposed on-site stadium.

Table ES-3, Alternatives Matrix – Impacts Comparison, provides a summary of the impacts of each alternative as it compares to the proposed project. As explained in the Table Notes, down arrows indicate impacts under the alternative would be less than the proposed project, up arrows indicate impacts would be greater than the proposed project, and horizontal lines indicate impacts would be similar to the proposed project.

Table ES-3. Alternatives Matrix – Impacts Comparison

	No Project Alternative	Stadium Re-Use Alternative	Reduced Density Alternative	Stadium and River Park Only Alternative	Alternative Stadium Location Alternative
Aesthetics and Visual Quality	↓	↑	↓	↓	↑
Air Quality	↓	–	↓	↓	↑
Biological Resources	↓	–	↓	↓	–
Cultural Resources	↓	↓	–	–	–
Energy	↓	↑	↓	↓	↑
Geology and Soils	↓	–	–	↓	↑
Greenhouse Gas Emissions	↓	–	↓	↓	↑
Hazards and Hazardous Materials	↓	–	↓	↓	↑
Hydrology and Water Quality	↓	–	–	↑	↑
Land Use and Planning	↓	↑	↑	↑	↑
Mineral Resources	↓	–	–	–	–
Noise	↓	↓	↓	↓	↑
Population and Housing	↓	–	↓	↓	–
Public Services	↓	–	↓	↓	↑
Transportation/ Circulation and Parking	↓	–	↓	↓	↑
Tribal Cultural Resources	↓	–	–	–	–
Utilities and Utility Systems	↓	–	↓	↓	↑
Wildfire	↓	–	↓	↓	–

Notes:

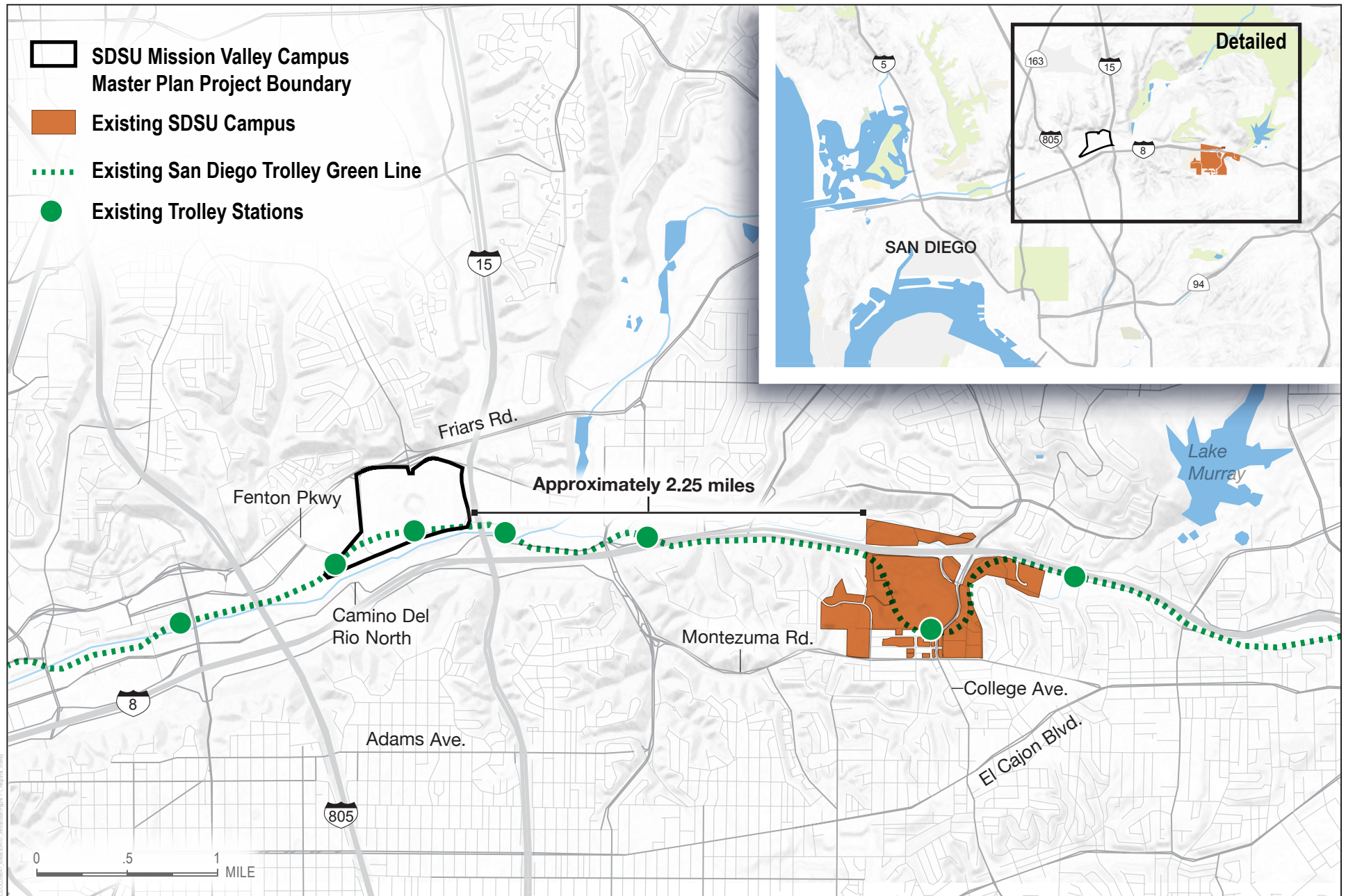
↓ = Less impacts than the proposed project

↑ = Greater impacts than the proposed project

– = Similar impacts to the proposed project

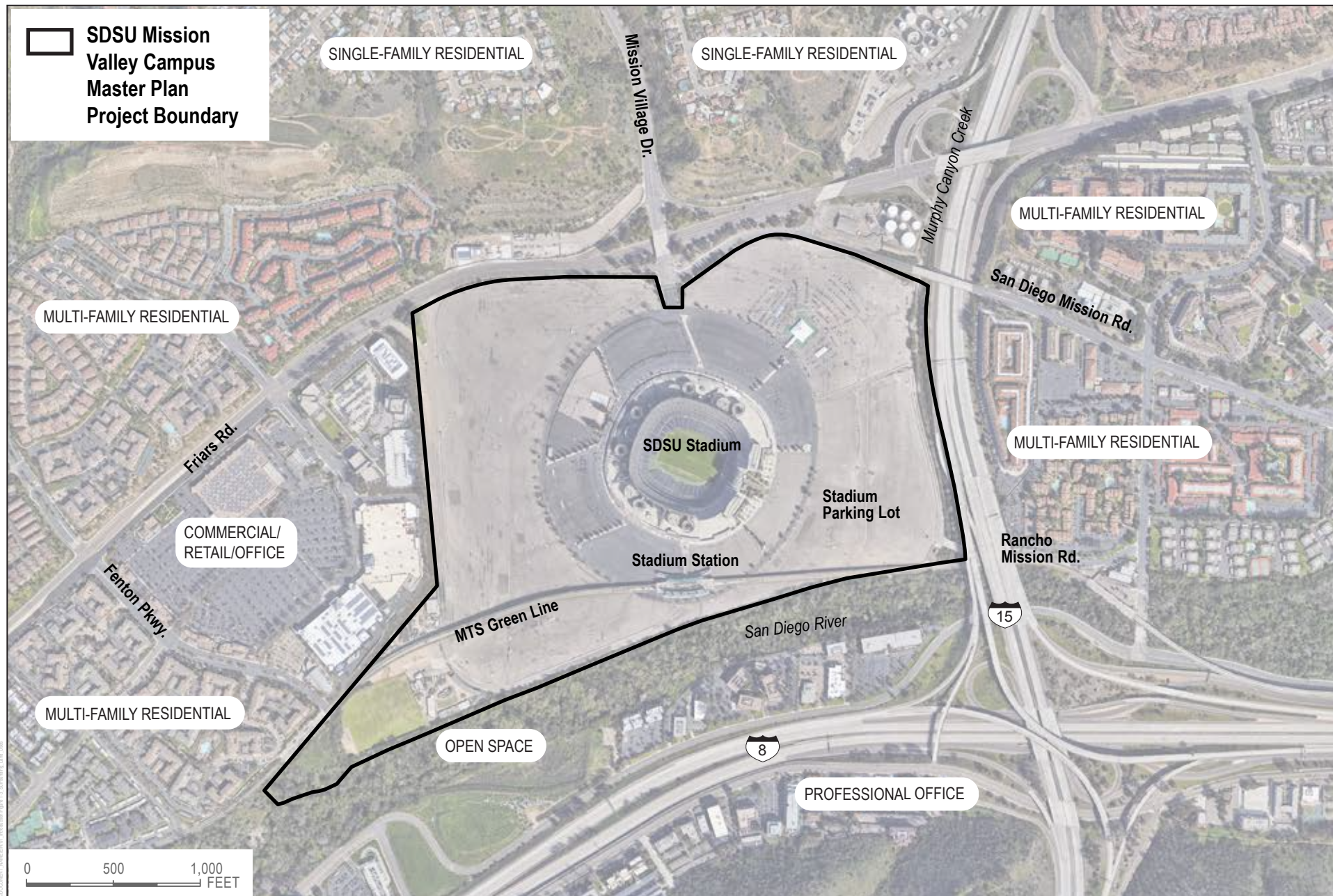
In addition to the above alternatives analyzed in Section 6.4, five alternatives were considered but rejected. These alternatives include (1) the City of San Diego 2015 Stadium Reconstruction EIR project (SCH No. 201506106) alternative which would develop a 68,000-72,000 capacity stadium on the project site; (2) an NFL Stadium alternative which would be similar to the proposed project but would include an NFL stadium in place of the currently proposed 35,000-capacity stadium; (3) an All Park alternative which would develop the entire project site for parks, recreational and open space uses; (4) a “Single Channel” Murphy Canyon Creek alternative which would widen Murphy Canyon Creek south of San Diego Mission Road to accommodate the projected 100-year floodplain, and (5) an SDSU On-Campus alternative which would develop the proposed project on the SDSU campus in the College area. As discussed in Section 6.3, these alternatives were considered but rejected from further analysis because they either failed to reduce environmental impacts, failed to comply with most of the project objectives, or are not considered feasible.

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SOURCE: GOOGLE EARTH

SDSU Mission Valley Campus Master Plan EIR



Figure ES-3
Project Site and Surrounding Land Uses

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SOURCE: 2/9/19 CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure ES-4
Concept Design - Site Plan

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1 Introduction and Existing Environmental Setting

This section provides an overview of the organization and content of the environmental impact report (EIR) prepared for the San Diego State University (SDSU) Mission Valley Campus Master Plan project (proposed project) in accordance with the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and California State University (CSU) policies and procedures. In addition, this section summarizes the existing project site and location; briefly describes the proposed project; provides an overview of the existing environmental setting, background, history, and planning context; and discusses the proposed project's environmental review procedures.

1.1 EIR Organization and Content

This EIR is organized to provide an analysis of the potentially significant environmental impacts, feasible mitigation measures, and reasonable alternatives associated with the proposed project. All elements of the proposed project are analyzed at a "project level."

To describe the significant direct, indirect, and cumulative impacts, and mitigation measures and alternatives of the proposed project, this EIR is organized as follows:

- **The Executive Summary** provides an overview of the proposed project and a table summarizing the results of the analysis of the environmental impacts identified in this EIR, along with the proposed mitigation measures and alternatives identified to avoid or substantially lessen each significant impact.
- **Chapter 1, Introduction and Environmental Setting** provides an overview of the EIR, the existing environmental setting; the proposed project's applicable background, regional, and local planning context; and the environmental review procedures for the proposed project.
- **Chapter 2, Project Description**, provides the project location, project objectives, detailed project description, and required discretionary approvals needed to implement the proposed project. The section includes detailed figures and tables relative to the proposed project.
- **Chapter 3, Cumulative Projects and Methods** summarizes the potential cumulatively considerable related projects that the environmental topical chapters have used to evaluate cumulative impacts.
- **Chapter 4, Environmental Impact Analysis**, analyzes the potentially significant environmental impacts identified for the proposed project, and the proposed mitigation measures to avoid or substantially lessen any identified significant impacts.
- **Chapter 5, Other Environmental Considerations**, discusses growth-inducing impacts of the proposed project, environmental areas where significant environmental effects cannot be avoided, and any significant irreversible environmental changes resulting from project implementation.
- **Chapter 6, Project Alternatives**, discusses a range of reasonable alternatives to the proposed project, including the No Project Alternative, a Stadium Re-Use Alternative, a Reduced Density Alternative, a Stadium and Park Only Alternative, and an Alternative Stadium Site Alternative.
- **Chapter 7, List of Preparers**, lists all individuals that participated in the preparation of this EIR.

The EIR appendices consist of technical studies prepared for the proposed project, as listed in EIR Table of Contents.

1.2 Brief Description of Existing Site, Project Background, and Proposed Project

1.2.1 Existing Site

The existing project site is located at 9449 Friars Road, San Diego, California 92008, which is commonly known as the San Diego County Credit Union (SDCCU) Stadium (formerly, “Qualcomm Stadium”). The existing site consists of the SDCCU Stadium, surrounding parking lot area, several storage sheds and other small buildings that support overall recreational uses of the existing stadium facility, and Murphy Canyon Creek. The Metropolitan Transit System (MTS) Green Line Trolley runs through the site; and the trolley’s Stadium Station is located on site and frequented by the traveling public primarily during stadium events.

1.2.2 Project Background

In January 2017, the National Football League’s San Diego Chargers announced the team’s intent to move to Los Angeles, removing one of the two major tenants of existing stadium. At the time, the remaining tenant, SDSU football, had only 2 years remaining under its lease agreement with the City of San Diego to continue use of the stadium.

Following the announcement from the Chargers, San Diego State University expressed its interest in purchasing the stadium site from the City for a campus expansion including a new stadium. SDSU began the process of developing a conceptual site plan for the project site, which generally consisted of a 35,000-capacity multi-purpose stadium, up to 4,600 residential units, two hotels and over 80 acres of recreational facilities and open space. The conceptual site plan was released in November 2017. SDSU presented the site plan to over 100 on campus and off-campus organizations and solicited feedback.

In September 2017, the Friends of SDSU was formed by a group of alumni, community members, and San Diegans. This group, operating independently of SDSU, assembled to develop and to qualify an Initiative petition (“Measure G”) that would allow the City of San Diego to sell the project site to SDSU for development of the proposed Mission Valley campus in an effort to secure a permanent home for SDSU football and provide the land necessary to build much-needed campus facilities and housing units that would facilitate SDSU’s projected growth. In January 2018, the SDSU West Campus Research Center, Stadium and River Park Initiative (Measure G) was qualified by the San Diego County Registrar of Voters, and the San Diego City Council voted to place the Initiative on the November 2018 General Election ballot.

On November 6, 2018, more than 54 percent of the City’s electorate voted in favor of Measure G, which has since been codified in Section 22.0908 of the San Diego Municipal Code (SDMC). Following the 2018 election, the City and SDSU have been engaged in negotiations for the purchase and sale of the project site pursuant to the conditions set forth in SDMC Section 22.0908.

1.2.3 Proposed Project Summary

The proposed project entails the acquisition, construction, and operation of the SDSU Mission Valley campus, stadium, parks, recreation, and innovation area to support SDSU's education, research, entrepreneurial, technology, and athletics programs. Specifically, the proposed campus would include:

1. approximately 86 acres of parks, recreation, and open space, including a River Park, which includes the 34 acres identified pursuant to the framework set forth in SDMC Section 22.0908, which shall be built by SDSU/CSU, with shared SDSU/community active and passive parks and recreation fields and open space; and pedestrian, hiking, and biking trails;¹
2. approximately 1.6 million square feet of campus uses for education, research, innovation, entrepreneurial, and technology programs;
3. construction of a new, multipurpose 35,000-capacity stadium and the corresponding demolition of the existing SDCCU Stadium;
4. approximately 4,600 residences including student, faculty, staff, workforce, and affordable housing within a vibrant, transit-oriented university village setting;
5. approximately 400 hotel rooms to support campus visitors and stadium-related events, with additional conference facilities, which would serve as an incubator for graduate and undergraduate students in SDSU's hospitality and tourism management program;
6. approximately 95,000 square feet of community-serving retail space to support campus, stadium, and the community;
7. enhanced use of the MTS Green Line Stadium Station, thereby minimizing vehicular traffic use and accommodating the planned Purple Line on the project site; and
8. associated on-site and off-site infrastructure, utilities, facilities, and other amenities.

For further information regarding the proposed project, please refer to this EIR, Section 2.0, Project Description.

1.2.4 Existing Environmental Setting

The project site is in the northeast portion of the Mission Valley Community within the City of San Diego (see Figure 1-1, Regional Vicinity Map, and Figure 1-2, Mission Valley Community Plan). Regionally, the City of San Diego covers approximately 206,989 acres in southwestern San Diego County, located approximately 17 miles north of the United States–Mexico border. The cities of Del Mar, Poway, Santee, El Cajon, La Mesa, Lemon Grove, National City, Chula Vista, and Coronado and unincorporated San Diego County border the City to the north, south, and east. The Pacific Ocean forms the City's western border. The Mission Valley Community is in the central portion of the San Diego metropolitan area (see Figure 1-2, Mission Valley Community Plan). This community is approximately 5 miles north of downtown San Diego and 7 miles east of the Pacific Ocean. The communities of Linda Vista, Serra Mesa, Kearney Mesa, and Tierrasanta are located north of Mission Valley. Kensington-Talmadge, Normal Heights, Greater North Park, Uptown, and Old Town are located to the south of Mission Valley. Mission Bay Park is located west of Mission Valley, and the communities of Navajo and College Area are located east of Mission Valley.

¹ The City of San Diego (City) would remain the owner of approximately 34-acres identified in SDMC Section 22.0908 within the River Park. As part of CSU's purchase of the property comprising the project site, CSU would revitalize and restore the River Park.

Specifically, the project site is situated south of Friars Road, west of Interstate 15 (I-15), north of I-8, and east of the existing Fenton Marketplace shopping center. It is approximately 5 miles from downtown San Diego and approximately 2.5 miles west of the existing SDSU main campus situated along I-8 within the College Area Community of the City of San Diego.

Regional access to and from the project site is provided by four major freeways—I-15, I-8, I-805, and State Route 163 (SR-163)—accessed via Friars Road (see Figure 1-3, Project Site and Surrounding Land Uses). Further, the existing San Diego MTS Trolley Green Line and Stadium Station are situated within the project site as shown on Figure 1-1, Vicinity Map.

The project area is surrounded by major freeways, roadways, existing urban development, and the San Diego River. Higher density multifamily residential land uses are located to the northwest, southwest, and east, across I-15. Friars Road, Mission Village Drive, and San Diego Mission Road are located to the north. Kinder Morgan owns the existing Mission Valley Terminal, which is a fuel storage facility located just north of the project site at 9950 San Diego Mission Road. The Mission Valley Terminal has been in operation since the 1960s and is a primary fuel distribution center in San Diego County. The San Diego River, part of the City of San Diego's Multiple Species Conservation Program, (as more fully described in Section 1.7.1, below, and EIR Section 4.3, Biological Resources), is located immediately south of the project site. South of the San Diego River are additional office uses and I-8. To the north of Friars Road is San Diego Fire-Rescue Department Fire Station 45, undeveloped hillsides, and single-family residences situated atop the mesa, within the Serra Mesa Community. To the west are office and large commercial retail uses as part of the Fenton Marketplace shopping center. Murphy Canyon Creek, a partially earthen and concrete-lined channel that conveys flow into the San Diego River, is located within the eastern project boundary, and I-15 is located east of Murphy Canyon Creek.

1.3 Existing On-Site Uses

The property comprising the project site includes four existing uses as shown on Figure 1-3, Project Site and Surrounding Land Uses: (1) a multipurpose stadium (SDCCU Stadium) with an existing capacity of approximately 71,000 seats for football and other events; (2) an associated surface parking lot with approximately 18,870 parking spaces; (3) the existing San Diego MTS Stadium Trolley station, accessible via the Green Line traversing the project site and running toward downtown San Diego to the west and Santee to the east; and (4) Murphy Canyon Creek, a north/south drainage which conveys runoff to the San Diego River runs along the eastern project boundary. The SDSU existing main campus includes an MTS Green Line Station three trolley stops east from the Stadium Trolley station.

1.3.1 SDCCU Stadium

The subject property, including the SDCCU Stadium, is City-owned land allocated between the City's General Fund and the City's Water Department (City of San Diego 2017). In the early 1960s, local San Diego Union sportswriter Jack Murphy began to build support for a multipurpose stadium for San Diego. In November 1965, the San Diego voters passed a \$27 million bond, allowing construction to begin on a stadium. The project was designed by the architectural/engineering firm, Frank L. Hope & Associates. Construction began in April 1966, and it was completed in August 1967. When completed, the stadium was named San Diego Stadium and originally had a capacity of approximately 51,500 (City of San Diego 2015a).

Since 1967, the stadium has undergone two major renovations. In 1984, the stadium was renovated to add approximately 9,000 seats and 50 suites. In 1997, the stadium was again renovated to add approximately 10,350

seats, 34 suites and four club lounges; and the existing video board was replaced by two Sony JumboTron displays. Several smaller renovations occurred in 1978 and 1987. The result of such renovations was the addition of a lower deck, enclosing the stadium, and adding additional seating capacity (City of San Diego 2015a). Such renovations have significantly altered the original design of the Stadium. The Stadium also has undergone multiple name changes from San Diego Stadium, Jack Murphy Stadium, Qualcomm Stadium, and SDCCU Stadium. The existing seating capacity is approximately 71,000.

The Stadium was the home of the National Football League's San Diego Chargers; and it is the current home of SDSU's Division 1 collegiate football team. The Stadium has hosted the NCAA Holiday Bowl collegiate football game every December since 1978, and formerly hosted the Poinsettia Bowl collegiate football game. Through the 2003 Major League Baseball season, the stadium also served as the home of the San Diego Padres (City of San Diego 2015a).

In January 2017, the National Football League's San Diego Chargers announced it was moving to Los Angeles, and its stadium occupancy agreement expired in July 2017. The SDSU football team began playing its home games at the Stadium in 1967. In 2018, the City and SDSU entered a lease amendment extending SDSU's existing lease at the Stadium for 2 years, to December 31, 2020. The lease amendment increases the City's expected annual revenue at the Stadium and commits to continued Stadium operations for the additional 2 years (City of San Diego 2018a).

The SDCCU Stadium holds a variety of sporting and non-sporting events, including SDSU football games, the San Diego County Credit Union Holiday Bowl football game, and several parking lot events, as described in Table 1-1, Existing SDCCU Stadium Use (2018).

Table 1-1. Existing SDCCU Stadium Use (2018)

Event Description	No. of Events (annual) ¹	No. of Weekday Events	No. of Weekend Events	Average Attendance ²
Highest Attended Stadium Events (20,000+ guests)				
SDSU Football	7	1	6	21,414
International Soccer	3	1	2	16,614
Concerts	1	1	0	40,885
Jehovah's Witnesses Convention	3	1	2	20,000
Other Football ³	1	0	1	56,740
Holiday Bowl	1	1	0	34,490
<i>Subtotal</i>	<i>16</i>	<i>5</i>	<i>11</i>	<i>—</i>
Major Events (5,000 - 15,000 guests)				
Cal State Games Opening Ceremony	1	1	0	8,500
Super Shred ⁴	1	0	1	11,000
Warped Tour ⁴	1	1	0	11,000
<i>Subtotal</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>—</i>
Minor Events (1,000 - 5,000 guests)				
Festivals (Winter Wonderland, Craft Beer & Food, etc.)	14	6	8	1,000
Fun Runs	3	1	2	2,250
Swap Meet	46	46	0	1,000
<i>Subtotal</i>	<i>63</i>	<i>53</i>	<i>10</i>	<i>—</i>

Table 1-1. Existing SDCCU Stadium Use (2018)

Event Description	No. of Events (annual) ¹	No. of Weekday Events	No. of Weekend Events	Average Attendance ²
Daily Operations (<1,000 guests)				
Car/RV Show	53	28	25	200
Car Race/Autocross	44	30	14	200
Recycling event	2	2	0	200
Driving School	2	2	0	220
Stadium Advisory Board Meeting	10	10	0	20
<i>Subtotal</i>	<i>111</i>	<i>72</i>	<i>39</i>	<i>—</i>

Notes:

¹ Events based on the 2018 calendar available at <https://www.sandiego.gov/stadium>. Canceled events are not included.

- ² Average attendance determined by event per the following sources. Employees at Stadium including parking attendants, vendors, concessions staff, security etc. are included in attendance figure.
- SDSU Football*: Announced attendance reported by goaztec.com for all regular season home games and reduced to 70 percent actual-to-announced rate based on data provided by SDSU for the 2016 and 2017 seasons.
- International Soccer*: Announced attendance reported by Wikipedia, estimated 90 percent actual-to-announced rate based on no-show rate provided at <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
- Concert*: Announced attendance for the Jay Z & Beyoncé concert reported by Wikipedia, estimated 95 percent actual-to-announced rate based on a higher attendance for a one-time event.
- Jehovah's Witnesses Convention*: Announced Attendance provided by SDSU, estimated 90 percent actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
- Holiday Bowl*: Announced attendance in 2018 reported by Wikipedia, estimated 90 percent actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
- Navy/Notre Dame game*: Announced attendance reported by Wikipedia, estimated 90 percent actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
- Cal State Games Opening Ceremony*: Announced Attendance in 2017 provided by SDSU, estimated 90 percent actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
- Super Shred*: Attendance reported in <https://www.sdccu.com/promos/shred-guinness-world-record/>.
- Warped Tour*: Reported tickets sold in <https://www.sandiegouniontribune.com/entertainment/music/sd-et-upfront-warped-tour-20180621-story.html>. Estimated that additional tickets sold balance with no-shows.
- Festivals, Fun Runs, Car/RV Show, Car Race/Autocross, Recycling event, Stadium Advisory Board Meeting* - Attendance based on engineering judgment.
- Swap Meet*: Approximately 1,200 available vendor stalls, attendance based on engineering judgment.
- Driving School* - Includes 200 teens attending per <https://putonthebrakes.org/about> and includes 20 staff.
- ³ Other football refers to the 2018 Navy/Notre Dame game.
- ⁴ Not included with City's due diligence list of stadium events but occurred based on Fehr & Peers research.

When the stadium was first built, the surrounding area was primarily gravel and rock quarries. Over the past 40+ years, the area has been developed with office buildings along both the north and south side of I-8, hotels, and large shopping areas, as well as over 10,000 residential units in numerous mixed-use and multifamily developments (City of San Diego 2015a).

Topography generally slopes down from the east to west and north to south with the perimeter around the Stadium structure elevated to create drainage away from the Stadium structure. The property includes the Stadium and commensurate support facilities. There are also several detached small buildings and improvements at the southwest corner (City of San Diego 2015a).

As reported by the City of San Diego, the Stadium has historically operated at a deficit. The City's fiscal year 2019 adopted budget showed a budgeted operating deficit of approximately \$7.3 million, which did not include debt-service payments on stadium renovation bonds, nor revenues associated with Transient Occupancy Tax transfers

used to support required Stadium expenditures (City of San Diego 2018a). The City's fiscal year 2018 adopted budget showed a budgeted operating deficit of \$7.6 million, but actual expenditures and revenues resulted in the deficit being lowered to approximately \$3.3 million, largely due to increased revenues from concerts and other events (City of San Diego 2018a).² Further, the City reports that total revenues from Stadium operations continue not to cover the Stadium's operating costs; therefore, funds from the City's Transient Occupancy Tax receipts are used to cover this deficit (City of San Diego 2018a).

The City has reported deficits from Stadium operations in fiscal years 2018 through fiscal year 2021. For example, Stadium operational deficits amounted to approximately \$3.3 million in fiscal year 2018 (City of San Diego 2018a). In fiscal years 2020 and 2021, the City projected deficits of approximately \$5.6 million for fiscal year 2020, and approximately \$5.6 million in fiscal year 2021 (City of San Diego 2018a). Most recently, the City projected a Stadium operational deficit of \$1.1 million for fiscal year 2019 based on its mid-year budget monitoring report (City of San Diego 2019a).

Beyond annual expenses, the City of San Diego commissioned a facilities condition assessment of the buildings and structures that encompass the existing stadium, which was conducted from December 6, 2010 through December 10, 2010 (AECOM + Magellan Consulting, 2011). The AECOM assessment covered the architectural, mechanical, electrical, technology, and structural engineering components of the existing stadium. The assessment included a detailed cost estimate to correct identified conditions. The total current amount required to correct deficiencies, including deferred maintenance, in 2011 construction cost dollars, was estimated to be approximately \$79.8 million. Because the assessment encompassed visual inspections of most or all building components, AECOM concluded that additional costs would likely be incurred once inspections included destructive material testing and analyses. The assessment also included a Tier I seismic assessment, including an assessment of structural integrity and seismic compliance. It found several issues during the evaluation. The most important issues were: (1) the main stadium seating columns are a problem area—the main column elements are too short, and there are shear and axial load limitations for certain long walls/columns; (2) the Stadium lighting ring support columns have inadequate moment capacity with evidence of bending, overstressing, and inadequate spacing, particularly during large seismic events; and (3) there are column steel lap length and tie spacing limitations for the main Stadium support columns.

Further, during periods of sustained, heavy rains, the existing Stadium and parking lot are subject to flooding (City of San Diego, 2015a). Based on this data and a site assessment, if the existing Stadium were in use during flooding, such flooding would pose public safety issues.

1.3.2 Parking Lot

The SDCCU Stadium is surrounded by a surface parking lot, which provides approximately 18,870 parking spaces (City of San Diego 2015a). During most days, the parking lot is vacant except for approximately 60 cars (see Traffic Impact Analysis, EIR Appendix 4.15-1) that use the Green Line Stadium Station daily (described below). Several re-occurring events take place in the parking lot, such as vehicle sales events. The City of San Diego and other regional law enforcement agencies also use the parking lot as an Emergency Vehicle Operations Course for training;

² The City's Real Estate Assets Department staff, which manages Stadium operations, indicates that the revenues generated in fiscal year 2018 were unusually high and likely represented an outlier year, and that the approximately \$3.7 million in revenue for fiscal year 2019 represented a more typical year's revenue from Stadium operations (City of San Diego 2018a).

however, a new facility is planned to open in Otay Mesa and is being constructed for future use. The parking lot is within the 100-year and the 500-year FEMA floodplain as shown further in EIR Figure 1-4, FEMA Floodplain.

1.3.3 Metropolitan Transit System Trolley/Transit

The San Diego MTS Trolley Green Line is 23.6 miles long, with 27 stations, and operates from the Santee Transit Center through Mission Valley to the 12th and Imperial Transit Center (MTS 2013). The Green Line runs seven days a week from 4:29 a.m. until midnight (City of San Diego 2018b). The Green Line runs through the southern Stadium parking lot and is elevated throughout the project site. The Stadium Station is located south of the SDCCU Stadium and was constructed in 2005 (City of San Diego 2015a).

MTS Bus Route 14 is in the vicinity of the project site and can be accessed by the Green Line. The closest bus stop is located at Rancho Mission Road and San Diego Mission Road, an approximately 0.5-mile walk from the existing Stadium's main gate. This route connects to the Grantville Trolley Station, the SDSU Transit Center, the 70th Street Trolley, and other MTS bus routes. Weekday operating hours start at approximately 6:38 a.m. and end at approximately 5:36 p.m.

1.3.4 Murphy Canyon Creek

The Murphy Canyon Creek watershed is in the Mission San Diego Hydrologic Subarea within the Lower San Diego Hydrologic Area and San Diego Hydrologic Unit. Murphy Canyon Creek is a partially earthen and concrete-lined channel that conveys flow into the San Diego River. Per the boundary shown in SDMC Section 22.0908, this creek is included along the eastern project boundary. The project is not proposing any improvement, facility, construction, or staging within any portion of Murphy Canyon Creek; therefore, while the existing creek is within the project boundary, no project element, component, improvement, or feature is contemplated within the creek.

Murphy Canyon Creek currently flows in a southerly direction along the east portion of the project site and west side of I-15. The creek has been channelized as it approaches and then flows along the project site. The approaching segment from the north is a concrete-lined trapezoidal channel, while the segment along the site is also trapezoidal, but with lining varying between riprap, earth, and vegetation. The creek confluences with the San Diego River near the southeast corner of the project site. There are three bridge crossings of the creek along the project site. A trolley bridge and vehicular bridge cross near the south end just upstream of the confluence. The vehicular bridge provides access to the stadium from Rancho Mission Road. The San Diego Mission Road bridge crosses near the northeast corner of the project site.

The Federal Emergency Management Agency has delineated a 100-year floodplain along Murphy Canyon Creek. The floodplain is shown on Flood Insurance Rate Map Panels 06073C1636H and 06073C1638H dated May 16, 2012. The FIRM floodplain is generally along the existing creek channel between the parking lot and I-15. However, the FEMA mapping also shows that the 100-year flow spills out of the creek and into the Kinder Morgan facility north of the site. The spillover flow continues south and enters the existing stadium site near the Kinder Morgan access road. This flow continues south along the existing stadium parking lot to the San Diego River. The Murphy Canyon Creek floodplain is designated as Zone A, which indicates that it was determined by approximate methods and no detailed analyses were performed.

Detailed analyses of the creek have been performed, and the analyses confirm that Murphy Canyon Creek, in its existing condition, does not have capacity to accommodate the 100-year flow rate of 3,500 cubic feet per second.

The lack of capacity is associated with the fact that the creek was constructed several decades ago, possibly circa the stadium construction in 1967. The City of San Diego's 1971 design standards were not based on a 100-year flow rate. The 100-year methodology did not arrive until sometime between 1971 and 1984. Furthermore, the watershed has developed over time. Ongoing development increases the creek flow rates as impervious surfaces are added and natural infiltration decreases. The 100-year flow will spill out of the existing channel within the Kinder Morgan facility as indicated by FEMA but can also spill out along the existing stadium parking lot. The project does not propose any project facilities, improvements, or features in the existing creek, nor any other change to any aspect of the creek. However, the proposed project's park feature, including a proposed culvert, have been designed to accommodate the 100-year flows due to pre-existing flood conditions from the creek.

1.3.5 Other Ancillary Uses

In addition to the above uses, there are other existing ancillary and temporary uses on the project site. These include Little Q field, a recycling center, storage and staging areas, and various MTS infrastructure.

1.4 Existing SDSU Main Campus

Throughout its over 120-year history, SDSU, which is San Diego's oldest university, has planned and developed numerous academic and athletic classrooms, buildings, and facilities at its main campus. In the last 5 years, SDSU has completed more than \$550 million in capital projects, including classroom, residential, and multi-use buildings to serve its student body for the benefit of the San Diego region. The South Campus Plaza is SDSU's most recent large-scale campus mixed-use project, completed with no state funds, tuition, or taxes. The following is a brief history of SDSU's main campus and associated development.

Founded as a state college in 1897, SDSU initially occupied a single building in downtown San Diego. In February 1930, the SDSU campus was moved to its present location and was operated from seven buildings surrounding the "Main Quad." Expansion of the campus initially occurred to the north and southeast. Gradually, canyon areas were developed with auxiliary uses, including sporting and entertainment venues, as well as parking lots (SDSU 1997).

By the early 1960s, primarily due to parking concerns and a lack of established functional campus areas, SDSU initiated a comprehensive planning effort deemed necessary for the future expansion of the campus. The first SDSU campus master plan was prepared by Frank L. Hope and Associates and approved by the CSU Board of Trustees in 1963. The 1963 master plan contained a planned land use map, outlined directives for facility placement, and provided target square footage for academic, support, and athletic spaces. An update to the 1963 campus master plan was completed in 1967, and several primarily minor revisions were made to the plan throughout the 1970s (SDSU 1997).

Several major revisions have been made to the master plan over the last 20 years. Beginning in 1997, SDSU embarked on a comprehensive two-phase master planning effort, which resulted in a significant update to the prior master plan efforts. Phase I of the process involved the preparation of a physical master plan, which documents SDSU's existing conditions and outlined proposed policies and guidelines to maintain and enhance the character, form, and function of the campus (SDSU 1997). Phase II of this process evolved into three distinct planning programs: the Student Activity Center (now Viejas Arena, completed in 1997) and the Aztec Recreation Center (completed in 1997), the SDSU Aztec Walk Master Plan (approved in 1999) and the SDSU Campus Master Plan 2000 (approved in 2001).

By 1997, SDSU planned, funded, and constructed the Viejas Arena, which is situated on the main SDSU campus and is home of the SDSU men's and women's basketball teams. In conjunction with that effort, SDSU also completed the Aztec Recreation Center. The Viejas Arena is a premier on-campus indoor basketball arena that seats approximately 12,414 for basketball games. The arena accommodates other athletic, entertainment, and cultural events; and it is a popular venue for concerts with intimate seating down to 3,000 seats and, depending on configuration, can accommodate as many as 13,500 concert seats. Related facilities include concessions, locker rooms, team rooms, a common area, training room, and work room.

Completed in time for the 1997 baseball season, SDSU planned and constructed Tony Gwynn Stadium, which became the new home of the SDSU baseball program. The facility is hailed as one of the top college baseball stadiums in the country. The \$4 million facility was made possible through donor funding. The seating capacity of the stadium is 3,000. Associated facilities include concessions, novelty/souvenir shop, coaches' dressing room, players' meeting room, baseball museum, home and visitor locker rooms and shower facilities, training and equipment rooms, press box, sky boxes, and alumni lounge.

Approved in 1999, components of the Aztec Walk Master Plan include the consolidation and redevelopment of SDSU's athletic, recreational, and student housing resources. Replacement locations for parking facilities were also included. Further, the Campus Master Plan 2000 consisted of a comprehensive, campus-wide buildout strategy. This master plan proposed the redevelopment of several classrooms, offices, research, and student buildings and facilities, and development of several new buildings, including a physical plant and yard, parking structure, and central campus park area.

In November 2007, the CSU Board of Trustees approved the 2007 SDSU Campus Master Plan Revision and certified the EIR prepared for the project as adequate under CEQA. The 2007 Campus Master Plan Revision provided the framework for implementing SDSU's long-term goals and programs for the campus by identifying needed buildings, facilities, improvements, and services to support campus growth and development from 25,000 full-time equivalent students to a new enrollment of 35,000 full-time equivalent students by the 2024–2025 academic year. To accommodate the projected student increase, the 2007 Campus Master Plan Revision included the near-term and long-term development of classroom, student housing, faculty/staff housing, and research and student support facilities on land located throughout the SDSU central campus, Alvarado, and Adobe Falls areas. Following project approval, litigation ensued, and the certified EIR for the 2007 Campus Master Plan Revision project was ultimately upheld, except with regard to the following three issues: (1) traffic-related mitigation payments for off-campus impacts; (2) bus and transit system impacts; and (3) Traffic Demand Management plan preparation (see further description below).

In May 2011, the Board of Trustees approved the Plaza Linda Verde (now South Campus Plaza) mixed-use development project along with related revisions to the Campus Master Plan. The South Campus Plaza is SDSU's most recent large-scale campus mixed-use project.

In September 2017, the Board of Trustees approved the planning, funding, and development of a new freshman residence hall to provide on-campus housing for 850 students. The new student housing project recently completed construction on the west side of campus, east of the existing Chapultepec Hall (near the athletic fields and the Recreation Center) and will be occupied beginning in the Fall 2019 academic year.

In 2018, SDSU prepared additional environmental analysis to address the three legal issues regarding the 2007 Campus Master Plan Revision and related Board-certified EIR. The additional analysis included revised traffic mitigation requiring SDSU to implement recommended road improvements, where applicable. The analysis also

included a quantitative analysis of the project's impacts on the trolley and bus system, and a mitigation measure requiring that SDSU implement a Traffic Demand Management program that includes a program coordinator, increased rideshare opportunities, facilities to increase bicycle and pedestrian travel, and incentives to ride transit. At the May 15–16, 2018, meeting, the CSU Board of Trustees re-approved the 2007 Campus Master Plan Revision and recertified the corresponding Final EIR, as amended by the final additional environmental analysis.

The proposed project would entail Board of Trustees' approval of the SDSU Mission Valley Campus Master Plan. The proposed SDSU Mission Valley Campus Master Plan is shown on Figure 1-5, Proposed Campus Master Plan.

SDSU's Planning, Design, and Construction is responsible for master planning, space planning, and capital planning, as well as managing the campus facilities information system. These responsibilities include, among others: (1) oversight of the Campus Master Plan; (2) concept and space planning for new construction, including major and minor renovation projects; (3) development of the annual capital outlay program; (4) preparation of environmental documents to comply with CEQA; (5) coordinating with the CSU Board of Trustees and the Chancellor's Office; and (6) developing campus design principles and guidelines.

Planning, Design, and Construction also collaborates with SDSU's Parking and Transportation Services to plan for parking and transportation options that serve the campus community and support campus transportation demand management plans and objectives. With completion of the MTS Transit Center on campus in 2005, the campus has greatly expanded public transportation options. The existing campus Transit Center is centrally located at the heart of the campus and is served by the MTS San Diego Trolley Green Line and seven bus routes. Discounted monthly and semester transit passes are available for students. Other alternatives to driving include bicycling, carpooling, vanpooling, and rideshare. In the past few years, the main campus also has implemented a variety of on-campus bicycle accommodations.

SDSU's main campus is currently landlocked, leaving the university with limited opportunities to grow its academic, research, innovation, housing, and athletic facilities and programs to meet increased student demand, as evidenced by more than 90,000 undergraduate student admission applications received in 2018. The proposed project is designed to provide SDSU the ability to plan for long-term growth to accommodate student demand and create academic, athletic, and recreation programs, including a football stadium and venue, within a vibrant, campus village and innovation area.

1.5 Project Area Background and Previous Planning Efforts

1.5.1 Mission Valley Historical Overview

As stated, regionally, the project site is situated in Mission Valley. The following is a historical overview of Mission Valley, which was adopted from a historic resources technical report and other cited sources included in Appendix H to the City's Stadium Reconstruction Project Draft EIR (City of San Diego 2015a).

Mission Valley is rich in history and includes all the land between overlying mesas on the lower 10 miles of the San Diego River from Mission Gorge to the lowlands of Mission Bay (Crawford 2014, as cited in City of San Diego 2015a). The San Diego River runs through Mission Valley, emptying to the San Diego Bay. Mission Valley was first inhabited

by the Kumeyaay tribes whose villages and settlements dotted the valley floor for centuries. By 1769, the area was captured by Spanish missionaries and soldiers.

Spain sought to anchor its North American holdings by exploring and creating a strong military and religious presence in California. To accomplish this goal, the Spanish crown sent Father Junipero Serra, with the military support of Don Gaspar de Portola, to advance into Alta California by land and sea from Mexico in 1769.

By the 1820s, after Mexico achieved Mexican independence from Spain, Mission Valley was part of Mexico's holdings. Mission lands were granted to faithful supporters of the new government, and the missions were secularized. The lands became part of large, private rancho holdings, with herds of cattle, sheep and horses. The local Kumeyaay tribes suffered greatly as their dependence on the mission system had become vital to their survival, and once that support was gone, their lives became one of poverty and despair. In later decades, they would be given reservation land, which did not truly alleviate their suffering.

The Alta California area, including Mission Valley, was the northernmost part of Mexico. The United States was expanding, spreading westward across North America. Trading ships had called at the port of San Diego for decades, bringing hides and tallow from the local ranchos back to the industrial centers of the East Coast. By 1846, various political and military events led to the Mexican American War from 1846 to 1948. The war concluded with the Treaty of Guadalupe Hidalgo, which transferred Mexican holdings north of the Rio Grande River to the United States. California and San Diego were now American territory. In 1850, California statehood brought California into the union.

As people moved into California, the San Diego River Valley drew new residents interested in dry farming. From 1850–1870, dry farming became a major economic development on the valley floor. The valley lands would go through periods of intense agricultural development over the next 100 years, alternating with low periods, depending upon the larger political and economic developments in San Diego. Floods periodically caused havoc in the valley, damaging crops and homes and necessitating a rebuilding process.

The situation began to change significantly when Alonzo Horton purchased land further south of Mission Valley to begin his dream of a new city, which came to be known as New Town. By 1870, patterns were shifting, the move to the new city had begun, stores and residences were going up, port facilities were under construction, and Old Town was slowly dying. By 1873, San Diego's population was over 1,500 people, the majority living in New Town. The city would continue to grow as the promise of the railroad made commercial and economic success viable. The city underwent a "boom and bust" cycle in the 1880s, but it recovered and has continued to grow into one of the largest cities in the United States.

As the population increased, demand increased on local farmers for more food. Mission Valley underwent continuous development to create more intensive agricultural production and the farms in the valley produced significant amounts of food. This process was aided by the improvement of pumping equipment allowing for better irrigation of the farmlands. By 1879, gardens and dairies extended across the river valley all the way to the old Mission San Diego de Alcalá.

Larger statewide and national events caused changes in San Diego. Asian immigration increased during the decades of the late 1800s, resulting in a rise in population in San Diego. Many of the new immigrants leased land in Mission Valley, creating successful vegetable farms.

Dairies were also part of the economic development of Mission Valley. They developed in response to the nearby urban market and increased in numbers as that market expanded. The valley had cheap, flat land and the space needed for dairy operations. Dairymen focused on shipping cream to market until 1916 when Ernest Briden started bottling milk.

San Diego was the first port of entry north of the Mexican border, a militarily strategic point. Starting in the 1890s, San Diego became a critical component in the nation's military operations. With its important harbor and location on the West Coast facing Asia, San Diego was destined to play a key role in 20th century events. This wave of development would continue to the present time, resulting in a considerable military presence in San Diego County. This, in turn, led to an increased need for land, food and goods and services. In the post-World War II period, the area would undergo development – all of which would change Mission Valley.

Large-scale commercial development of Mission Valley began in this post-World War II period. Three factors shaped the future of Mission Valley post-1950 – flood control, road construction, and population growth. Construction of freeways through the valley also changed Mission Valley. By 1953, the two lanes of Highway 8, the main east/west highway through Mission Valley, were expanded to four lanes and in that same year, the C.J. Brown family opened the Town & Country Hotel and Club at the western end of the Valley. Subsequently, planning began for the second commercial development, the Mission Valley Inn, followed by the Mission Valley Lodge in 1956. In 1957, the Bowlero, “the West Coast’s Largest Bowling Center,” was opened. By 1957, the Mission Valley Country Club became the Stardust Motor Hotel; and 1959 brought the Rancho Presidio (later Hanalei Hotel), the King’s Inn, and the Vagabond Motor Hotel.

Businessman C. Arnholt Smith, owner of Westgate-California Tuna Packing Co., had acquired the Pacific Coast League Padres and immediately began to make plans to develop a new, modern stadium for the minor league team in 1955. After approval by the City Council in 1956, construction schedule began, which included the surfacing of Friars Road. Westgate Park was opened to the public on April 28, 1958 (Crawford 2009, as cited in City of San Diego 2015a).

In October 1957, the May Company announced plans for an \$18 million major department store and shopping center in Mission Valley. The store was planned for the Mission Valley site in order to draw trade from the San Diego, El Centro, Oceanside, and Escondido areas.

In March 1958, the May Company presented formal plans to the San Diego City Council for its Mission Valley Shopping Center project. Los Angeles based Albert C. Martin presented the plans with Frank L. Hope of Hope & Associates for a \$20 million, 80-acre shopping center. In April 1958, the City Council approved the May Company’s request to rezone the 90 acres in Mission Valley for commercial use. When completed, the project was to provide the largest and most complete facility for shopping south of downtown Los Angeles. Construction of the shopping center commenced in July 1959 and was completed in February 1961.

In 1958, the Los Angeles-based football team, the Chargers, expressed interest in moving their team to San Diego with hopes of a new, larger municipal stadium in Mission Valley (City of San Diego 2007, as cited in City of San Diego 2015a). They temporarily moved into the 1914 Balboa Stadium and played their first game on August 6, 1961. The Chargers continued to play at Balboa Stadium until December 1966. The following year, the team moved to the newly developed stadium in Mission Valley (then called San Diego Stadium), which had been approved by San Diego voters on November 2, 1965.

The year 1958 also marked construction on a new principal interchange for SR-163 (395) and I-8 (formerly 80). By 1960, these routes had been converted to full freeways. Lanes went from four to eight, and large sections of Mission Valley land were converted from farm use to transportation use.

Due to population growth and expansion of the freeway system, Mission Valley became a prime location for new uses to accommodate the growing demands of San Diego. It also offered a wide range of economic opportunities. The effect of the new transportation systems was to increase land values substantially and land use correspondingly changed and intensified.

By 1968, more than half of Mission Valley went from agricultural use to commercial use. In 1969, the second largest shopping center, Fashion Valley, was added to the west end of the valley.³ Commercial growth continued, and by 1975, much of the valley could be characterized by its commercial/retail uses.

In 2005, service began on the Trolley Green Line, which extends from the western end of Mission Valley at the Old Town Station, through Mission Valley and connected in the east to Santee. There are several stations through Mission Valley, including Morena/Linda Vista, Fashion Valley, Hazard Center, Mission Valley Center, Rio Vista, Fenton Parkway, Stadium Station, Mission San Diego, Grantville, SDSU, Alvarado Medical Center, 70th Street, Grossmont, and El Cajon Transit Center.

The currently adopted Mission Valley Community Plan, adopted in 1984, provided for limited residential development in Mission Valley. Commercial and office uses proliferated; however, comparatively few homes were built since the time the Mission Valley Community Plan was adopted. In 2008, the City adopted the current General Plan “City of Villages.” Since then, the City has been updating community plans in the years following adoption of the General Plan to implement the vision contained in the City of Villages. For example, in 2018, the City released a Mission Valley Community Plan Update Draft Working Plan and in February 2019, the City released the Draft Mission Valley Community Plan Update and associated Draft Program EIR. Following public review, a draft Final PEIR was released on May 31, 2019, and the Final Draft of the Mission Valley Community Plan was released in July 2019 for final review and consideration by the City, including the Planning Commission and City Council. The City is scheduled to take a final vote in August 2019. The Draft Community Plan Update would increase the amount of residential development within Mission Valley compared to the 1984 community plan.

For further information regarding the culture and history of Mission Valley, please refer to the Mission Valley Community Plan Final Draft (City of San Diego 2019b).

1.5.2 Previous Planning Efforts

Beginning in the early 2000s, several planning efforts and proposals were made for redevelopment of the project site. These efforts were largely focused around the construction of a new NFL stadium for the former San Diego Chargers football club and necessary supporting development to fund such construction. In 2015, the City of San Diego advanced a Draft Environmental Impact Report for the Stadium Reconstruction Project (SCH No. 2015061061); however, the EIR was never certified. A summary of previous proposals is provided below in Table 1-2, Prior Planning Efforts on Project Site.

³ Westgate Park was razed in 1967 and the Padres moved to San Diego Stadium. Fashion Valley Shopping Mall was built where Westgate Park was originally constructed on Friars Road.

Table 1-2. Prior Planning Efforts on Project Site

Year	2003	2005	2015	2015	2017
Proposed Use(s)	Proposing Entity				
	Stadium Task Force¹	San Diego Chargers²	City of San Diego³	Chargers Stadium Advisory Group⁴	FS Investors⁵
Stadium	65,600 seats		68-72,000 seats	65-72,000 seats	30,000
Residential	3,300 homes	60 acres/ 6,000 homes	N/A	3,300 units	4,800
Office	600,000 sq. ft.		N/A	1,000,000 sq. ft.	2,100,000 sq.ft.
Retail	230,000 sq. ft.		N/A	175,000 sq. ft.	300,000 sq. ft.
Hotel	623 rooms	TBD	NA	500 rooms	450 rooms
Park	10-20 acres	30 acres	N/A	31 acres	55 acres

Sources:

- ¹ City of San Diego 2019c.
- ² Donohue 2006.
- ³ City of San Diego 2015b.
- ⁴ CSAG 2015.
- ⁵ Initiative Petition n.d.

1.6 San Diego Municipal Code Section 22.0908

1.6.1 Summary of San Diego Municipal Code Section 22.0908

In general, SDMC Section 22.0908 adopts a City policy authorizing, directing, and providing the means for the sale of the project site to SDSU for Bona Fide Public Purposes, as defined, provided that such sale is at such price and upon such terms and timing as the City Council deems fair and equitable and in the public interest, and that such sale would create jobs and economic synergies in the City and improve the quality of life of Mission Valley residents through the development specified below.⁴

CSU is a state agency and, therefore, not subject to local ordinances, regulations, policies, and rules, including zoning and land use regulations, development regulations, inclusionary housing and affordable housing regulations, subdivision regulations, development impact fees, facilities benefit fee assessments, parkland dedication and improvement requirements, and other regulations, rules, fees, and exactions that might be imposed by a local agency in connection with the regulation of land use and development. Given the unique circumstances and opportunities presented, however, the development features and framework set forth in SDMC Section 22.0908 will be included in the Purchase and Sale Agreement. For an analysis of how the framework of SDMC Section 22.0908 is achieved through the proposed project, refer to EIR Section 4.10, Land Use and Planning.

⁴ This summary is not intended to replace or supersede the provisions found in SDMC Section 22.0908. Instead, it is intended to provide an overview of the new law to the public, decision makers, and other interested parties. In the event of a conflict or omission in the summarized text above, the provisions of SDMC Section 22.0908 and the Purchase and Sale Agreement are to control.

1.6.2 Development Features Contemplated by San Diego Municipal Code Section 22.0908

SDMC Section 22.0908 contemplates demolition of the existing SDCCU Stadium and provides for the development of a new joint-use Stadium; River Park, public trails, and associated open space; practice and recreation fields; residences; and facilities for educational, research, entrepreneurial, and technology programs within a vibrant campus and innovation village. Specifically, SDMC Section 22.0908 contemplates the following development and open space features:

- Joint-use Stadium, as defined.
- A 34-acre River Park, public trails, walking and biking paths or trails, and associated public open space.
- Passive and active recreation space, and community and neighborhood parks.
- Practice intramural, intermural, and recreation fields.
- Facilities for educational, research, entrepreneurial, and technology programs within a vibrant mixed-use campus village and research park, constructed in phases and to include:
 - Academic and administrative buildings and classrooms
 - Commercial, technology, and office space
 - Retail uses serving neighborhood residents and businesses
 - Hotels
 - Faculty and staff housing
 - Graduate and undergraduate student housing
 - Apartment-style homes for the local community
 - Other market-rate, workforce, and affordable homes
 - Trolley and other public transportation use and improvements

As part of the purchase of the project site, SDMC Section 22.0908 requires that CSU (on behalf of SDSU) revitalize and restore the 34-acre River Park as identified in SDMC Section 22.0908, which will be retained and owned by the City in fee. In addition, both the 34-acre River Park, as identified in SDMC Section 22.0908, and the new Stadium must be completed no later than 7 years from the date of execution of the Purchase and Sale Agreement.

Further, the project site must be comprehensively planned through an SDSU Campus Master Plan process, which requires full compliance with CEQA, the CEQA Guidelines, and Education Code Section 67504, subdivisions (c) and (d), along with ample opportunities for public participation. Though not required by the SDSU Campus Master Plan process, SDMC Section 22.0908 provides that SDSU also use the content requirements of a Specific Plan, prepared pursuant to Government Section 65451, subdivision (a), in completing the SDSU Campus Master Plan.

Other environmental-related requirements include (1) taking steps to reach agreements with the City of San Diego and other public agencies regarding the payment of fair-share mitigation costs for identified off-site significant impacts related to the project, (2) providing at least two publicly noticed EIR scoping meetings (completed on January 30 and 31 and February 1, 2019), (3) preparing an EIR with all feasible alternatives and mitigation measures, (4) extending the public comment period on the draft EIR to 60 days, and (5) holding a noticed public hearing.

Additional components of SDMC Section 22.0908 include the following:

- The sale requires SDSU and the City to negotiate fair-share contributions for feasible mitigation and applicable taxes for development within the property.⁵
- The sale and ultimate development shall require the proposed site development to comply with:
 - The City's development impact fee requirements, parkland dedication requirements, and housing impact fees/affordable housing requirements, and
 - Adherence to the City's greenhouse gas (GHG) emission reduction goals.
- The sale requires the City and SDSU to cooperate to modify or vacate easements or secure lot line adjustments on the property (other than easements of the City or any utility department of the City for which the City retains its full regulatory discretion), so that development of the property is facilitated.
- The sale must not raise or impose any new or additional taxes on City residents.
- The sale requires SDSU or its designee to pay prevailing wages for construction of the Joint-Use Stadium and other public improvements, provided that the construction occurs on state-owned property or involves the use of state funding.
 - To the extent possible under state law, all building and construction work shall be performed by contractors and subcontractors licensed by the State of California, who shall make good faith efforts to ensure that their workforce construction hours are performed by residents of San Diego County.
 - With respect to the new joint-use Stadium, SDSU will use good faith efforts to retain qualified employees who currently work at the existing Stadium.

Further, SDMC Section 22.0908 identifies existing rights and obligations for both the City and CSU. For example, the sale and ultimate development cannot impair the City's ability to continue its plan of environmental remediation of the property based on its existing agreements with responsible parties. In addition, the sale cannot change or alter any obligation under any existing lease regarding the use of the property, or any portion thereof, that continues in effect until approximately 2018 and that could be extended until approximately 2022 or thereafter.

Nothing in SDMC Section 22.0908 abrogates, or is intended to abrogate, the authority of the CSU Board of Trustees, acting by and through the State of California.

Additionally, nothing in SDMC Section 22.0908 abrogates, or is intended to abrogate, the City of San Diego mayor's administrative and executive authority, particularly relative to engaging in good faith contract negotiations, including purchase and sales agreements for the City. SDMC Section 22.0908 also does not mandate, dictate, or impede the mayor's administrative or executive authorities; instead, it makes clear that the City's legislative policy is to sell the property to SDSU for Bona Fide Public Purposes, as defined, consistent with the purpose, intent, findings, and conditions set forth in the new law.

⁵ The CSU also will take steps to reach agreements with the City regarding the payment of fair-share mitigation costs for identified off-site significant impacts related to campus growth and development as part of the proposed project.

1.6.3 Applicability of San Diego Municipal Code Section 22.0908 to the Proposed Project

The City and the CSU are currently negotiating a purchase and sale agreement (Purchase and Sale Agreement). The Purchase and Sale Agreement will include conditions codified in SDMC Section 22.0908.

The purpose and intent of SDMC Section 22.0908 was to adopt a new City policy authorizing, directing, and providing the means for the City to sell the project site to CSU/SDSU for “Bona Fide Public Purposes,” provided such sale complied with the conditions established in SDMC Section 22.0908. SDMC Section 22.0908 defines “Bona Fide Public Purposes” to encompass the proposed project’s land uses.⁶

The State of California, acting by and through the CSU, has sovereign immunity and is not subject to municipal codes, but will agree to purchase the project site pursuant to the framework described in Section 22.0908 upon the mutual agreement of terms to be set forth in the Purchase and Sale Agreement between the City and CSU. The conditions set forth in Section 22.0908 are intended to set forth the conditions under which the City is directed to sell the site to CSU/SDSU. While subject to Section 22.0908, the City currently owns the real property that comprises the project site. Though fee title to the entire project site is vested in the City of San Diego, internally, the site is allocated in a manner that assumes, the City General Fund “owns” approximately 55 acres that make up the northern third of the project site, and the City Water Department “owns” approximately 115 acres that make up the southern two-thirds of the project site, as shown in Figure 1-6, Existing Ownership.

Upon execution of the Purchase and Sale Agreement, the purchase of approximately 132 acres of land within the project site would be pursuant to the terms of that Purchase and Sale Agreement. That agreement will also provide for the City to retain ownership of the remaining approximately 34-acre River Park area identified in SDMC Section 22.0908, which CSU/SDSU would revitalize on terms to be set forth in the Purchase and Sale Agreement.

1.7 Planning Context

As stated, CSU is a state agency and, therefore, not subject to the application of local and regional, adopted land use regulatory/planning documents, ordinances, regulations, policies, rules, fees, taxes and exactions. However, CSU will purchase the proposed project site pursuant to the framework set forth in SDMC Section 22.0908 and the Purchase and Sale Agreement currently being negotiated, in order to implement the purpose of the proposed project. In addition, CSU will evaluate the proposed project’s consistency with adopted, applicable state and federal regulatory/planning documents; and though not required by law, CSU will also consider the proposed project’s consistency with adopted, applicable local regulatory/planning documents. Table 1-3, Summary of Planning Documents, identifies applicable, adopted regulatory and planning documents.

⁶ SDMC Section 22.0908 defines “Bona Fide Public Purposes” to include “good faith or genuine use or uses for public or government purposes such as public university uses or facilities; institutional uses or facilities; offices; buildings; stadium, park, open space, trail, and recreation uses and facilities; academic uses and facilities; public parking; faculty, staff, student, and residential market-rate and affordable housing; hotel uses and facilities to support university goals and objectives; and public-private partnership support uses and facilities, including but not limited to commercial, neighborhood-serving retail, research, technology, development, entrepreneurial, and residential uses, because all such uses, individually and cumulatively, promote or facilitate SDSU’s higher education mission, goals and objectives.”

Table 1-3. Summary of Planning Documents

Agency	Planning Documents
Local Agencies	
City of San Diego	San Diego General Plan – City of Villages San Diego Municipal Code Mission Valley Planned District Ordinance Mission Valley Community Plan (1984) Mission Valley Public Facilities Financing Plan Draft Mission Valley Community Plan Update (2019) Climate Action Plan Multiple Species Conservation Program San Diego River Park Master Plan
SANDAG	Regional Transportation Plan/Sustainable Communities Strategy Regional Housing Needs Assessment
San Diego Air Pollution Control District	San Diego Regional Air Quality Strategy
San Diego County Regional Airport Authority	Montgomery Field Airport Land Use Compatibility Plan
State Agencies	
San Diego Regional Water Quality Control Board	Water Quality Control Plan for the San Diego Basin (Basin Plan)
Federal Agencies	
Federal Emergency Management Agency	100-year and 500-year Floodplains 100-year Floodway Special Flood Hazard Areas
Federal Highway Administration	Congestion Management Plan

1.7.1 San Diego General Plan, Community Plan, and Climate Action Plan

The City's General Plan (City of San Diego 2008, as amended) sets forth a comprehensive, long-term plan that prescribes overall goals and policies for development within the City of San Diego. The City Council comprehensively updated the General Plan by unanimous vote in 2008. The City Council also certified the General Plan Program EIR and adopted associated amendments to its Land Development Code. The General Plan update does not include land use designations or zone changes, which are the purview of the City's community plans.

Community plans work together with the General Plan to provide location-based policies and recommendations in the City's numerous community planning areas. Community plans refine the General Plan's citywide policies, designate land uses and housing densities, and include additional site-specific regulations, land use designations, development standards, goals, policies and objectives.

The project site is located within the Mission Valley Community Plan area. The Mission Valley Community Plan encompasses approximately 3,216 acres (City of San Diego 2019b). The community is a regional center of offices, hotels, retail businesses, a growing residential community, and a major regional visitor center with hotels located near tourist attractions, including Mission Bay Park, SeaWorld, and Balboa Park. The community also is tied together by the MTS Trolley system. The Mission Valley Community Plan was adopted in 1985 and describes the community's

history and environmental context and presents the various community plan elements. In each element, direction is provided in the form of objectives, proposals, and development guidelines.

The City is in the process of updating the adopted Mission Valley Community Plan. The Final Draft Mission Valley Community Plan, July 2019 is evaluated in the Mission Valley Community Plan Update Final Program EIR, SCH No. 2017071066, May 31, 2019 (City of San Diego 2019d). Neither the Plan Update nor the EIR have been approved by the City as of this writing. The proposed Mission Valley Community Plan Update is focused on the vision for Mission Valley and various ways the City and community will implement the vision over the planning horizon through implementing actions, design guidelines, and policies. Notably, the proposed Mission Valley Community Plan Update does not include a “development intensity” section, but instead relies on development standards as defined in Chapter 13 of the San Diego Municipal Code to limit the developability of any given parcel. The proposed Mission Valley Community Plan Update identifies a buildout year of 2050.

The proposed Mission Valley Community Plan Update identifies “conceptual changes” (Figure 3 in the Mission Valley Community Plan Update) for several areas of Mission Valley, including the “Stadium site” and “Eastern Mission Valley” (City of San Diego 2019b). The “Stadium site” referenced in the proposed Mission Valley Community Plan Update encompasses the SDSU Mission Valley campus project site. The Mission Valley Community Plan Update also designates the project site as “Campus Master Plan.” Specifically, the “Stadium site” (i.e., the project site) will be redeveloped through Campus Master Plan, which will include detailed information on the land uses, mobility system, and recreation facilities (City of San Diego 2019b).

The proposed Mission Valley Community Plan Update identifies four geographic areas with different focus points. These include Western Mission Valley (west of SR-163), Central Mission Valley (between SR-163 and I-805), Eastern Mission Valley (east of I-805), and South of I-8 (south of I-8). The SDSU Mission Valley campus project site is in the larger “Eastern Mission Valley” geographic area. The “Eastern Mission Valley” area “will focus on higher density development with an emphasis on connectivity and comfort for pedestrians, cyclists, and other modes of transportation,” and this area will include “a recreation center to meet the active recreational needs of the community” (City of San Diego 2019b).

The proposed Mission Valley Community Plan Update also calls for a proposed park site on the SDSU Mission Valley campus project site, adjacent to the San Diego River, which would serve both the Mission Valley and Navajo communities (City of San Diego 2019b). The proposed Mission Valley Community Plan Update’s recommendations for the design and construction of park facilities include active and passive recreation, such as lighted sports fields, San Diego River pathway improvements, picnic areas, children’s play areas, multipurpose courts, walkways, landscaping, and parking. In addition, the proposed Mission Valley Community Plan Update recommends that the park area accommodate special activities such as skateboarding, dog off-leash, and other unique uses (City of San Diego 2019b).

In addition, the proposed Mission Valley Community Plan Update contemplates a 20,000-to-25,000-square-foot recreation center, including indoor gymnasium, multipurpose courts, multipurpose rooms, kitchen, and other community-serving facilities. The proposed Mission Valley Community Plan Update (see Table 5 in City of San Diego 2019b) also proposes an aquatics complex to be located at a site to be determined within the Mission Valley community. Recommended uses within the aquatics complex include a swimming pool, children’s pool, therapeutic pool, and pool house with locker rooms; staff offices; and equipment storage facilities. The proposed Mission Valley Community Plan Update also identifies a satellite police station on the “Stadium site” (City of San Diego 2019b).

The Mission Valley Community Plan Program EIR (see Figure 16 in City of San Diego 2019c) identifies the project site for “redevelopment to occur through a future Campus Master Plan (City of San Diego 2019c). In addition, the Draft Program EIR identifies “Eastern Mission Valley” as an area to “support higher density residential development with enhanced multi-modal connectivity” (City of San Diego 2019c).

Further, the Mission Valley Community Plan Program EIR states that the proposed Mission Valley Community Plan Update assumed that 4,800 dwelling units, 2 million square feet of office space, 300,000 square feet of retail space, 450 hotel rooms, 38.1 acres of active park, 4.9 acres of open space, and a 40,000-seat stadium would be developed on the Stadium site (City of San Diego 2019c). The SDSU Mission Valley campus proposed project’s land uses fall within the envelope identified in the Mission Valley Community Plan Update. For further information, please refer to this EIR, Section 4.10, Land Use and Planning.

The City’s Climate Action Plan calls for eliminating half of all GHG emissions in the City and aims for all electricity used in the City to be from renewable resources by 2035 (City of San Diego 2015c). The City Council approved the Climate Action Plan in December 2015. The Climate Action Plan helps achieve the state’s GHG reduction targets. For further information, please refer to this EIR, Section 4.7, Greenhouse Gas Emissions.

1.7.2 Multiple Species Conservation Program

The Multiple Species Conservation Program (MSCP) was developed to preserve a network of sensitive habitat and open space, protecting biodiversity and enhancing the quality of life in the San Diego region. The City of San Diego is one of several jurisdictions participating in the MSCP, which covers 85 species and core biological resource areas within the City’s Multi-Habitat Planning Areas. The City also has entered into an Implementing Agreement with federal and state wildlife agencies (U.S. Fish and Wildlife Service and California Department of Fish and Wildlife) to ensure implementation of the MSCP. The MSCP Plan guides the preparation of individual subarea plans for each jurisdiction within the MSCP boundary.

The City’s Subarea Plan guides the establishment of the City’s Multi-Habitat Planning Areas preserve system. The Implementing Agreement grants the City permit authority over those plants and animal species listed as threatened or endangered under federal and state Endangered Species Acts and covered by the City’s Subarea Plan. The project site is north of the MHPA. For further information regarding the MSCP and the City’s Subarea Plan, please refer to this EIR, Section 4.3, Biological Resources.

1.7.3 San Diego River Park Master Plan

The San Diego River Park Master Plan (City of San Diego 2013) provides the vision and guidance to restore the relationship between the San Diego River and the surrounding community. The San Diego River Park Master Plan covers the 17.5-mile stretch of the river within the City. The project site abuts the San Diego River; however, proposed development would be located outside the river area. At the same time, the proposed project requires that CSU revitalize and restore the 34-acre River as identified in SDMC Section 22.0908, which would be retained and owned by the City in fee under the Purchase and Sale Agreement.

For further information regarding the River Park, please refer to this EIR, Section 4.14, Public Services and Recreation; Section 4.10, Land Use and Planning; and Section 4.3, Biological Resources.

1.7.4 Regional, State, and Federal Plans

2050 Regional Transportation Plan and Sustainable Communities Strategy

In October 2011, the San Diego Association of Governments (SANDAG) Board of Directors adopted the 2050 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) (SANDAG 2011). The 2050 RTP lays out a plan for investing an estimated \$214 billion in local, state, and federal transportation funds expected to come into the region over the next 40 years. The largest proportion of the funds will go toward transit, which will receive 36% of the funds in the first 10 years, with 34% going to highway improvements (largely for the addition of high-occupancy vehicle lanes to existing freeway corridors), and 21% to local roads and streets (SANDAG 2011). The percentage dedicated to transit will grow each decade, up to 44% from 2021 to 2030, 47% in the third decade, and 57% in the last decade of the plan (SANDAG 2011).

Along with the 2050 RTP, the SANDAG Board adopted the SCS. The SCS details how the San Diego region will reduce GHG emissions to state-mandated levels over time. This inclusion of the SCS is required by Senate Bill 375 (SB 375), and the San Diego region is the first in California to produce an RTP with an SCS. The Board also certified an EIR for the 2050 RTP and SCS.

The 2050 RTP also identifies transit project needs for the region through 2050, which require funding above and beyond the revenues expected to be available. Among the transit projects on that list include construction of the MTS Purple Line. The Purple Line is a proposed light rail line that would operate between San Ysidro and Kearny Mesa along I-805 and provide riders with a more direct trip to job centers in Mission Valley and Kearny Mesa.

Consistent with the 2050 RTP, SANDAG commissioned a study to assess the feasibility of the Purple Line. The SANDAG Purple Line Conceptual Planning Study, January 2017, provides an assessment of the Purple Line's engineering feasibility; preliminary alignments; and construction, operations, and maintenance cost estimates, as well as implementation opportunities and challenges (SANDAG 2017). The Purple Line study reviewed an alternative alignment into Mission Valley. Upon reaching Mission Valley, the alignment would enter the project site and continue north across Friars Road and into Kearny Mesa along Ruffin Road, with its terminus on Overland Avenue at Claremont Mesa Boulevard (SANDAG 2017).

Specific to the project site, the Purple Line alignment currently contemplated by MTS would enter the project site from the southeast in a west-northwesterly direction. The alignment would then curve north and include a future trolley station approximately due north of the existing Green Line Stadium Station. Note this would be a separate station from the Stadium Station. From this future Purple Line Station, the alignment would curve slightly northeast and exit the project site in generally the same alignment as the current access gate on San Diego Mission Road and continue northeast on the existing Kinder Morgan access road under Friars Road before turning north along Murphy Canyon Road (see Figure 2-11E in Chapter 2, Project Description).

For further information regarding the 2050 RTP/SCS, please refer to this EIR, Section 4.15, Transportation, Circulation, and Parking; and Section 4.7, Greenhouse Gas Emissions.

Regional Housing Needs Assessment Plan

The SANDAG Board adopted the final Regional Housing Needs Assessment Plan, which was prepared in conjunction with the 2050 RTP/SCS to improve the connection between planning for transportation, land use, and housing, and to help meet the region's GHG reduction targets set by the California Air Resources Board as required by Senate

Bill 375. The Regional Housing Needs Assessment Plan calls for increasing the supply of housing and providing greater housing choice for all income levels. SANDAG then allocates the overall housing need by jurisdiction and income category. The allocation of and planning for the region's future housing needs will assist the region in meeting its housing needs in all income categories, meeting its GHG reduction targets, addressing its transportation needs as identified in the 2050 RTP/SCS, and helping reduce vehicle miles traveled.

For further information regarding the Regional Housing Needs Assessment Plan, please refer to this EIR, Section 4.10, Land Use and Planning and Section 4.13, Population and Housing.

Regional Air Quality Strategy

Air quality plans provide an overview of the region's air quality and identify the pollution-control measures needed to expeditiously attain and maintain air quality standards. The San Diego County Air Pollution Control District's plans include the San Diego Regional Air Quality Strategy (RAQS), addressing state requirements, and the San Diego portion of the California State Implementation Plan, addressing federal requirements.

In compliance with the California Clean Air Act, as amended, the San Diego County Air Pollution Control District prepared and submitted the 1991 RAQS to address San Diego County's nonattainment status for ozone. The RAQS is designed to make expeditious progress toward attaining the state ozone standard and contains preliminary implementation schedules for control programs on stationary sources, transportation, indirect sources, and a vehicle/fuels program.

The San Diego County Air Pollution Control District held a public meeting in September 2016, to discuss a draft proposed update of the RAQS to expeditiously attain the state ozone standards (limits) in San Diego County, and a draft proposed Eight-Hour Ozone Attainment Plan and Reasonably Available Control Technology Demonstration to expeditiously attain the federal ozone standard in San Diego County.

Further, the U.S. Environmental Protection Agency has established National Ambient Air Quality Standards for six criteria pollutants, which are known to be harmful to human health and welfare. These criteria pollutants are:

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen dioxide (NO₂)
- Ozone (O₃)
- Particulate matter (PM)
- Sulfur oxides (SO_x)

The federal Clean Air Act, as amended, requires plans that identify how nonattainment areas will attain and/or maintain the National Ambient Air Quality Standards. The federal Clean Air Act requires the U.S. Environmental Protection Agency to review each plan, any plan revisions, and to approve the plan/revisions if consistent with the Clean Air Act.

Key elements of these plans include emission inventories, emission control strategies and rules, air quality data analyses, modeling, air quality progress, and attainment or maintenance demonstrations.

Congestion Management Plan

The Federal Highway Administration (23 CFR Section 450.320) requires that each transportation management area address congestion management through a process involving an analysis of multimodal metropolitan-wide strategies that are cooperatively developed to foster safety and integrated management of new and existing transportation facilities eligible for federal funding.

SANDAG has been designated as the transportation management area for the San Diego region. The 2050 RTP/SCS, the region's long-range transportation plan and SCS, meets the requirements of federal law (23 CFR Section 450.320) by incorporating the federal congestion management process, including performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-single-occupancy-vehicle analysis, land use impact analysis, the provision of congestion management tools, and integration with the Regional Transportation Improvement Program process.

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update the Congestion Management Program (CMP). The requirements in the state CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the state CMP and, since this decision, SANDAG has been abiding by 23 CFR Section 450.320 to ensure the region's continued compliance with the federal CMP process. For further information regarding the San Diego Regional Air Quality Strategy and CMP, please refer to this EIR, Section 4.2, Air Quality.

Water Quality Control Plan for the San Diego Basin

The Water Quality Control Plan for the San Diego Basin (Basin Plan) designates beneficial uses for water bodies in the San Diego region and establishes water quality objectives and implementation plans to protect those beneficial uses. The San Diego Regional Water Quality Control Board (RWQCB) updated the Basin Plan in August 2016.

Specifically, the updated Basin Plan: (1) designates beneficial uses for surface and ground waters, (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy, (3) describes implementation programs to protect the beneficial uses of all waters in the region, and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan (San Diego RWQCB 2016). Additionally, the Basin Plan incorporates by reference all applicable state and RWQCB plans and policies.

RWQCB regulates waste discharge and reclaimed water use to minimize and control adverse effects on the quality and beneficial uses of the region's waters. RWQCB issues permits, called "waste discharge requirements" and "master reclamation permits" that require waste and reclaimed water to not be discharged in a manner that would cause an exceedance of an applicable water quality objectives or adversely affect beneficial uses designated in the Basin Plan. The RWQCBs enforce these permits through a variety of administrative means.

For further information regarding the Basin Plan, please refer to this EIR, Section 4.9, Hydrology and Water Quality.

Montgomery-Gibbs Executive Airport—Airport Land Use Compatibility Plan

The project site is located within the Airport Influence Area identified as Review Area 2 in the Airport Land Use Compatibility Plan for the Montgomery-Gibbs Executive Airport, a general aviation airport. General aviation

encompasses all aviation except air carrier and military. The types of general aviation aircraft that operate at the airport include private, corporate, charter, air ambulance, law enforcement, fire rescue, flight training, and cargo.

The Federal Aviation Administration has classified the airport as a reliever for San Diego International Airport—Lindbergh Field. A reliever airport serves general aviation aircraft that might otherwise use a congested air carrier airport.

Review Area 2 involves airspace protection or overflight compatibility. The airport is located approximately 2 miles north of the project site and nearly 360 feet higher in elevation. The project site also is within the Federal Aviation Administration Part 77 Notification Area for the airport. The City of San Diego implements the Airport Land Use Compatibility Plan policies and criteria with supplemental development regulations contained in the City's Municipal Code.

Marine Corps Air Station Miramar—Airport Land Use Compatibility Plan

The project site is located approximately 5 miles south of Marine Corps Air Station Miramar. While it is not within the Airspace Protection Compatibility Area, Noise Exposure Contours, Safety Zones, Overflight Zones, or Airport Influence Area, it is within the FAR Part 77 Outer Boundary.

These plans are further discussed in this EIR, Section 4.8, Hazards and Hazardous Materials, and Section 4.10, Land Use and Planning.

1.8 Environmental Procedures

1.8.1 California Environmental Quality Act

The CEQA requires preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. This EIR was prepared in compliance with CEQA, the CEQA Guidelines, and CSU policies and procedures, and is prepared as a Project EIR pursuant to CEQA Guidelines Section 15161. The EIR represents the independent judgment of the CSU Board of Trustees as lead agency.

1.8.2 Notice of Preparation and Scoping

CEQA establishes mechanisms whereby the public and affected public agencies can be informed about the nature of the project being proposed and the extent and types of impacts that the project and its alternatives would have on the environment should the project or alternatives be implemented. Pursuant to CEQA Guidelines Section 15082, SDSU circulated a Notice of Preparation (NOP) dated January 18, 2019, to interested agencies, organizations, and individuals. The NOP was also sent to the State Clearinghouse at the California Governor's Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2019011042) to this EIR.

The NOP is intended to encourage interagency communication regarding the proposed project so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR to be prepared. Three public scoping meetings were held, the first at the SDSU campus (Parma Payne Goodall Alumni Center, 5250 55th Street, San Diego, California 92182) on January 29, 2019, and the other two at the Mission Valley Marriot Hotel (8757 Rio San Diego Drive, San Diego, California 92108) on January 30, 2019, and February 7, 2019, to gather additional public input. The 30-day comment period ended on February 19, 2019.

Comments received during the NOP public scoping period were considered during preparation of this EIR. The NOP and all comments received by SDSU are included in Appendix 1-1 to this EIR. Oral and written comments also were received at the public scoping meetings. Based on the scope of the proposed action as described in the NOP and the comments received from the public, the following issues were determined to be potentially significant and therefore, are addressed in Chapter 4, Environmental Analysis, of this EIR:

- Aesthetics
- Land Use and Planning
- Air Quality
- Mineral Resources
- Biological Resources
- Noise
- Cultural Resources
- Population and Housing
- Energy
- Public Services and Recreation
- Geology and Soils
- Transportation/Circulation and Parking
- Greenhouse Gas Emissions
- Tribal Cultural Resources
- Hazards and Hazardous Materials
- Utilities and Utility Systems
- Hydrology and Water Quality
- Wildfire

Of the environmental topics analyzed in Chapter 4, Environmental Analysis, the following are determined to have potentially significant impacts requiring mitigation:

- Air Quality
- Population and Housing
- Biological Resources
- Public Services and Recreation
- Cultural Resources
- Transportation/Circulation and Parking
- Geotechnical Resources
- Tribal Cultural Resources
- Hazards and Hazardous Materials
- Utilities and Utility Systems
- Noise
- Wildfire

Additional CEQA-mandated environmental issue areas, such as Agricultural Resources, were found not to be significant during the NOP process. These issues are addressed in Chapter 5, Other Environmental Conditions.

1.8.3 Overview of the Environmental Impact Report Process

This EIR has been made available to members of the public, agencies, and interested parties for a 60-day public review period in accordance with CEQA Guidelines Section 15105. Public review of the Draft EIR is intended to focus “on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated.” The Notice of Completion of the Draft EIR has been filed with the State Clearinghouse as required by CEQA Guidelines Section 15085. In addition, the Notice of Availability of the Draft EIR has been distributed pursuant to CEQA Guidelines Section 15087. This EIR is available for review during the 60-day public review period at the following locations:

- SDSU website: <http://missionvalley.sdsu.edu/index.html>
- SDSU Love Library, 5500 Campanile Drive, San Diego, California, 92182
- Mission Valley Public Library, 2123 Fenton Pkwy, San Diego, California 92108

Once the 60-day public review period has concluded, the CSU Board of Trustees will review all public comments on the Draft EIR, provide a written response to comments, and authorize revisions to the Draft EIR text, if necessary. A Mitigation Monitoring and Reporting Program will be incorporated into the Final EIR, and it will include monitoring team qualifications, specific monitoring activities, a reporting system, and criteria for evaluating the success of the mitigation measures. Mitigation measures contained in this EIR were developed in consideration of future monitoring requirements and written in enough detail to address impacts of the proposed project, referencing the appropriate implementing permits and plans. The Final EIR will include all comment letters received on the Draft EIR; responses to comments; a Final EIR preface; and, if applicable, edits made to the EIR as a result of public review.

1.8.4 Scope of the Environmental Impact Report

This EIR evaluates the potential short-term (during construction), long-term (post-construction), direct, indirect, and cumulative environmental impacts associated with construction and operation of the new SDSU Mission Valley Campus Master Plan proposed project.

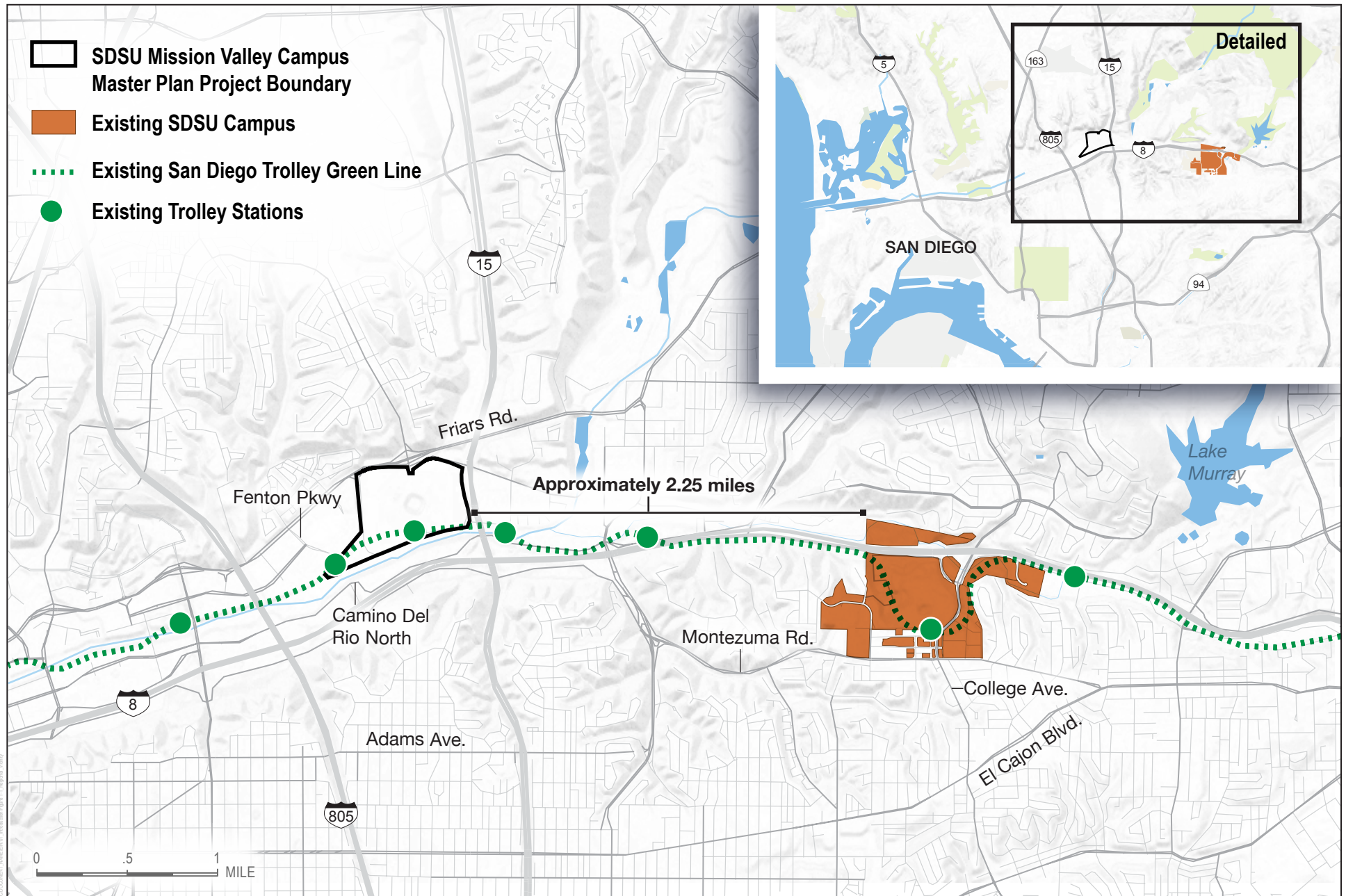
1.9 Reference Notes

As a state agency, CSU is not subject to local government planning regulations such as policies and guidelines outlined in the City of San Diego General Plan. Notwithstanding, CSU considers local agencies and related planning documents where feasible. Accordingly, any reference to local planning documents generally is provided for informational purposes only unless otherwise noted. For this reason, the EIR references the certain City of San Diego planning documents, including the City's General Plan and associated documents.

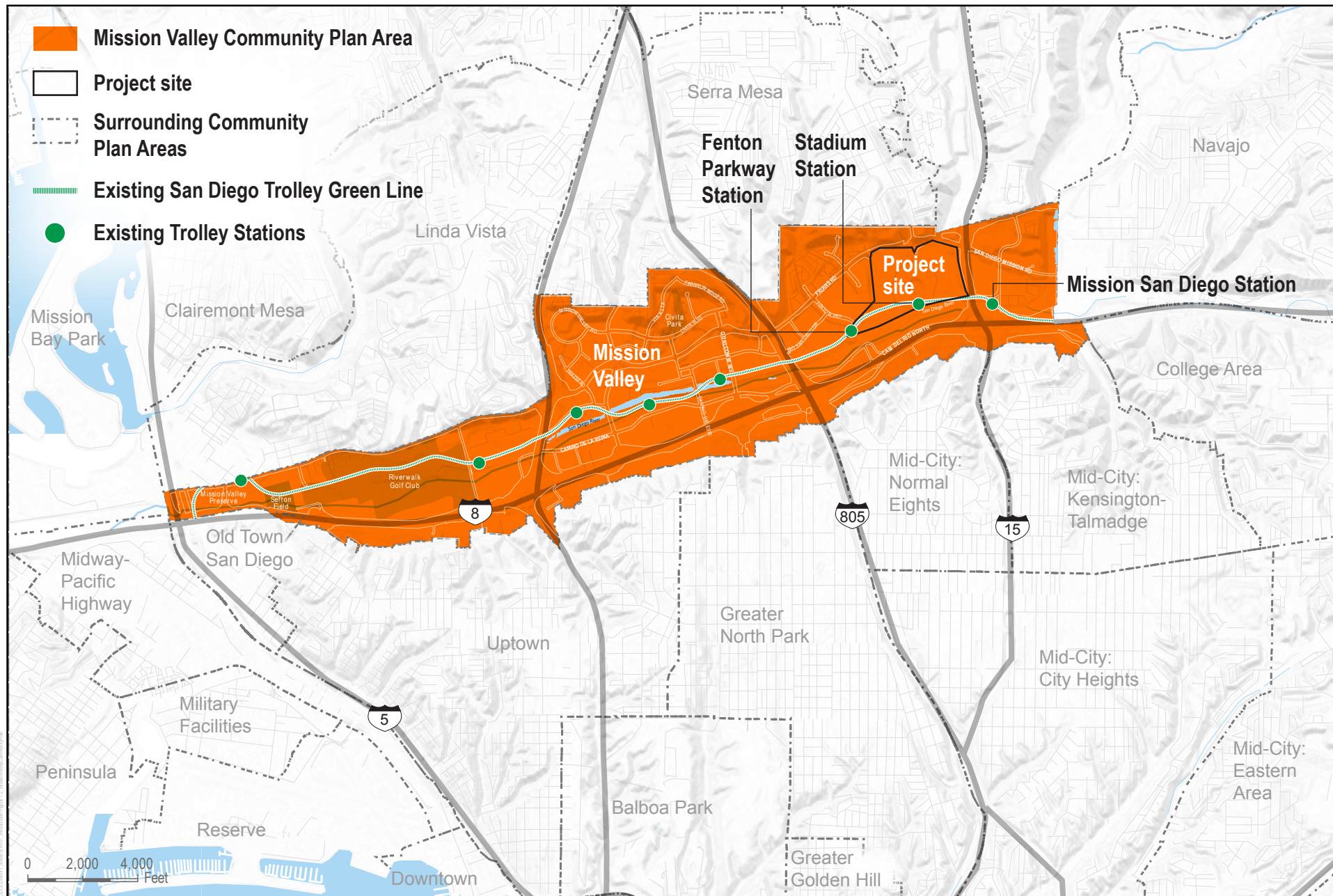
1.10 Mitigation Monitoring and Reporting Program

As required by CEQA Guidelines sections 15097 and 15091, the CSU Board of Trustees will prepare a Mitigation Monitoring and Reporting Program prior to project approval. The Mitigation Monitoring and Reporting Program will include all mitigation measures identified in the EIR, the entity responsible for implementation, implementation timing (prior to construction, during construction, and/or after construction), and any follow-up reporting requirements (such as submittal of materials to regulatory agencies). The CSU Board of Trustees, as the designated lead agency for the project, is responsible for enforcing and verifying that each mitigation measure is implemented.

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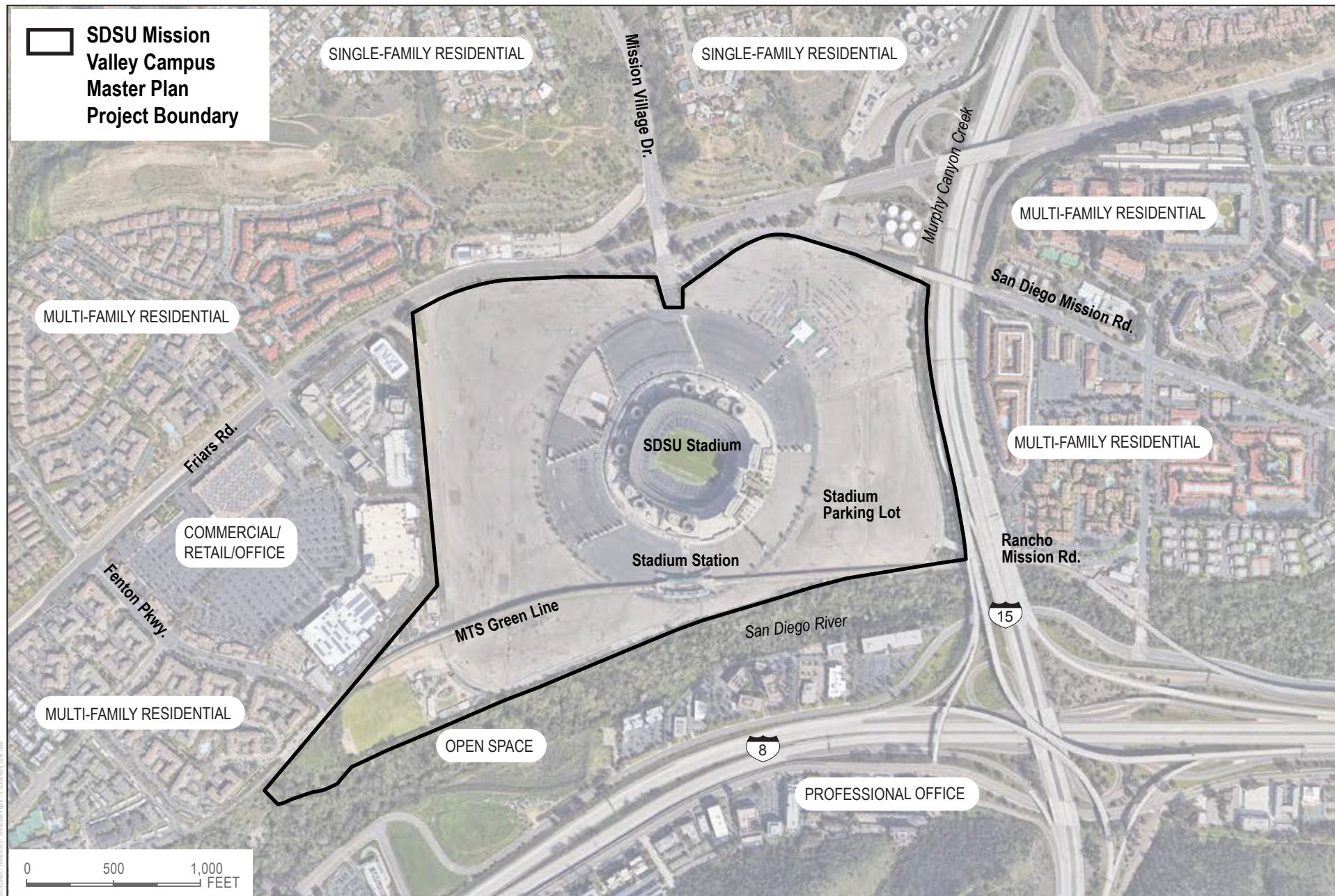
SOURCE: CITY OF SAN DIEGO

SDSU Mission Valley Campus Master Plan EIR



Figure 1-2
Mission Valley Community Plan

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SOURCE: GOOGLE EARTH

SDSU Mission Valley Campus Master Plan EIR



Figure 1-3
Project Site and Surrounding Land Uses

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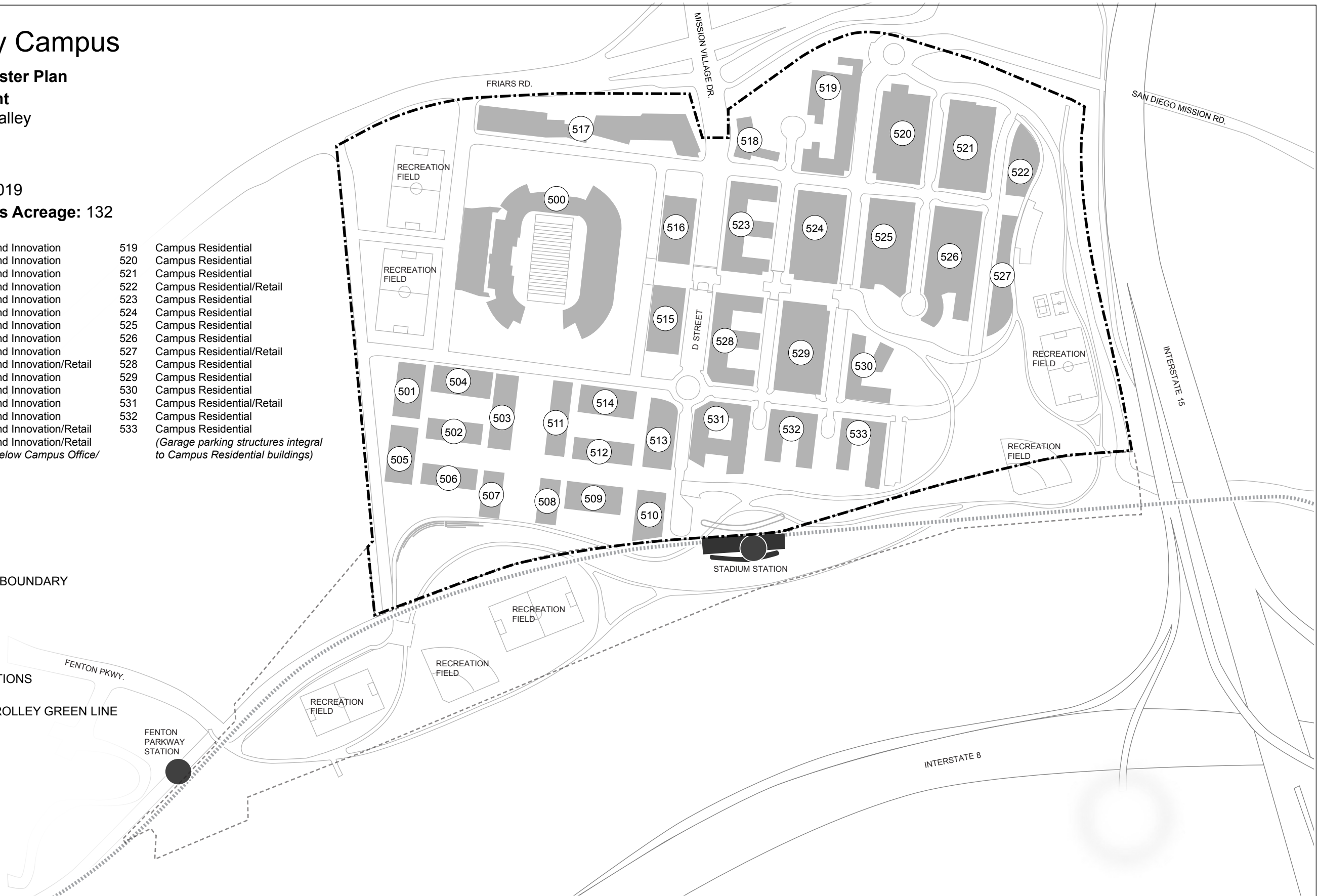
Mission Valley Campus

Proposed Campus Master Plan
Master Plan Enrollment
15,000 FTES Mission Valley

Approval Date:
Proposed Date: July 2019
Mission Valley Campus Acreage: 132

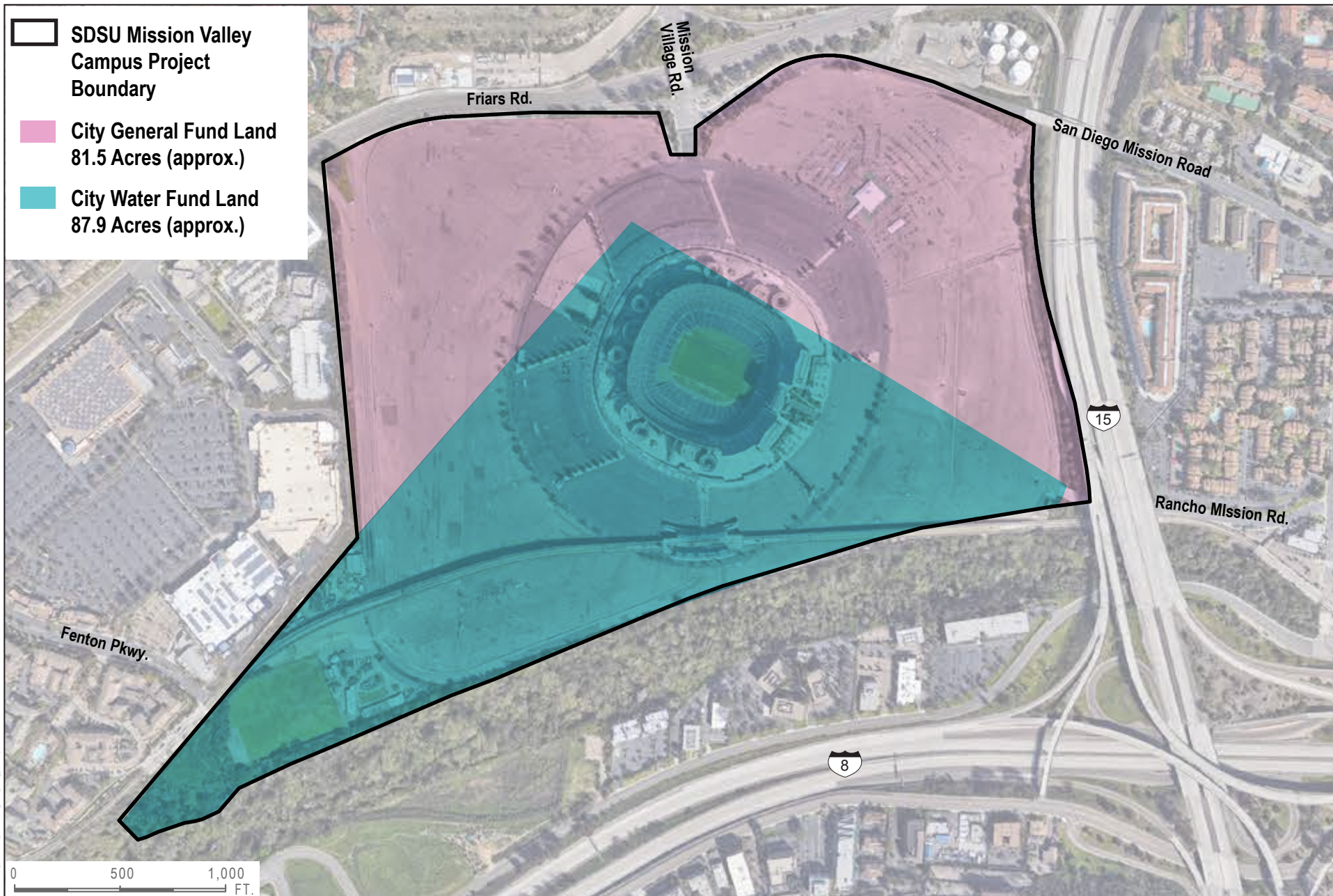
- | | | | |
|-----|---|-----|---------------------------|
| 501 | Campus Office/Research and Innovation | 519 | Campus Residential |
| 502 | Campus Office/Research and Innovation | 520 | Campus Residential |
| 503 | Campus Office/Research and Innovation | 521 | Campus Residential |
| 504 | Campus Office/Research and Innovation | 522 | Campus Residential/Retail |
| 505 | Campus Office/Research and Innovation | 523 | Campus Residential |
| 506 | Campus Office/Research and Innovation | 524 | Campus Residential |
| 507 | Campus Office/Research and Innovation | 525 | Campus Residential |
| 508 | Campus Office/Research and Innovation | 526 | Campus Residential |
| 509 | Campus Office/Research and Innovation | 527 | Campus Residential/Retail |
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| 513 | Campus Office/Research and Innovation | 531 | Campus Residential/Retail |
| 514 | Campus Office/Research and Innovation | 532 | Campus Residential |
| 515 | Campus Office/Research and Innovation/Retail | 533 | Campus Residential |
| 516 | Campus Office/Research and Innovation/Retail
(Garage parking structure below Campus Office/
Research buildings) | | |
| 517 | Campus Hospitality | | |
| 518 | Campus Hospitality | | |
| 500 | Stadium | | |

- CAMPUS MASTER PLAN BOUNDARY
- FUTURE BUILDING
- EXISTING BUILDING
- EXISTING TROLLEY STATIONS
- EXISTING SAN DIEGO TROLLEY GREEN LINE
- RIVER PARK



SOURCES: SDSU/AUGUST 2019, CITY OF SAN DIEGO SDMC SECTION 22.0908

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SOURCE: GOOGLE EARTH, CITY OF SAN DIEGO, SANGIS

SDSU Mission Valley Campus Master Plan EIR



Figure 1-6
Existing Ownership

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2 Project Description

2.1 Introduction

2.1.1 Purpose

The purpose of this section is to describe the proposed San Diego State University (SDSU) Mission Valley Campus Master Plan Project (proposed project) for the public, reviewing agencies, and decision makers. Pursuant to the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., the project description section of an environmental impact report (EIR) is to contain the following information:

1. the precise location and boundaries of the proposed project, shown on a detailed map, along with a regional map of the project location;
2. statement of the objectives of the proposed project, which should include the underlying purpose of the project;
3. general description of the project's technical, economic, and environmental characteristics; and
4. statement briefly describing the intended uses of the EIR.

An adequate project description should supply the information necessary to evaluate and review the proposed project's significant environmental effects, but need not be exhaustive. This section describes the proposed project, including its location, objectives, and characteristics, and the intended uses of this EIR. The Board of Trustees of the California State University (CSU), which is the State of California acting in its higher education capacity, on behalf of SDSU, is the lead agency responsible for certifying the adequacy and completeness of this EIR and considering approval of the proposed project.

2.1.2 Overview

The proposed project entails the acquisition, construction, and operation of an SDSU Mission Valley campus, stadium, parks, recreation, and innovation area to support SDSU's education, research, entrepreneurial, technology, and athletics programs. Specifically, the proposed campus would include:

1. approximately 86 acres of parks, recreation, and open space, including a River Park, which includes the 34 acres identified pursuant to the framework set forth in San Diego Municipal Code (SDMC) Section 22.0908, which shall be constructed by SDSU/CSU, with shared SDSU/community active and passive parks and recreation fields and open space; and pedestrian, hiking, and biking trails;¹
2. approximately 1.6 million square feet of campus uses for education, research, entrepreneurial, and technology programs;
3. construction of a new, multipurpose 35,000-capacity Stadium and the corresponding demolition of the existing San Diego County Credit Union (SDCCU) Stadium (formerly, "Qualcomm Stadium");
4. approximately 4,600 residences including student, faculty, staff, workforce, and affordable housing, within a vibrant, transit-oriented university village setting;

¹ The City of San Diego (City) would remain the owner of the approximate 34-acre River Park identified in SDMC Section 22.0908. As part of CSU's purchase of the property comprising the project site, CSU would revitalize and restore the 34-acre River Park.

5. approximately 400 hotel rooms to support campus visitors and Stadium-related events, with additional conference facilities, which would serve as an incubator for graduate and undergraduate students in SDSU's hospitality and tourism management program;
6. approximately 95,000 square feet of community-serving retail space to support the campus, Stadium, and the community;
7. enhanced use of the Metropolitan Transit System (MTS) Green Line Stadium Trolley Station, thereby, minimizing vehicular traffic use and accommodating the planned Purple Line on the project site; and
8. associated on-site and off-site infrastructure, utilities, facilities, and other amenities.

As part of the proposed project, CSU as lead agency would consider approval of the SDSU Mission Valley Campus Master Plan, which is the physical master plan to guide the future development of CSU facilities, based on academic goals and projected student enrollment levels, for an established time horizon. The SDSU Mission Valley Campus Master Plan would be able to accommodate up to 15,000 full-time equivalent students (FTES) over time, resulting in a total student headcount of approximately 20,000 students.²

For further project-related information, please refer to Figure 2-1, Concept Design - Site Plan, which graphically depicts the proposed project and its components; and Table 2-1, Campus Land Use Summary, which provides a statistical breakdown of the proposed project. See also Section 2.5, Project Overview, below.

Table 2-1. Campus Land Use Summary

Proposed Campus Land Uses	Footprint (acres)	No. of Buildings	Stories	Units	
				Homes	Hotel Rooms
Parks, Recreation, and Open Space ^a	86.1	— ^b	—	—	—
Campus Office (Including Stadium)	28.6	17	3-6	—	—
Campus Residential	24.6	16	3-24	4,600	—
Campus Hospitality ^c	5.2	2	3-22	—	400
Circulation	27.4	—	—	—	—
Total	172.0	34	—	4,600	400

Source: Carrier Johnson + Culture 2019.

Notes:

^a Includes trails.

^b A dash (—) signifies that the information does not apply for a given category.

^c Hotel H1 includes both hotel and residential uses.

2.1.3 Project Location

The property comprising the project site is located in the northeast portion of the Mission Valley community, which is located in the central portion of the City of San Diego metropolitan area (see Figure 2-2, Regional Vicinity Map, and Figure 2-3, Mission Valley Community Plan). Specifically, the project site is situated south of Friars Road, west of Interstate (I) 15, north of I-8, and east of the existing Fenton Marketplace shopping center. It is approximately 5

² One full-time equivalent student is defined as one student taking 15 course units (which is considered to be a "full course load"). Two part-time students, each taking 7.5 course units, also would be considered one FTES; and, therefore, the total student headcount enrolled at the university is higher than the FTES enrollment. At buildout, SDSU estimates that when enrollment reaches up to 15,000 FTES at the SDSU Mission Valley campus, total students enrolled at that campus site would be approximately 20,000 students.

miles from downtown San Diego and 2.5 miles west of the existing SDSU main campus situated along I-8 within the College Area Community of the City of San Diego.

Regional access to and from the project site is provided by four major freeways—I-15, I-8, I-805, and State Route 163—accessed via Friars Road (see Figure 2-4, Project Site and Surrounding Land Uses). Further, the existing MTS Trolley Green Line and Stadium Trolley Station are situated within the project site as shown on Figure 2-2, Regional Vicinity Map.

The project area is surrounded by major freeways, roadways, existing urban development, and the San Diego River. See EIR Section 1, Introduction and Environmental Setting, for further information on the proposed project's location, regional setting, and existing uses.

2.1.4 Project Contact Information

Information pertinent to the proposed project, including the project title, lead agency, project sponsor, and project contact person is provided below.

Project Title

SDSU Mission Valley Campus Master Plan

Lead Agency

The Board of Trustees of the California State University
401 Golden Shore
Long Beach, California 90802

Project Sponsor

San Diego State University
Facilities Planning, Design, and Construction
5500 Campanile Drive
San Diego, California 92182-1624
619.594.1190

Contact Person

Laura Shinn, Director
Facilities Planning, Design, and Construction
San Diego State University
5500 Campanile Drive
San Diego, California 92182-1624
619.594.1190
lshinn@mail.sdsu.edu

2.2 Project Objectives

CEQA Guidelines Section 15124 requires an EIR to include a statement of objectives sought by the proposed project. The objectives assist CSU as the lead agency in developing a reasonable range of alternatives to be evaluated in the EIR. The project objectives also aid decision makers in preparing findings and a statement of overriding considerations, if necessary. The statement of objectives should also include the underlying purpose of the proposed project.

The underlying purpose of the proposed project is to implement a SDSU Mission Valley campus, including a new multipurpose Stadium, faculty/staff/student residences and homes, academic/office/innovative uses, hotel rooms and conference space, and commercial/retail uses to support SDSU's academic, educational and cultural mission through the demolition and redevelopment of the existing SDCCU Stadium; and the restoration and revitalization of a River Park pursuant to the framework set forth in SDMC Section 22.0908.

To implement this underlying purpose, the project objectives are to:

1. Enable CSU to expand SDSU's education, research, entrepreneurial, innovation technology, and athletic programs to accommodate increasing demand for higher education within a vibrant SDSU Mission Valley campus, innovation district, and Stadium venue proximate to SDSU's existing main campus.
2. Situate and design a River Park, shared parks and open space, and recreation areas in a manner that integrates the site's natural features and green space into the SDSU Mission Valley campus.
3. Restore and revitalize the River Park.
4. Establish a sustainable, walkable, efficient, and transit-oriented SDSU campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development.
5. Create a new, 35,000-capacity multipurpose Stadium as the "home" for SDSU Division I collegiate football and other events and make the new Stadium fully operational in time for the opening of the SDSU 2022 football season.
6. Provide an SDSU Mission Valley campus innovation village with up to approximately 1.6 million square feet for academic, office, research and development and technology transfer uses with adequate faculty, staff, student and employee parking.
7. Demolish the existing SDCCU Stadium in accordance with SDMC Section 22.0908.
8. Enhance transit ridership through pedestrian and bicycle improvements, and transit connections to the existing Metropolitan Transit System (MTS) Trolley Station and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line.
9. Provide up to 4,600 residences with a mix of student, faculty, staff, workforce, and affordable housing, with adequate parking, within a vibrant, transit-oriented university village setting and in proximity to trolley and other public transportation uses to reduce reliance on automobiles.
10. Provide neighborhood-serving retail with adequate parking to serve students, faculty, staff, alumni, neighborhood residents, businesses, and park and other visitors engaging in academic, cultural, athletic, and artistic endeavors, as well as game-day sporting and other events.
11. Provide hotel/hospitality services, including up to 400 hotel rooms and 40,000 square feet of conference space and associated parking, to support visitors to campus, Stadium, and other events; meeting and

conference facilities; and academic opportunities for undergraduate and graduate students in SDSU's hospitality and tourism management programs.

12. Provide potential employment opportunities in close proximity to the campus and transit.
13. Encourage on-campus learning, research, and internship opportunities for students, faculty, and staff through public-private partnerships.
14. Meet the City's greenhouse gas (GHG) emission reduction goals as required by SDMC Section 22.0908.
15. Reflect SDSU and Mission Valley's heritage through campus planning, architecture, landscape, signage and wayfinding, and cultural and artistic design elements.
16. Create a "sense of place" within the campus open space, trails, pathways, streets, walkways, and outdoor "space," which form the campus landscape.
17. Bring together diverse groups of people for intellectual, social, and recreational exchange; foster learning, creativity, collegiality, collaboration, and innovation; facilitate student, faculty, and staff activities with innovative businesses in the community; and create a sense of community derived from actively shared park and recreation space.
18. Generate revenue to finance project elements and further support and benefit SDSU's academic and athletic programs for the SDSU campus and the San Diego region.
19. Implement a Transportation Demand Management Plan that incorporates land use, employer and resident strategies, to encourage transit use and reduce vehicle miles traveled

2.3 Project Overview

2.3.1 Site Constraints (Environmental, Technical and Economic)

Several constraints were considered in the development of the proposed project's site plan as described below and shown in Figure 2-5, Planning Constraints. Addressing these constraints in the proposed plan creates project features that serve to avoid or minimize the proposed project's environmental impacts as noted in each description.

San Diego River. The project site is bounded on the south by the San Diego River and the San Diego Multi-Habitat Planning Area. Consistent with adjacency guidelines, the proposed project would include passive, naturally landscaped areas within the San Diego River Park area to serve as a buffer to the river. In addition, biological resource protections are already in place through the SDMC and regulations implementing the City's Multiple Species Conservation Program and Multi-Habitat Planning Area.

Drainage. The San Diego River serves as a natural outlet for stormwater runoff from the project site. Accordingly, the proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with Municipal Separate Storm Sewer System requirements.

Murphy Canyon Creek and San Diego River Floodplain. In the existing condition, Murphy Canyon Creek floods under 100-year and 500-year storm events as shown in Figure 2-5, Planning Constraints. The proposed project would employ grading techniques that elevate vertical construction of the project site outside the floodplain and thereby protect people and property from flood conditions. Areas in the floodplain would be exclusively park and open space, designed to occasionally flood and filter stormwater draining to the San Diego River.

Phasing/Stadium. As contemplated by the conditions set forth in SDMC Section 22.0908, development of a 35,000-capacity multipurpose stadium is required within the first 7 years following execution of the Purchase and Sale Agreement. Accordingly, the new Stadium location in the northwest corner of the project site was selected to allow concurrent construction activities while the existing SDCCU Stadium remains in operation hosting events. In addition to allowing for concurrent construction operations, the northwest corner of the project site was selected due to its proximity to Friars Road and Stadium Way, which facilitate traffic flows in and out of stadium events, and the desire to minimize impacts to future residential neighborhoods on the eastern half of the project site. The final elevation of the field and facilities was dictated by the minimum grades necessary to achieve a gravity flow for the sewer system to connect to existing trunk sewer pipes at the southern edge of the project site.

Phasing/River Park. CSU will cause the River Park contemplated by SDMC Section 22.0908 to be revitalized and restored as envisioned by past community planning efforts, and such improvements would be at no cost to the City and completed no later than 7 years from the date of execution of the Purchase and Sale Agreement. The proposed park improvements include, among others, active and passive park uses, walking and biking trails, river buffer to protect native vegetation, and measures to mitigate drainage impacts and ensure compliance with water quality standards.

Open Space. The proposed project's site plan started first with the integration of open space into and surrounding the project site (see Figure 2-5, Planning Constraints). As illustrated, the proposed open space provides finger parks and pathways creating connection to other active and passive open space areas as well as the San Diego River, and enhances pedestrian and bicycle access throughout the project site.

Site Access/Friars Road. The existing Friars Road is an east–west roadway north of the project site and is classified as a six-lane expressway between Stadium Way and the I-15 south ramps. Friars Road currently provides two access points to the project site, at Stadium Way on the west of the site during events, and at Mission Village Drive in the middle of the project site. One additional access point from Friars Road into the project site, between Stadium Way and Mission Village Drive, was identified to ensure adequate access to the proposed multi-use stadium.

Mission Valley Terminal Facility. The project site is located to the southwest of Kinder Morgan's Mission Valley Terminal, an active, operating petroleum terminal with aboveground storage tanks and pipelines in close proximity to the project site. SDMC Section 22.0908 provides that the sale of the project site and its ultimate development must not impair the City's ability to continue its plan of environmental remediation of the existing site based on its existing agreements with responsible parties, including Kinder Morgan. For further pertinent information, please refer to this EIR, Section 4.8, Hazards and Hazardous Materials.

2.3.2 Purchase and Sale Agreement

As of this writing, the City and CSU/SDSU are discussing the terms for the purchase and sale of the project site. The City of San Diego currently owns the project site as shown in Figure 2-6, Existing Ownership. After the Purchase and Sale Agreement is executed, the portion of the project site that will remain in the City's ownership generally coincides with the boundary of the approximately 34-acre River Park identified in SDMC Section 22.0908. Figure 2-7, Proposed Land Ownership, depicts the location of land that will be acquired by SDSU and the land that is part of the proposed project, but whose ownership will be retained by the City. One of the intended uses of this EIR is to provide the CEQA compliance needed for the Purchase and Sale Agreement.

2.3.3 SDSU Mission Valley Campus Master Plan

The proposed SDSU Mission Valley Campus Master Plan is shown on Figure 2-8, Proposed Campus Master Plan. The proposed SDSU Mission Valley campus is an extension of SDSU's existing main campus, which is land-use constrained. The proposed SDSU Mission Valley campus is also connected to the main campus by the MTS Trolley Green Line and transit stations. SDSU is projected to help meet the existing and projected need to accommodate higher education in California. The proposed SDSU Mission Valley Campus Master Plan would constitute the next step in SDSU's long-term strategic planning effort. The SDSU Mission Valley Campus Master Plan's purpose is to further SDSU's academic and athletic mission, and to document the vision for the SDSU Mission Valley campus physical environment.

The CSU Board of Trustees has long recognized the importance of each campus developing a physical master plan. The Board of Trustees and the California Education Code require that each CSU campus have a physical master plan, showing existing and anticipated facilities necessary to accommodate a specified academic year FTES enrollment at an estimated target date, in accordance with approved educational policies and objectives. Each master plan reflects the ultimate physical requirements of academic and athletic programs and auxiliary activities on the campus. In developing the plan, the campus considers costs and benefits, functionally related disciplines and activities, aesthetics, instructional support needs, and environmental impact, including vehicular and pedestrian traffic flow (CSU 2018/2019).

As part of the proposed project, SDSU is proposing the addition of up to 15,000 FTES on the SDSU Mission Valley campus over time.

In completing the SDSU Mission Valley Campus Master Plan, SDSU prepared the SDSU Mission Valley Campus Guidelines (Guidelines), using the content requirements of a specific plan pursuant to California Government Code section 65451, subdivision (a)³, as contemplated by SDMC Section 22.0908(g).³ Accordingly, the Guidelines include the following content:

- (1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
- (2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.
- (3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
- (4) A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

The Guidelines are intended to be a planning guide for the orderly development of the project site over the approximately 15-year buildout. Section 2.3.4, Land Use, Open Space, and Other Major Project Components, summarizes the land uses and open space, including the distribution, location, and extent of such uses. In addition, Section 2.3.4 describes the proposed distribution, location, extent, and intensity of major components of the

³ CSU would not otherwise be required to comply with such requirements to prepare a plan in accordance with Government Code section 65451, subdivision (a); the Design Guidelines have been prepared.

proposed project's transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the project site and needed to support the described land uses and open space. Further, Section 2.3.4 identifies the development standards and guidelines for open space conservation, development, and utilization of natural resources, where applicable. Additionally, Section 2.3.4 identifies the implementation measures, including financing, necessary to carry out the proposed project's land uses, open space, and major project components.

2.3.4 Land Use, Open Space, and Other Major Project Components

The proposed project includes the acquisition, construction, and operation of a SDSU Mission Valley campus, innovation district, and Stadium to support SDSU's education, research, entrepreneurial, technology, and athletics programs. Specifically, the proposed project would include development of a new 35,000-capacity multipurpose stadium; approximately 1.6 million square feet of educational, office, innovation, and research uses; approximately 4,600 residences in approximately 16 buildings; two hotels with approximately 400 hotel rooms; and approximately 95,000 square feet of commercial/retail uses to support students, faculty, staff, and visitor uses (refer to Figure 2-1, Concept Design – Site Plan). The proposed project would also include approximately 86 acres of open space, parks, and recreation, including a River Park, which includes the 34-acre area identified under SDMC Section 22.0908; over 4 miles of pedestrian and bicycle trails; and the requisite utility improvements to provide for the orderly development and operation of these uses.

Please refer to Table 2-1, Campus Land Use Summary, for a statistical breakdown of the proposed project. Please also refer to Table 2-2, Existing and Proposed Conditions Summary below, for a breakdown of the proposed project's existing and proposed project site conditions.

Table 2-2. Existing and Proposed Conditions Summary

Category	Existing Conditions	Proposed Conditions
Campus Stadium		
Capacity	71,500	35,000
Footprint	15 acres	15.4 acres
Total building area	1,351,200 square feet	750,000–800,000 square feet
Parking spaces	18,870 spaces	6,205 spaces
Annual Major Events		
<i>SDSU Football games</i>	7	7
<i>Other sporting events (MLS, Soccer)</i>	5	21
<i>Concerts</i>	1	4
<i>Other major events</i>	6	6
Employees	- employees	570 employees
Residential Campus Uses		
Buildings (not including H1 hotel)	0 buildings	15 buildings
Footprint	0 acres	24.6 acres
Total building area	0 square feet	4,734,000 square feet
Homes	0 homes	4,600 homes
Residential parking spaces	0 parking spaces	5,663 parking spaces
Residents	0 residents	8,510 residents

Table 2-2. Existing and Proposed Conditions Summary

Category	Existing Conditions	Proposed Conditions
Nonresidential Campus Uses		
Campus		
<i>Buildings (not including stadium)</i>	0 buildings	16 buildings
<i>Total building area</i>	0 square feet	1,565,800 square feet
<i>Footprint</i>	0 acres	9.6 acres
<i>Courtyards, Mall, Green</i>	—	8.2 acres
<i>Multi-use Recreation Fields/Tailgate park</i>	—	7.2 acres
<i>FTES</i>	—	15,000 FTES
<i>Office Employees</i>	—	5,324 employees
<i>SDSU Faculty/Staff</i>	—	1,896 employees
Campus Neighborhood-Retail		
<i>Total building area</i>	0 square feet	95,000 square feet
<i>Employees</i>	—	314 employees
Campus Hotels		
<i>Buildings</i>	0 buildings	2 buildings
<i>Rooms</i>	0 rooms	400 rooms
<i>Footprint</i>	0 acres	5.2 acres
<i>Total building area</i>	0 square feet	215,400 square feet
<i>Employees</i>	—	228 employees
Streets and Circulation		
<i>Footprint</i>	1.88 acres	27.4 acres
Parks, Recreation and Open Space (including trails and paths)		
<i>Footprint</i>	6.1 acres	86.1 acres
Surfaces and Drainage		
<i>Impervious Surface Percentage</i>	90%	57%%
<i>Pervious Surface Footprint</i>	16.9 acres	72.6 acres
<i>Impervious Surface Percentage</i>	90%	58%
<i>Average Annual Runoff Volume</i>	134 acre-feet	104 acre-feet

Sources: Carrier Johnson + Culture 2019; Appendix A of Appendix 4.13-1; Geosyntec 2019; Appendices 4.9-1, 4.9-2.

Notes: FTES = full-time equivalent students.

A dash (—) signifies that the information does not apply for a given category.

Each project component will be in accordance with CSU building authority and building permit process. Pursuant to California Education Code Section 66606, the CSU has full power and responsibility over the construction and development of all state university campuses and properties. The California Public Contract Code includes Chapter 2.5 specific to CSU Contract Law (California Public Contract Code Sections 10700 – 11005). Section 10704 of the General Provisions provides, “[t]he project shall be under the sole and direct control of the trustees, pursuant to the powers and responsibilities invested in them by Chapter 8 (commencing with Section 66600) of Part 40 of Division 5 of Title 3 of the Education Code.”

Pursuant to Cal. Health and Safety Code Section 18934.5, the CSU is required to construct and maintain its facilities in compliance with the California Building Code (CBC). Per CBC 1.2.1.2, the CSU has appointed a CSU Building

Official. The Building Official is the “officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative” (CBC 2.202, Definitions).

The CSU Building Official is the enforcing entity for CSU projects for the 23 campuses and the Chancellor’s Office. Acting under this authority, each Campus Deputy Building Official has the responsibility to coordinate and confirm all required approvals. There are several determinations that must be addressed for each project (see <http://www.calstate.edu/cpdc/ae/review>). When a CSU campus has completed its due diligence plan and peer reviews, and has demonstrated the project’s compliance with the CBC to the satisfaction of the CSU Building Official, the CSU issues a California State University Building Permit to permit the project, or aspects of the project, to proceed to construction.

Information regarding CSU Building Permit requirements may be found at: <http://www.calstate.edu/cpdc/ae/review>. (Note that some of these processes are continuously being updated and revised on an as-needed basis.)

Each project component is described further below.

2.3.4.1 Multipurpose Stadium

2.3.4.1.1 Stadium and Stadium Concourse

The proposed 35,000-capacity multipurpose stadium and concourse would support collegiate football, professional and collegiate soccer, National Collegiate Athletic Association Mountain West Conference championship and bowl games, concerts, and other events within a campus setting. Consistent with CSU policies, SDSU is planning a collaborative design-build approach to the design and construction of the Stadium and concourse.

The selected design-builder would provide complete architectural, engineering, and consulting services as required to design and construct all details of the Stadium and concourse in accordance with good practices, applicable building codes, CSU guidelines, and other standards and criteria. In addition, the design-builder would be responsible for project construction phasing components, including preconstruction, demolition, mobilization, hazardous material abatement, underground utilities relocation, site preparation, and landscaping, all of which would be identified during the stadium design phase.

Accordingly, the new stadium components described below are based on estimates and approximations, and therefore, are subject to further refinement during the design-build process. To account for this design-build approach, this EIR has reported Stadium design/construction components using gross or slightly higher square feet or other metrics to ensure that all Stadium-related potential significant environmental impacts are addressed. (The actual design/construction is likely to be less than reported herein.)

Stadium and Concourse Capacity and Design Criteria

The proposed new stadium and concourse is to be situated in the northwest corner of the project site, at the highest existing elevation (see Figure 2-9A, Concept Design – Stadium Plan). The 35,000-capacity multipurpose stadium would host SDSU football and accommodate soccer, and other events; the new Stadium and concourse area also could be expanded to accommodate a future National Football League (NFL) franchise.

As publicly reported, in January 2017, the San Diego Chargers, an NFL team, notified the City it would terminate their lease and vacate the stadium later that year. The Chargers have since permanently relocated to the Los

Angeles region, and there are currently no plans or proposals for the return of an NFL or professional franchise to San Diego. The new Stadium/concourse design, however, will not preclude future expansion capabilities from a capacity of 35,000 to approximately or up to 55,000. Nonetheless, the proposed project does not include, plan, or contemplate an “expanded” stadium at this time or in the future; and no foreseeable development proposals, plans, or projects for an expanded stadium are known, pending, or contemplated.

For those reasons, this EIR analyzes the potential environmental effects of the 35,000-capacity Stadium, but not the future potential of expanding the Stadium to accommodate a future professional franchise. This is because such expansion is not a part of the proposed project; and such expansion is not reasonably foreseeable at this time or in the future. Additionally, such expansion capacity and timing are not known and cannot reasonably be anticipated or evaluated without performing hypothetical scenarios without regard to an actual project, development proposal, or time frame for implementing any such project or proposal. Should plans or circumstances change, the lead agency would be required to address the potential significant environmental impacts associated with an expanded stadium at a later time, consistent with CEQA and the CEQA Guidelines.

The new Stadium and concourse would cover a building area of approximately 5.46 acres and 9.36 acres, respectively (totaling approximately 14.82 acres), less than 10% of the total site acreage. In terms of approximate gross square feet, the Stadium and all associated facilities would cover approximately 750,000 to 800,000 square feet of the project site. The stadium field would consist of natural turf. The concourse area would feature a combination of concrete hardscape, canopy trees, native understory, and ornamental understory/natural turf.

The Stadium and concourse would be designed in accordance with applicable CSU building codes, seismic design criteria, and thermal considerations. In addition, all stadium/concourse mechanical (e.g., heating, ventilation, air conditioning, plumbing, fire protection) systems would be constructed in accordance with all applicable CSU and State Fire Marshal building codes and regulations, and installed for a complete, fully functional facility. The design intent of such mechanical systems would be to enhance the facility’s flexibility of use, provide a safe and comfortable environment, and minimize energy consumption and maintenance costs.

Stadium plumbing systems would be designed and installed in accordance with the applicable CBC (2016, Title 24, Part 5). Further, the Stadium’s fire protection system would be installed to meet the requirements of the California Fire Code (2016, Title 24, Part 9), State Fire Marshal (Title 19, Public Safety), and other applicable standards. The Stadium’s electrical (power, lighting, and fire alarm) systems also would be installed in accordance with all applicable state law building codes and design criteria.

Stadium and Concourse Facilities

The new Stadium would include spectator facilities (suites, end zone club, reserved seating, loge amenities, restrooms, guest services, etc.), food service, concessions, and retail facilities.

The new Stadium would also include team facilities (e.g., home and visiting team facilities, equipment room, lockers, athletic training, post-game facility, recruiting room, and other support services), administration facilities (e.g., ticketing), service and operations facilities (e.g., offices/operations, dock/staging, security, storage, electrical/janitorial), and meeting facilities (e.g., media and press box, support facilities). Overall stadium circulation requirements (e.g., concourse, vertical circulation [including ramps, stairs, and elevators], service corridors, restrooms) would be located throughout the Stadium as required by code.

Comparison of Stadium Characteristics

Table 2-3, Comparison of Existing Stadium to New Stadium, describes other proposed Stadium characteristics compared to the existing Stadium located on site.

Table 2-3. Comparison of Existing Stadium to New Stadium

Stadium Characteristics	Existing Stadium	New Stadium ¹	Net Change
Square Footage	1,351,200	750,000-800,000	– 551,200
Parking Spaces ²	18,870 spaces	6,205 spaces	– 12,665 spaces
Normal Capacity	70,560	35,000	– 35,560

Notes:

¹ In final design development, actual stadium seating and features may vary.

² Future implementation of the proposed River Park would result in less parking bringing the total to approximately 6,205 spaces.

Stadium Programming

The new Stadium would be used for collegiate football games, including SDSU home football games, collegiate and professional soccer matches, and a variety of other events (e.g., dirt shows, family entertainment, concerts, tent sales). Table 2-4, Existing and Proposed Event Characteristics, describes these uses, as compared to those currently supported at the existing stadium.

Table 2-4. Existing and Proposed Event Characteristics

Event Description	Existing Stadium		Proposed Stadium	
	No. of Events (annual) ¹	Average Attendance ²	No. of Events (planned) ³	Attendance ⁴
Events (20,000+ guests)				
SDSU Football	7	21,414	7	32,500
International Soccer	3	16,614	4	30,500
Professional Soccer ⁴	—	—	17	25,500
Concerts	1	40,885	4	25,500
Jehovah's Witnesses Convention	3	20,000	—	—
Other Football ⁵	1	56,740	—	—
Holiday Bowl	1	34,490	—	—
Other Events ⁶	—	—	6	20,500
<i>Subtotal</i>	16	—	38	—
Events (5,000 - 15,000 guests)				
Cal State Games Opening Ceremony	1	8,500	—	—
Super Shred	1	11,000	—	—
Warped Tour	1	11,000	—	—
Professional Football (AAF)	—	—	5	12,200
Trade and Consumer Shows	—	—	4	8,200
<i>Subtotal</i>	3	—	9	—
Events (1,000 - 5,000 guests)				
Festivals (Winter Wonderland, Craft Beer & Food, etc.)	14	1,000	—	—

Table 2-4. Existing and Proposed Event Characteristics

Event Description	Existing Stadium		Proposed Stadium	
	No. of Events (annual) ¹	Average Attendance ²	No. of Events (planned) ³	Attendance ⁴
Fun Runs	3	2,250	—	—
Swap Meet	46	1,000	—	—
High School Events	—	—	6	3,100
Graduations	—	—	2	3,100
<i>Subtotal</i>	63	—	8	—
Daily Operations (<1,000 guests)				
Car/RV Show	53	200	—	—
Car Race/Autocross	44	200	—	—
Recycling event	2	200	—	—
Driving School	2	220	—	—
Stadium Advisory Board Meeting	10	20	—	—
Events in Clubs	—	—	50	200
Speaking Engagements	—	—	10	550
Weddings	—	—	5	200
Farmers Markets	—	—	40	300
<i>Subtotal</i>	111	—	105	—

Notes:

- ¹ Events based on the 2018 calendar available at <https://www.sandiego.gov/stadium>. Canceled events are not included.
- ² Average attendance determined by event per the following sources. Employees at stadium including parking attendants, vendors, concessions staff, security etc. are included in attendance figure.
SDSU Football: Announced attendance reported by goaztec.com for all regular season home games and reduced to 70% actual-to-announced rate based on data provided by SDSU for the 2016 and 2017 seasons.
International Soccer: Announced attendance reported by Wikipedia, estimated 90% actual-to-announced rate based on no-show rate provided at <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
Concert: Announced attendance for the Jay Z & Beyoncé concert reported by Wikipedia, estimated 95% actual-to-announced rate based on a higher attendance for a one-time event.
Jehovah's Witnesses Convention: Announced attendance provided by SDSU, estimated 90% actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
Holiday Bowl: Announced attendance in 2018 reported by Wikipedia, estimated 90% actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
Navy/Notre Dame game: Announced attendance reported by Wikipedia, estimated 90% actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
Cal State Games Opening Ceremony: Announced attendance in 2017 provided by SDSU, estimated 90% actual-to-announced rate based on no-show rate provided by <https://blog.kalaharimeetings.com/2015/03/09/three-tips-to-limit-no-shows-at-your-next-event/>.
Super Shred: Attendance reported in <https://www.sdccu.com/promos/shred-guinness-world-record/>.
Warped Tour: Reported tickets sold in <https://www.sandiegouniontribune.com/entertainment/music/sd-et-upfront-warped-tour-20180621-story.html>. Estimated that additional tickets sold balance with no-shows.
Festivals, Fun Runs, Car/RV Show, Car Race/Autocross, Recycling event, Stadium Advisory Board Meeting: Attendance based on engineering judgment.
Swap Meet: Approximately 1,200 available vendor stalls, attendance based on engineering judgment.
Driving School: Includes 200 teens attending per <https://putonthebrakes.org/about> and includes 20 staff.
- ³ Number of events and average attendance provided by SDSU/JMI Sports. Employees at stadium including parking attendants, vendors, concessions staff, security etc. are included in attendance figure.
- ⁴ Stadium would host either MLS or USL Events not both, so USL events with lower attendance were excluded from this calculation.
- ⁵ Other football refers to the 2018 Navy/Notre Dame game.
- ⁶ Other events include bowl games, monster truck, motocross, religious/cultural gatherings etc.

Football Games

Approximately eight football games per year would be held at the Stadium (SDSU football games and potential Mountain West Conference Championship games). Football games would be scheduled on Saturdays (and occasionally mid-week in-lieu of Saturdays.) These games will occur generally the last week of August through the end of the calendar year. Annually, the Holiday Bowl is played in San Diego, and neutral-site football games (i.e., non-San Diego based football teams hosting a football game at a neutral location).

Professional and International Soccer Matches

The Stadium could accommodate professional or international soccer games. The multipurpose stadium would be designed to accommodate a future Major League Soccer or other professional soccer leagues (i.e., USL), including indoor and minor league soccer. Major League Soccer (MLS) teams play 34 matches annually; accordingly, there would be approximately 17 home matches. In addition, San Diego historically has been a location for international soccer matches. The new multipurpose stadium could accommodate such soccer matches. Approximately four international soccer matches per year are assumed to be held at the new stadium. Soccer matches would be scheduled throughout the year; however, they would avoid scheduling conflicts with National Collegiate Athletic Association collegiate football games.

Concerts

Approximately three to five large concerts per year would be held at the Stadium; however, additional corporate sponsored events including smaller, private concerts may also be accommodated (assumed to be one to two private concerts annually).

Other Events

The remaining events are characterized as smaller stadium-type events and non-stadium events. Smaller stadium events may include the California Interscholastic Federation championship high school football games. Three such championship games were played at Qualcomm Stadium in 2013; however, these have moved to other locations since then. Other Stadium uses include Monster Jam (the monster truck competition) and Supercross, which have been held at Petco Park for the past several years, and religious gatherings such as Jehovah's Witnesses conventions. Smaller events may include functions such as events in Stadium clubs, speaking engagements, weddings and farmers markets. Events may also include cultural and music festivals, community and civic events, farmers markets, academic events and performing arts/theatrical events within the on-site conference facilities, parks, amphitheater(s), and campus green spaces

Multi-use Recreation Field/Tailgate Park

The proposed recreation field and related areas would be located immediately west of the stadium and concourse area. This area would feature hardscape, turf and canopy trees. Bike racks would be included.

Entry Signage

The entry signage would feature an approximately 25-foot-tall LED display along Friars Road, between Stadium Way and Mission Village Drive.

Lighting

All interior and exterior areas of the Stadium and concourse would include an installed lighting system to maintain recommended illumination levels, CSU requirements, and other standards. Lighting power density and controls would meet or exceed the requirements in the most recent version of the California Energy Code (Title 24) and other applicable requirements.

All light fixtures would be commercial quality grade fixtures. The interior lighting concepts would be developed during the design phase, and cover all Stadium and concourse facilities.

Sports lighting would include LED field lighting fixtures, and National Electrical Manufacturer's Association 3 reflectors with exterior glare control shrouds. For emergency lighting, 10% of the fixtures would be connected to an emergency generator system. The illumination level for the sports lighting would be as follows: (1) for horizontal lighting, a 250-foot candle (FC) average would be maintained; (2) for vertical lighting (fixed and reverse camera), a 150 FC average would be maintained; (3) maximum and minimum uniformity of 1.35 to 1 would be maintained; and (4) a glare rating of ≤ 40 would be used. The fixtures would be aimed to optimize the lighting, minimize hard shadows noticeable in televising, and reduce light and glare to surrounding areas.

Maintenance and concert lighting would be set at a minimum of 10 FC. The egress lighting would be set at a minimum of 5 FC; and the maintenance and egress lighting would utilize the same fixtures.

Lighting guidelines would require that in no event would any lighting element associated with the Stadium adversely impact the operation of motor vehicles on area roadways. Additionally, the guidelines would specify that spill light levels would not adversely impact any residential community.

The design goal is to limit light spill illumination to surrounding areas to 0.5 FC, approximately 200 feet from the Stadium's perimeter. Such goals are intended to limit glare to all motorists around the Stadium to a threshold value rating of 40 glare rating at major street intersections around the stadium. In addition, all lighting sources would be directed downwards or otherwise shielded so as to keep light and glare confined to the project boundary. The sports lighting fixture will be equipped with glare shields and cut-off louvers for glare and spill light control. Physical obstructions will be used to further limit any impact. At stadium completion, the lighting system would be aimed and commissioned to optimize the illumination quality on the playing field and minimize the glare and spill to the area outside the Stadium. Further, all maintenance and emergency lighting would be connected to a dimming system. Concert lighting would be adjustable from 0.1 FC to 10 FC throughout the bowl and the field.

Lighting hours would be similar to existing conditions at SDCCU Stadium, with sports lighting operating before, during and following events, to ensure safe ingress and egress before and after events, and work lights operating as needed.

Sound System

During SDSU football games, which would typically occur on Saturdays but may also occur on mid-week nights in lieu of Saturday, the sound system would operate until approximately 12:00 a.m. During professional soccer matches, the sound system would be employed until approximately 12:00 a.m. Other events would occur as determined by the special events calendar but typically on Fridays, Saturdays, and Sundays, and the sound system would be operational until 11:00 p.m.

2.3.4.1.2 Demolition

The proposed project would result in the demolition, dismantling, implosion, and/or removal of the existing SDCCU Stadium. Demolition is expected to last approximately 9 months, from approximately January to August 2022.

Initial demolition steps would be abatement of the existing SDCCU Stadium for asbestos-containing materials, lead-based paint, and other hazardous materials. Once abated, the existing stadium would be prepared for demolition. Implosion also may be initiated through the use of explosives in one coordinated event. Implosion methods are effective in bringing down tall structures that would be difficult to demolish with typical construction equipment or too expensive to demolish from the top downward. Implosion also reduces the length of time neighboring areas would be subject to the noise and other inconvenience from a lengthy conventional demolition approach. Implosion methods use highly specialized explosives to undermine the supports of a structure so it collapses either within its own footprint or in a predetermined path. Project-specific demolition methods would be determined based on a demolition plan. Dust mitigation and monitoring would be a part of the demolition plan. Noise levels for the implosion of concrete structures have ranged from 120 to 135 decibels at the source, which last only a brief period of time (typically less than 10 seconds). The demolition plan also would include enforcement of a human safety standoff distance during an implosion. After demolition, the materials would be sorted for reuse, recycling, and landfill disposal. Approximately 80% of the demolition debris would be diverted from landfills. Further, it is expected that approximately 40,000 cubic yards of material would be hauled from the project site. Approximately 2,500 truck trips would be required to haul away the demolition debris.

2.3.4.2 SDSU Campus Education and Innovation Area

Figure 2-9B, Concept Design – Campus Plan, depicts the proposed project's academic, administrative, and public/private-partnership office buildings. These uses would encourage the transfer of knowledge, ideas, and technology, and foster new research while serving as an incubator for internships and exchange between new innovative business uses and the campus. Fourteen of these buildings would be located south of the new Stadium and two would be located east of the Stadium. These buildings would range from approximately 3 to 6 stories in height, and from 50,160 square feet to 150,450 square feet, for a total of 1,565,800 square feet. Of this total, up to 100,000 square feet of the total campus educational/innovation uses may entail community health care clinic/medical office building uses. Approximately 5,000 garage parking spaces would be provided below these buildings to serve students, faculty, staff, employees, and guests.

These academic buildings could initially be leased for office/commercial use, through SDSU-public/private partnerships to facilitate building construction and funding of campus facilities. These buildings would ultimately support educational, research, entrepreneurial, and technology programs as determined necessary by SDSU.

As part of the proposed project, and as indicated above, the SDSU Mission Valley campus, in combination with the adjacent residential area, may ultimately accommodate approximately up to 15,000 FTES and associated faculty and staff.

For further detail, please refer to Figure 2-1, Concept Design – Site Plan, which depicts the proposed project's site plan for the campus buildings.

2.3.4.3 Parks, Recreational, and Open Space Uses

The proposed project would include a River Park, walking paths and trails, and associated open space for the shared use of the campus and community. Landscaping features, such as paseos, malls, greens, and green

space, would be interspersed throughout the campus land uses as depicted in Figure 2-9C, Concept Design – Parks and Recreation Features. Focused parks and recreation areas are shown in Figures 2-9D and 2.9-E, listed in Table 2-5, and described below.

Table 2-5. Parks, Recreational, and Open Space Land Use Summary

Proposed Land Use	Footprint (approx. acres)
River Park	58.2 ^a
Active Park and Green Space	22.0
Community Passive Park and Green Space	18.8
SDSU Active Park and Recreation	14.8
Open Space (Murphy Canyon Creek)	2.6
Hike and Bike Loop ^b	4.1
Community Hike and Bike Trail ^b	3.8
Multi-use Recreation Fields/Tailgate Park	7.2
Campus Mall	2.2
Campus Green	2.1
Campus Courtyard	3.9
50-yard line Park	0.3
Campus Paseos	2.0
Residential Paseos, Sidewalks and Landscape Areas within right-of-way	2.4
<i>Subtotal</i>	<i>86.1</i>

Source: Carrier Johnson + Culture 2019

Note:

^a Includes 34 acres identified in SDMC Section 22.0908 for San Diego River Park.

^b Within portions of the River Park; however, acreage is accounted for separately.

River Park

The proposed project would include development of a River Park as envisioned by past community planning efforts, including the San Diego River Park Master Plan and the Mission Valley Community Plan, to integrate Mission Valley's urban setting with the natural environment. Figure 2-9D, Concept Design – River Park Plan, depicts the River Park conceptual design. The River Park would include the approximately 34-acre area identified for such uses by SDMC Section 22.0908 as well as a river buffer of native vegetation and features to ensure compliance with water quality standards and Multiple Species Conservation Program adjacency requirements. Figure 2-10C, Concept Design – Parks and Recreation Features, depicts certain uses within the River Park, which are further described below; however, the uses are conceptual and may be revised by more precise site planning conducted through the public outreach process.

Active Parks and Recreation Facilities

The parks and recreation portion of the River Park would be located north of the San Diego River floodway. The area would include flexible use turf event/play areas, play structure(s), basketball courts, volleyball courts, softball field(s), and/or soccer field(s). Additionally, fixed bench seating and bike racks would be constructed. These facilities would be open to the public and, while retained in fee ownership by the City of San Diego per SDMC Section 22.0908, the River Park will be built by SDSU to serve the needs of the campus and greater San Diego community. This area would be comprised of native, drought-tolerant plantings, including canopy trees, native/established

understory, and ornamental understory, and would include hardscaping with ground-permeable concrete, integral color concrete, and a synthetic lumber footbridge with metal guardrails.

Dog Park

A dog park would be located south of San Diego Mission Road and north of the proposed campus-related residential uses. The dog park would be comprised of native, drought-tolerant plantings, including canopy trees, native/established understory, and hardscape.

Community Hike/Bike Trail

An approximately 2-mile hike and bike trail would be located throughout the parks and recreation portions of the River Park, as shown in Figure 2-9E, Concept Design – Trails and Open Space Plan. The trail would connect to the hike and bike loop, described further below. The trail would be comprised of native, drought-tolerant plantings and hardscape. Hardscape would include permeable concrete and exposed aggregate finish concrete. The trail would include fixed-bench seating and bike racks.

Community Hike/Bike Loop

An approximately 2.4-mile hike and bike loop would connect to the proposed hike and bike trail at multiple points and circle the project site, as shown in Figure 2-9E, Concept Design – Trails and Open Space Plan. The loop would be comprised of native, drought-tolerant plantings and hardscape. Plantings would include canopy trees and native/established understory. Hardscape would include permeable concrete and exposed aggregate finish concrete. The loop would include fixed-bench seating and bike racks.

Community Recreation Center Site

The proposed project would include a site that would provide a building pad for a future City-constructed recreation/community/aquatic center envisioned by the Mission Valley Community Plan Update. Construction of vertical improvements at the community center is not part of the proposed project. The design and vertical improvements would be the responsibility of the City and funded through the City's collection of park development fees or other City-funding mechanisms.

SDSU Campus Parks and Recreation Features

Parks and recreation features within the proposed project are shown in Figure 2-9C, Concept Design – Parks and Recreation Features. These uses and facilities are described below.

Recreation Field

In the northwest corner of the project site, an open turf area would be used for recreational fields (i.e., soccer fields) during typical operation of the proposed project. During certain events in the new Stadium, this area may be converted to temporary parking.

Green

Approximately 2.1-acres would provide a north–south connection between the new Stadium and the River Park and provide access points to parking garages. The green would be comprised of native, drought-tolerant plantings

(canopy trees, ornamental understory, and turf) and hardscape (permeable concrete, exposed aggregate concrete, and integral color concrete). This area would feature raised planters, cantilever overhang patio, pedestal paver system, and a raised amenity deck with a shade structure, stair and ramp system, fixed furnishings, moveable tables and chairs, and turf.

Mall

The mall running east–west would intersect the center of the green. The mall would be comprised of native, drought-tolerant plantings (canopy trees, ornamental understory, and turf) and hardscape. This area would feature a campus monument, raised planters, shade structure, pedestal paver system, and moveable tables and chairs.

Other Green Spaces

Green space would be located throughout the campus/academic building areas serving as traditional “quad” features between buildings. The “quad” green space would be comprised of native, drought-tolerant plantings (canopy trees and native/established understory) and hardscape (permeable concrete and exposed aggregate concrete). This area would feature raised planters, bike racks, pedestal paver systems, moveable tables and chairs, shade structure, a seasonal water feature/stormwater conveyance system, and an outdoor assembly/shared plaza space.

Paseos

Paseos would be located throughout the campus/academic building areas and around the Stadium concourse. Paseos would be comprised of native, drought-tolerant plantings (canopy trees and native/established understory) and hardscape (permeable concrete and exposed aggregate concrete). This area would feature raised planters and a pedestal paver system.

Bike Lane and Path

Approximately two-thirds of a mile of bike lanes and paths would provide bike access within the campus/academic areas. Signage would be provided to designate the bike lanes and paths. Street crossings and traffic signals would be provided.

2.3.4.4 Campus-Related Residential Uses

The proposed project would include a campus-related residential area south of Friars Road, east of Mission Village Drive, west of Murphy Canyon Creek, and north of the MTS Trolley Green Line, as shown on Figure 2-9F, Concept Design – Residential Plan. The residential area would be comprised of up to approximately 16 buildings totaling up to 4,600 residential units and with 5,662 parking spaces. Residential buildings would range from approximately 70,000 gross square feet (Building R9) to 490,000 gross square feet (Buildings R6 and R7) and between 3 and 24 stories in height, for a total of approximately 4.7 million square feet of residential uses (gross). The residential area would provide housing for students, faculty, and staff. The proposed project would comply with the City’s affordable housing requirements by building the required affordable units on-site. The remainder of the residential units would be made available to provide workforce and publicly available housing within a vibrant university village setting.

2.3.4.5 Hotel Uses

The proposed project would include two hotels (H1 and H2) in the northern portion of the project site, on either side of Mission Village Drive, adjacent to Friars Road. Figure 2-9G, Concept Design – Campus Hospitality Plan, identifies

the location of the hotels. H1 would be approximately 3.8 acres located north of the new stadium, and would provide a mix of hotel uses and residential uses. The hotel would comprise a total of approximately 255 hotel rooms on the first nine floors of the building, totaling approximately 156,000 gross square feet (95,000 net square feet). This hotel would also include an approximately 2,040-square-foot lobby/restaurant(s), and approximately 40,000 square feet of conference space. Hotel H1 would also include 70 residential units on the top stories. Overall, this hotel would include a total of approximately 425 parking stalls.

H2 would be approximately 1.4 acres located east of Mission Village Drive and south of Friars Road, and would consist of 145 rooms in three stories totaling 60,000 gross square feet (50,000 net square feet). The hotel would include a total of approximately 60 parking stalls.

2.3.4.6 Utilities and Public Services

The proposed project would require new points of connection for domestic water, fire water, and sewer from existing utility lines. Existing stormwater systems would be augmented to support anticipated changes in stormwater discharge quantities. Construction and operation of the proposed project would entail improvements to the wet and dry utilities within the immediate area. Improvements and modifications associated with each type of utility are briefly noted below.

Electrical and Natural Gas Service

Figure 2-10A, Site Utilities – Concept Electrical Utilities Plan depicts the existing and proposed electrical infrastructure relative to the proposed project. Electrical services and natural gas would be provided by San Diego Gas and Electric. For further information regarding the extension of electrical and natural gas service to the project site, please refer to this EIR, Section 4.17, Utilities and Utility Systems.

Water

The proposed project's water demand is approximately 693,343 gallons of water per day (or 776 acre-feet per year). The City's Water Utilities Department currently provides water to the project site as part of its metropolitan system. All water infrastructure would connect to existing City of San Diego infrastructure and be built by CSU/SDSU in coordination with the City. Figure 2-10B, Site Utilities – Concept Water Plan, shows locations of the proposed project's water facility infrastructure. For further information regarding the proposed project's water demands and associated supplies to meet demand, please refer to this EIR Section 4.17, Utilities and Utility Systems.

Sanitary Sewer

Based on estimated capacity, the proposed project would generate approximately .7 million gallons per day of wastewater.

Sewer service will be provided by the City. The existing sewer collection system for the project site consists of 8-inch gravity sewers around the existing stadium connecting to a single 18-inch gravity sewer which flows south and connects to the existing North Mission Valley Interceptor. There is also an existing 36-inch gravity sewer adjacent to the eastern property line that connects to the North Mission Valley Interceptor. Figure 2-10C, Site Utilities – Concept Sewer Plan, shows the existing sewer facilities in the vicinity of the proposed project. The existing on-site sewer also conveys wastewater from several single-family homes north of Friars Road and east of Mission Village Drive, as well as from Fire Station 45 north of Friars Road and west of Mission Village Drive. Service operation will

be coordinated with the City to ensure that existing services will remain operational during development of the proposed project.

Figure 2-10C, Site Utilities – Concept Sewer Plan, depicts the proposed project’s sewer system relative to existing sewer lines. The proposed project will connect to the Mission Valley interceptor utilizing the existing 18-inch gravity sewer and two proposed new connection the north of Mission Valley interceptor. There is sufficient capacity in the North Mission Valley Interceptor to accommodate the anticipated sewer flows generated from the proposed project. Design and construction of the sewer system in the project site would be performed by CSU/SDSU in coordination with the City. The design of sewer facilities would be coordinated with the City’s Utilities Department. For further information regarding the proposed project’s sewer system relative to existing sewer lines, please refer to this EIR, Section 4.17, Utilities and Utility Systems.

Stormwater

Figure 2-10D, Site Utilities – Concept Drainage Plan, depicts the locations of the proposed project’s stormwater facility infrastructure. Stormwater drainage systems would be located throughout the project site and generally direct all stormwater on site to bioretention basins. Any excess water such as generated during larger storms would be directed to catchment basins near the southern edge of the project site, which would outlet into the existing storm drain connections to the San Diego River, located at the southern edge of the project site as shown in Figure 2-10E, Site Utilities – Stormwater Quality Treatment Plan. For further information regarding the proposed project’s stormwater system and related issues please refer to this EIR, Section 4.9, Hydrology and Water Quality.

Fire Protection

The proposed project’s fire protection services would be provided by the San Diego Fire-Rescue Department. Fire Station 45, located at 9366 Friars Road, just to the north of the project site, would serve the proposed project. Fire Station 45 opened in November 2015 and serves West Mission Valley and its surrounding areas. Fire Station 45’s district is 4.28 square miles. In addition, Fire Station 45 is a HAZMAT station, which is responsible for identifying, containing, and removing hazardous materials. Apparatus stationed at Fire Station 45 include Battalion 4, Engine 45, Truck 45, HazMat 1, and HazMat 2 (SDFD n.d.). For further information regarding the proposed project relative to fire protection, please refer to this EIR, Section 4.14, Public Services and Recreation.

Law Enforcement

The proposed project’s law enforcement services would be provided by SDSU’s University Police Department; however, the San Diego Police Department would also serve the project site through an automatic aid agreement with CSU/SDSU. The project site is within the Eastern Division of the San Diego Police Department, which serves the neighborhoods of Allied Gardens, Birdland, College East, College West, Del Cerro, Grantville, Kearny Mesa, Lake Murray, Mission Valley East, Qualcomm, San Carlos, Serra Mesa, and Tierrasanta. The Eastern Division serves a population of approximately 155,892 people and encompasses 47.1 square miles. Headquarters of the Eastern Division are located at 9225 Aero Drive, approximately 1.75 miles north of the project site (SDPD n.d.).

The proposed project’s buildings would be capable of accommodating a new SDSU Campus Police Department substation. This substation would serve as an extension of the central University Police Department station on the main campus. All services available on the Mission Valley campus would be provided in close coordination with main campus personnel and leadership. For further information regarding the proposed project relative to law enforcement, please refer to this EIR, Section 4.14, Public Services and Recreation.

Library

Library service would be provided through the CSU/SDSU library system, as well as the City of San Diego library system. The nearest City library, Mission Valley Branch Library, is located 0.25 miles west of the project site at 2123 Fenton Parkway. The SDSU library is the Love Library, located on the SDSU main campus, approximately 2.5 miles east of the project site. For further information regarding the proposed project relative to libraries, please refer to this EIR, Section 4.14, Public Services and Recreation.

Secondary Schools

K-12 school services would be provided by San Diego Unified School District (SDUSD). SDUSD serves more than 121,000 students in pre-school through grade 12 and is the second largest district in California. SDUSD has 226 educational facilities with 13,559 employees. Nearly 6,000 teachers are in classrooms at SDUSD's various educational facilities, which include 117 traditional elementary schools, 9 K-8 schools, 24 traditional middle schools, 22 high schools, 49 charter schools, 13 atypical/alternative schools, and 5 additional program sites (SDUSD 2018).

The nearest elementary school (K-5) is Juarez Elementary School, located at 2633 Melbourne Drive, San Diego, California 92123, approximately 0.5 miles north of the project site. Enrollment in 2018-2019 was 274 students (California Department of Education 2018a). A new elementary school at Civita, approximately 1.5-miles west of the project site, is planned to accommodate 500 students and is expected to open in 2022.

The nearest middle school is Taft Middle School, located at 9191 Gramercy Drive, San Diego, California, 92123, approximately 1.25 miles north of the project site. Enrollment in 2018-2019 was 462 students (California Department of Education 2018b). The nearest high school is Kearny Complex, located at 7651 Wellington Drive, San Diego, California 92111, approximately 2.5 miles northwest of the project site. Enrollment in 2018-2019 was 1,737 students. For further information regarding the proposed project relative to schools, please refer to this EIR, Section 4.14, Public Services and Recreation.

2.3.4.7 Access, Circulation, and Parking

The existing SDCCU Stadium has regional access to four major freeways: I-15 is adjacent to the east; I-8 is approximately 0.25 miles to the south; I-805 is less than 1 mile to the west; and State Route 163, accessed via Friars Road, is approximately 2.4 miles to the west. Vehicle access to the project site is from the main gate at Mission Village Drive to the north; east-west access is from Friars Road via Qualcomm Way, which provides two gated accesses. A gated access is provided westbound from San Diego Mission Road; and at the southeast corner of the site via Rancho Mission Road, there is a bus access gate (see Figure 2-4, Project Site and Surrounding Land Uses). The MTS Trolley Green Line provides services through Mission Valley and to the main SDSU campus, with an existing trolley station in the south-central portion of the existing parking lot on the project site, as well as stations immediately west of the project site at Fenton Parkway and east of the project site at Mission San Diego.

On-site circulation improvements would consist of the construction of a network of streets and non-vehicular improvements. Figure 2-11A, Proposed On-Site Circulation and Access, shows the proposed circulation for the project site, which includes two, six-lane Urban Major roads at the main entrances (Stadium Way and Mission Villages Road), as well as four-lane Urban Major roads that provide east-west access to the project site via San Diego Mission Road (from the northeast). Rancho Mission Drive would be extended south into the project site as a four-lane Urban Major road. The remainder of the internal street network would be predominately two-lane collector

roads arranged in a grid pattern providing multiple points of connection through the project site. Figures 2-11B through 2-11D depict the proposed street sections within the project site. Overall, the internal circulation network is approximately 25 acres.

As stated, non-vehicle circulation improvements include bike lanes, bike paths, and shared use pathways on streets and roads, and a network of trails through the open space and recreation areas, connecting to the MTS Stadium Trolley Station.

The proposed project site would be served by the MTS Green Line and Stadium Trolley Station, as well as the Fenton Parkway and Mission San Diego stops. The current station trolley plaza would remain in place with minor upgrades and refinements as part of the proposed project and would be located north of the proposed River Park area and south of the proposed residential uses and campus/office uses. Figure 2-11E, Mobility and Transit, depicts the existing MTS Trolley Green Line and planned future MTS Trolley Purple Line.

While not part of the proposed project, the MTS Purple Line is expected to be extended through the project site in the future. As shown in Figure 2-11E, Mobility and Transit, there are two potential routes for the Purple Line. Current San Diego Association of Governments plans show the Purple Line veering through the middle of the project site, providing a close connection to the existing Green Line and Stadium Trolley Station. This planned alignment has been accommodated by the proposed project through a wide median. The proposed project also maintains a potential future alignment along the eastern edge of the project site, parallel to I-15.

Parking

Parking would be accommodated throughout the project site through a combination of street level parking and parking garages, as well as temporary parking in the tailgate park area west of the new stadium. A total of approximately 5,660 parking spaces are anticipated in aboveground parking garages in campus residential buildings (Buildings R1 through R16). Within the campus research and innovation district, a total of approximately 5,065 parking spaces would be provided, including 4,746 spaces south of the new Stadium and 319 spaces east of the new Stadium. Another 1,140 at-grade parking spaces would be located west of the new Stadium during events. 485 parking spaces would be located in hotel parking garages. Approximately 840 parking spaces would be provided along streets (see Figure 2-11F, Parking Plan).

For further information regarding the proposed project relative to access, circulation, and parking, please refer to Section 4.15, Transportation and Access.

2.3.4.8 Off-Site Improvements

The proposed project would result in traffic impacts, which would require improvements to intersections and roadway segments (see EIR, Section 4.15, Transportation and Access, mitigation measures MM-TRA-1 through MM-TRA-18). Off-site traffic-related mitigation improvements have been identified to address potential environmental impacts associated with the off-site traffic improvements identified in this EIR. The proposed project's off-site traffic-related mitigation improvements include construction of, or fair share payment contributions to, several traffic roads, intersections, and other facilities. For further information regarding traffic and access issues, please refer to this EIR, Section 4.15, Transportation and Access, including the technical traffic impact analysis appended to this EIR.

2.3.5 Design Standards and Energy Efficiency

In May 2014, the CSU Board of Trustees broadened sustainable practices to all areas of the university. The state also strengthened energy efficiency requirements in the California Green Building Standards Code (CalGreen; Title 24 of the California Code of Regulations). All CSU new construction, remodeling, renovation, and repair projects will be designed with consideration of optimum energy utilization, low lifecycle operating costs, and compliance with all applicable energy codes and regulations. Progress submittals during design are monitored for individual envelope, indoor lighting, and mechanical system performances. The CSU Mechanical Review Board was established in February 2004 and considers proposed building designs for conformance with code and energy efficiency practices (CSU 2018/2019).

As part of CSU's broadened commitment to sustainable practices, also in May 2014, the CSU Board of Trustees adopted the first systemwide Sustainability Policy, which applies sustainable principles across all areas of university operations, expanding beyond facilities operations and utility management. This expansion was both a reaction to and a catalyst for a changing sustainability landscape within the CSU and higher education in general. The 2014 Sustainability Policy seeks to integrate sustainability into all facets of the CSU, including academics, facilities operations, the built environment, and student life (CSU 2018).

For further information regarding sustainable practices applicable to the proposed project, please refer to this EIR, Section 4.7, Greenhouse Gas Emissions.

2.3.6 Construction Activities and Phasing

The proposed project is anticipated to be developed over approximately 15 years beginning in 2020 and ending in approximately 2037. While the following is the estimated phasing schedule for purposes of analysis in this EIR, it is recognized that phasing is nonsequential to allow for the proposed project to respond to changes in economic conditions.

Figure 2-12A, Phasing Exhibit Opening Day, depicts the completion of the multipurpose Stadium, and Figure 2-12B, Phasing Exhibit, generally depicts the phasing areas described for the project site. Table 2-6 provides more detailed information regarding the phasing, schedule, construction details for each phase, including volumes of grading per phase, anticipated number of construction workers, and construction equipment mix by phase.

Phase 1 is anticipated to include grading in the northwest quadrant of the project site for the new Stadium, and includes a temporary borrow pit southwest of the existing SDCCU Stadium, a new storm drain to collect diverted flows around the Phase 1 grading area, and a temporary public sewer main to redirect sewer flows around the Phase 1 grading area.

Phase 1 would include demolition of the western third of SDCCU Stadium; grading the southwestern edge of the project site, the installation of storm drain bioretention facilities, and the extension of a new east–west access road from Fenton Parkway; installation of sewer, water, and storm drain improvements; and construction of the proposed new Stadium.

The west side grading in Phase 1 would include rough grading the remainder of the western half of the project site, off-site improvements along Friars Road, construction of a bioretention basin, and construction of the River Park.

The east Stadium demolition and east side rough grading phase (Phase 2) would occur from April to June 2022 and consist of the demolition of the remainder of SDCCU Stadium and grading the eastern half of the project site, including continued construction of the River Park. Following rough grading, circulation improvements to San Diego Mission Road and Rancho Mission Road would be made to provide access for the new Stadium. Initial improvements on the western portion of the San Diego River Park would commence. The existing 48-inch water main would be relocated, and a temporary fire loop would be constructed. Temporary desilting basins would be installed as required.

Phase 2 would complete the residential sheet grading and streets on the eastern half of the project site and continue construction of improvements to the San Diego River Park. Completion of the River Park is anticipated by the middle of 2024. Per SDMC Section 22.0908, the River Park construction is required to be completed within 7 years of the effective date of the Purchase and Sale Agreement.

Phase 3 would including fine grading individual pads, street improvements, wet and dry utilities, and the phased vertical construction of the residential, hotel, and campus buildings across the project site, beginning in 2022 and extending through 2037 as determined by market/economic forces.

Table 2-6. Proposed Construction Phasing

Construction Phase Name	Start Date ¹	End Date ¹	Phase Duration ² (days)	Equipment Type	Number of Equipment	Hours per day ¹	Worker Trips per Day ¹	Vendor Trips per Day ¹	Total Hauling Trips ¹
Grading Phase A	2/1/2020	7/31/2020	130	Excavators	4	8			
				Graders	3	8			
				Rubber-Tired Dozers	2	8			
				Scrapers	6	8			
				Tractors/Loaders/Backhoes	6	8			
Site Preparation Phase A	8/1/2020	12/31/2021	370	Rubber-Tired Dozers	6	8			
				Tractors/Loaders/Backhoes	6	8			
Building Construction Stadium (Phase A)	8/1/2020	3/1/2022	412	Cranes	3	16			
				Forklifts	6	16			
				Generator Sets	3	16			
				Tractors/Loaders/Backhoes	5	16			
				Welders	8	16			
Grading Phase A (cont'd)	12/1/2021	4/15/2022	98	Excavators	4	8			
				Graders	3	8			
				Rubber-Tired Dozers	3	8			
				Scrapers	4	8			
				Tractors/Loaders/Backhoes	5	8			
Paving Stadium (Phase A)	12/1/2021	7/31/2022	173	Pavers	3	8			
					2	8			
					4	8			
Site Preparation Phase B (utilities)	1/1/2022	6/14/2022	117	Rubber-Tired Dozers	3	8			
					8	8			
Demolition of SDCCU Stadium (Phase A)	1/1/2022	4/15/2022	75	Concrete/Industrial Saws	5	16			
					5	16			
					8	16			
					3	16			
Architectural Coating Stadium (Phase A)	3/1/2022	7/31/2022	109	Air Compressors	8	6			

Table 2-6. Proposed Construction Phasing

Construction Phase Name	Start Date ¹	End Date ¹	Phase Duration ² (days)	Equipment Type	Number of Equipment	Hours per day ¹	Worker Trips per Day ¹	Vendor Trips per Day ¹	Total Hauling Trips ¹
Demolition of SDCCU (Phase B)	4/16/2022	6/30/2022	54	Concrete/Industrial Saws	5	16			
				Excavators	5	16			
				Rubber-Tired Dozers	3	16			
				Crushing/Proc. Equipment ²	3	16			
Grading Phase B (Rough Residential Pad and Initial River Parks)	4/16/2022	7/31/2022	75	Excavators	6	8			
					4	8			
					3	8			
					6	8			
					6	8			
Finish Phase B (Finish Residential Pad and River Park)	2/1/2020	7/31/2020	533	Rubber-Tired Dozers	6	8	92	8	
				Tractors/Loaders/Backhoes	8	8			
Grading Phase C	8/1/2022	12/31/2022	110	Excavators	4	8			12,500
				Graders	6	8			
				Rubber-Tired Dozers	3	8			
				Scrapers	4	8			
				Tractors/Loaders/Backhoes	6	8			
Building Construction Phase C1	7/1/2024	9/30/2027	849	Cranes	4	7	189	58	0
				Forklifts	8	8			
				Generator Sets	3	8			
				Tractors/Loaders/Backhoes	6	7			
				Welders	6	8			
Site Preparation - Off-Site Improvements	7/1/2025	1/7/2026	137	Rubber-Tired Dozers	3	8	18	0	0
				Tractors/Loaders/Backhoes	4	8			
Paving Phase C1	10/1/2027	8/14/2028	227	Pavers	2	8	15	0	0
				Paving Equipment	2	8			
				Rollers	2	8			
Building Construction Phase C2	7/1/2028	10/1/2031	848	Cranes	6	7	122	32	0
				Forklifts	8	8			
				Generator Sets	6	8			
				Tractors/Loaders/Backhoes	6	7			
				Welders	6	8			

Table 2-6. Proposed Construction Phasing

Construction Phase Name	Start Date ¹	End Date ¹	Phase Duration ² (days)	Equipment Type	Number of Equipment	Hours per day ¹	Worker Trips per Day ¹	Vendor Trips per Day ¹	Total Hauling Trips ¹
Architectural Coating Phase C1	8/17/2028	6/30/2029	227	Air Compressors	4	6	38	0	0
Paving Phase C2	10/2/2031	8/15/2032	227	Pavers	4	8	15	0	0
				Paving Equipment	2	8			
				Rollers	4	8			
Building Construction Phase C3	7/1/2032	10/1/2035	848	Cranes	4	7	122	32	0
				Forklifts	3	8			
				Generator Sets	1	8			
				Tractors/Loaders/Backhoes	3	7			
				Welders	1	8			
Architectural Coating Phase C2	8/18/2032	6/30/2033	227	Air Compressors	4	6	24	0	0
Paving Phase C3	10/2/2035	8/14/2036	228	Pavers	2	8	15	0	0
				Paving Equipment	2	8			
				Rollers	2	8			
Architectural Coating Phase C3	8/15/2036	6/30/2037	228	Air Compressors	4	6	24	0	0

Notes:

¹ See Appendix 4.2-1, Air Quality Technical Report, for monthly worker trips, vendor trips, and hauling trips for Phases 1 and 2, from 2020 to 2023.

² Equipment was added to the California Emissions Estimator Model (CalEEMod) defaults to reflect project-specific information.

2.4 Economic Characteristics

CEQA also requires that an EIR also describe the economic characteristics of the proposed project. This sub-section is based on an economic report prepared for CSU/SDSU by Ernst & Young (2019, Appendix 4.13-1). The Ernst & Young report analyzed the proposed project, estimated its potential economic and tax impacts, and made the following findings:

- Total economic contributions of the proposed project during construction, which could take up to 15 years, include \$4.6 billion in total economic output, nearly 29,000 one-year jobs supported, and \$29.2 million in tax revenue for the City of San Diego.
- Once construction is complete, the proposed development would directly support a maximum annual total of approximately 7,809 jobs on site; indirectly result in approximately 4,314 jobs; induce approximately 5,117 jobs for a total of approximately 17,241 jobs; and generate annual labor income of \$1.2 billion for California residents, plus nearly \$1.9 billion annually of regional gross state product and \$3.1 billion of economic output. This includes the most conservative scenario of enrollment growth at the campus (6,000 new students by 2033).
- The additional tax revenue for the City of San Diego associated with annual operations would be \$21.9 million annually (2018 dollars), including possessory interest, sales, and transit occupancy taxes.
- Overall, the proposed development would generate approximately \$26.1 million in local taxes to benefit the City of San Diego, County of San Diego, SDUSD, San Diego County schools, San Diego Community College District, and other education and public entities.
- While not quantified in this analysis, the proposed project would present other benefits. The proposed project would include approximately 86 acres of open space, including roughly 70 acres of community parks. SDSU's planned programming includes educational and research space with the potential to improve the region's human and intellectual capital with resulting impacts on productivity. While none of these benefits are quantified, they all present positive impacts that contribute value to the local region in excess of the economic and tax impacts presented in the Ernst & Young report.
- Additional enrollment supported by the project would also generate a positive economic impact for the region. For every 10,000 additional graduates, an estimated \$200 million in annual economic output is generated for the regional economy (based upon a 2017 economic impact report conducted by ICF).

2.5 EIR Intended Uses/Project Actions and Approvals

2.5.1 Intended Uses

The EIR analyzes the proposed project at the “project” level of review. The EIR examines all phases of development and operation of the proposed project; no further CEQA review will be required prior to project implementation. This EIR will be used by the CSU Board of Trustees to evaluate the potential environmental impacts associated with adoption of the proposed project. Additionally, the EIR could be relied upon by responsible agencies, if any, with permitting or approval authority over any project-specific action to be implemented in connection with the project, including the City's sale of the project site to CSU/SDSU.

2.5.2 Requested Project Approvals

The following approvals by the CSU Board of Trustees are required prior to implementation of the proposed project:

1. Certification of adequacy and completeness of the Final EIR.
2. Approval of the Campus Master Plan and Schematic Plans.
3. Authorization to execute the Purchase and Sale Agreement.
4. Approval of financing mechanisms to support Phases 1 and 2.
5. Other approvals as necessary.

Development of the proposed project may require permits and/or approvals issued by public agencies other than the CSU Board of Trustees. The following is a non-exclusive list of other project permits or approvals that may be required by other agencies:

1. Federal Emergency Management Agency (Conditional Letter of Map Revision/Letter of Map Revision)
2. U.S. Army Corps of Engineers (Clean Water Act Section 404 permit)
3. U.S. Fish and Wildlife Service (Incidental Take Permit)
4. Division of the State Architect (accessibility compliance)
5. State Fire Marshal (approval of facility fire and life safety review)
6. California Department of Fish and Wildlife (California Fish and Game Code Section 1600 permit; Section 2080.1 permit)
7. San Diego Regional Water Quality Control Board (National Pollutant Discharge Elimination System permit; Clean Water Act Section 401 water quality certification)
8. San Diego County Air Pollution Control District (authority to construct and/or permits to operate)
9. City of San Diego (permits for construction within City rights-of-way, if necessary)
10. City of San Diego water and wastewater approval (authority to connect to existing City-owned infrastructure)
11. City of San Diego (approval of access to facilities for fire service)
12. City of San Diego (approval of various easements, including vacations, replacements, etc.)
13. City of San Diego (approval and execution of Purchase and Sale Agreement)

2.5.3 Responsible Agencies

Under CEQA, responsible agencies are public agencies other than the lead agency with discretionary approval authority over the proposed project. The above-listed agencies may determine they have some discretionary authority over one or more aspects of the proposed project; therefore, those agencies are identified at this time as potential responsible agencies. Such agencies are ordinarily required to rely on the EIR prepared and certified by the lead agency (here, CSU) when considering issuing a project permit or other approval for the proposed project.

Trustee agencies are state agencies having jurisdiction by law over natural resources affected by the proposed project that are held in trust for the people of the State of California. In the event that any special-status species or wetland areas or waters of the United States would be affected by the proposed project, the following agencies potentially would be trustee agencies: the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, the Regional Water Quality Control Board, and/or the U.S. Army Corps of Engineers.



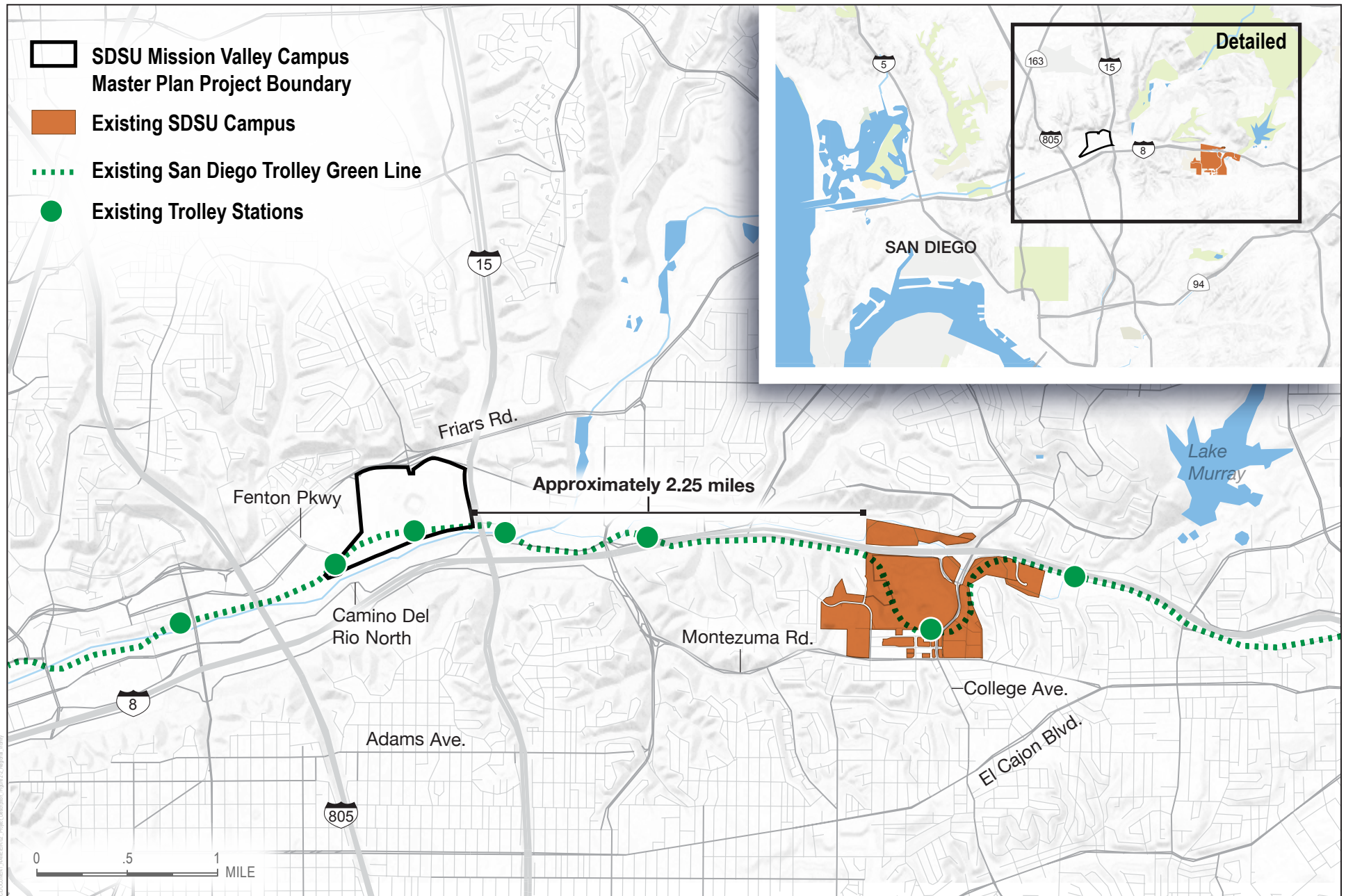
SOURCE: 2/9/19 CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR

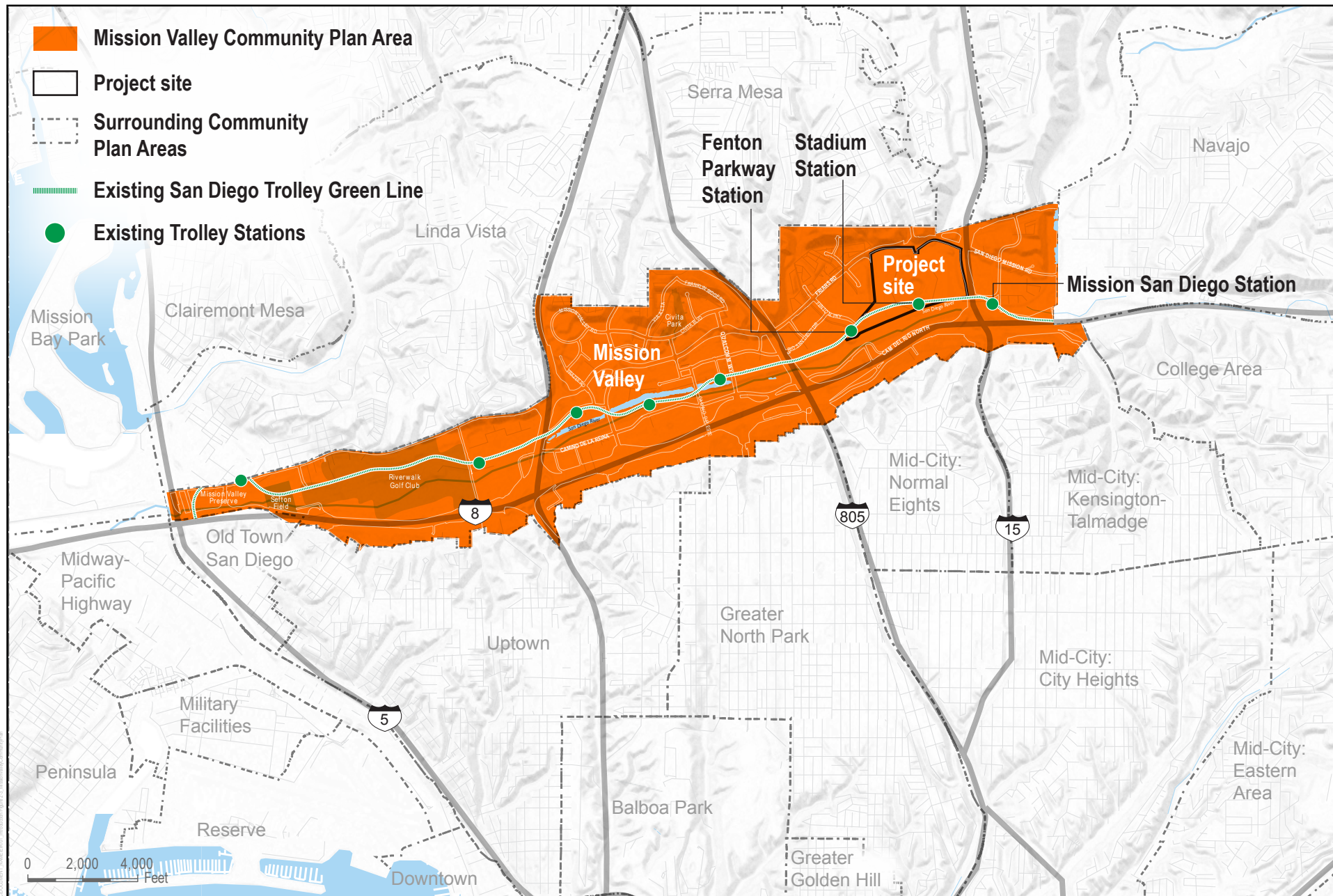


Figure 2-1
Concept Design - Site Plan

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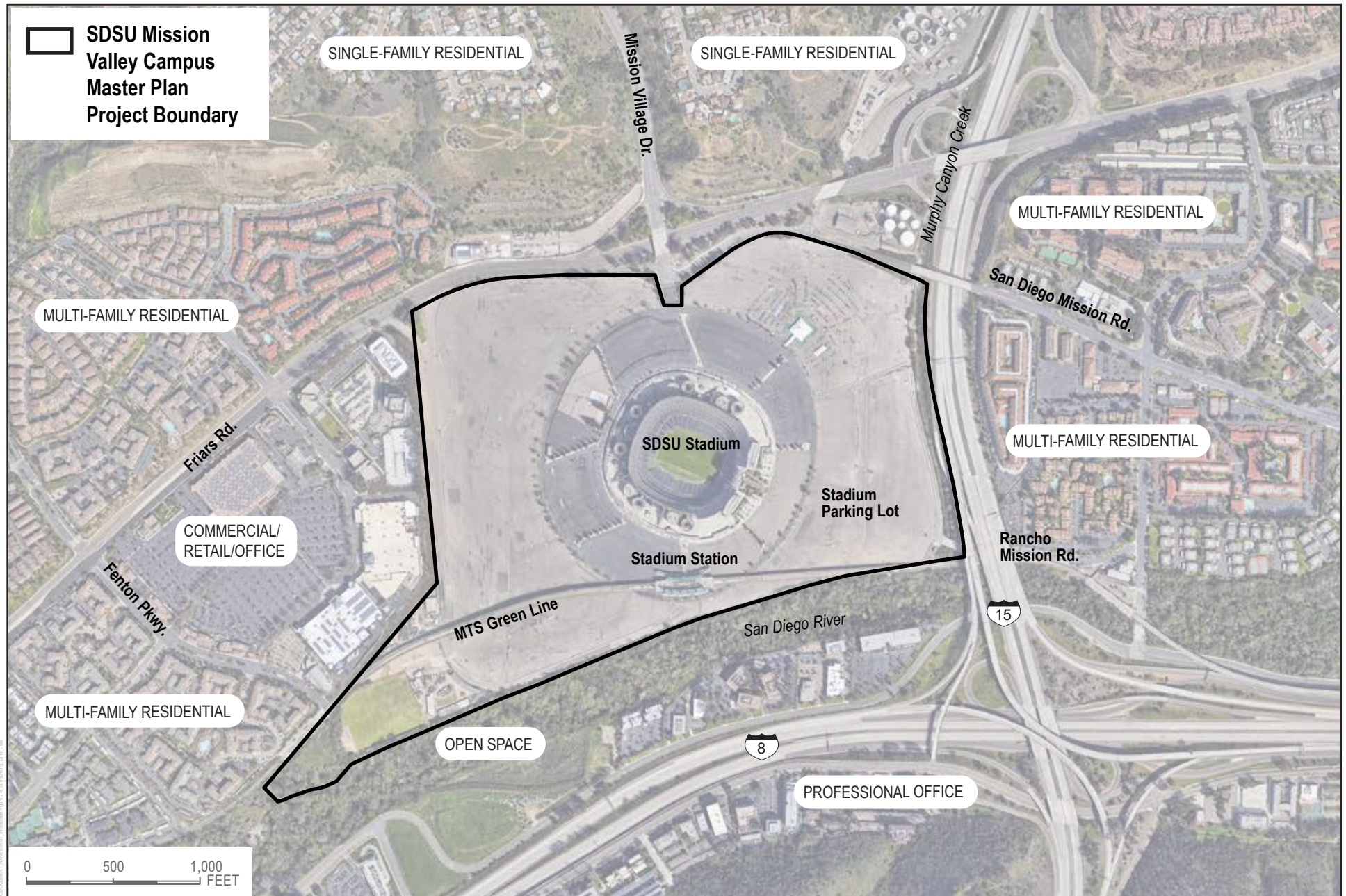
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SOURCE: CITY OF SAN DIEGO



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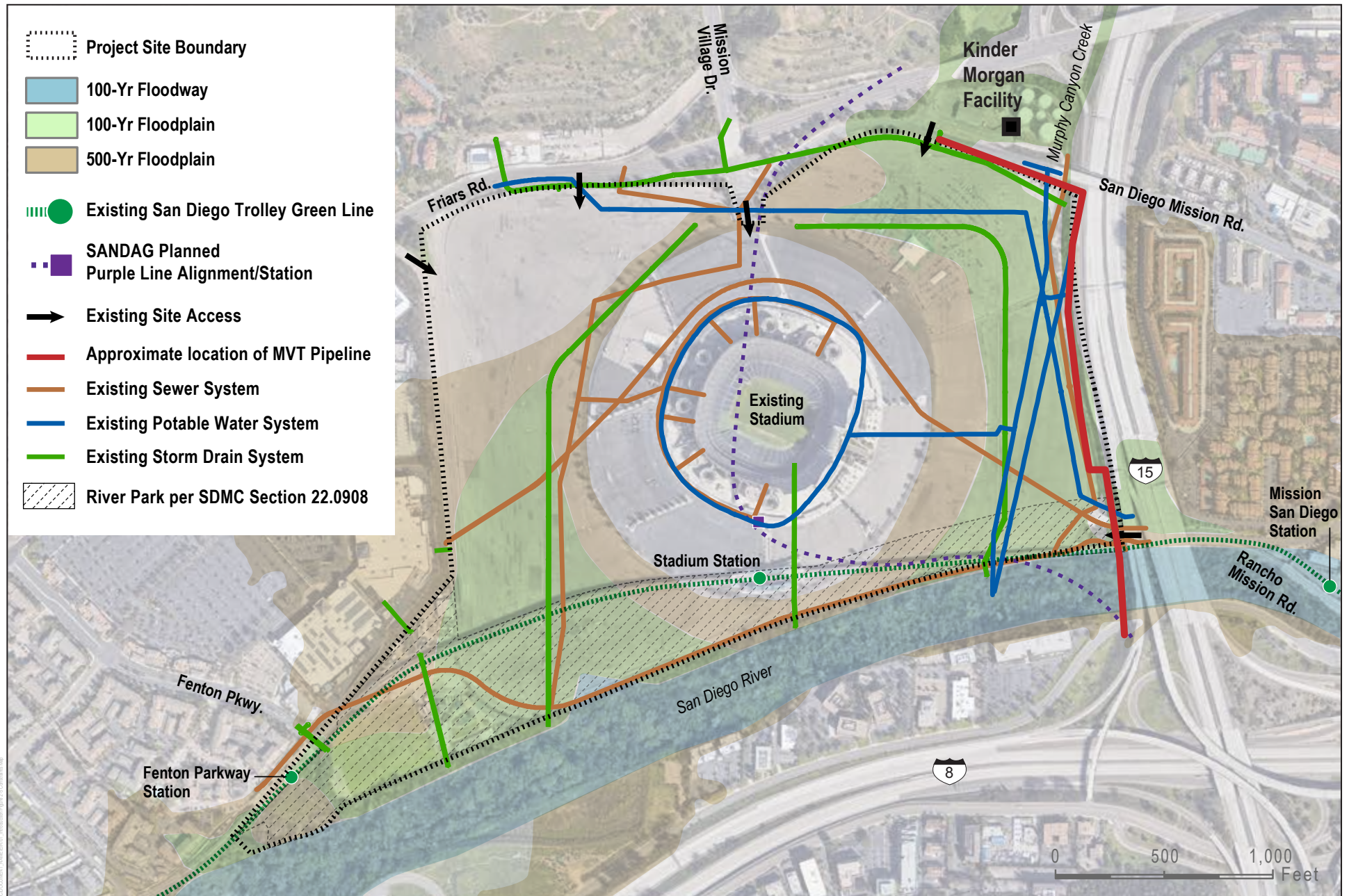
SOURCE: GOOGLE EARTH

SDSU Mission Valley Campus Master Plan EIR



Figure 2-4
Project Site and Surrounding Land Uses

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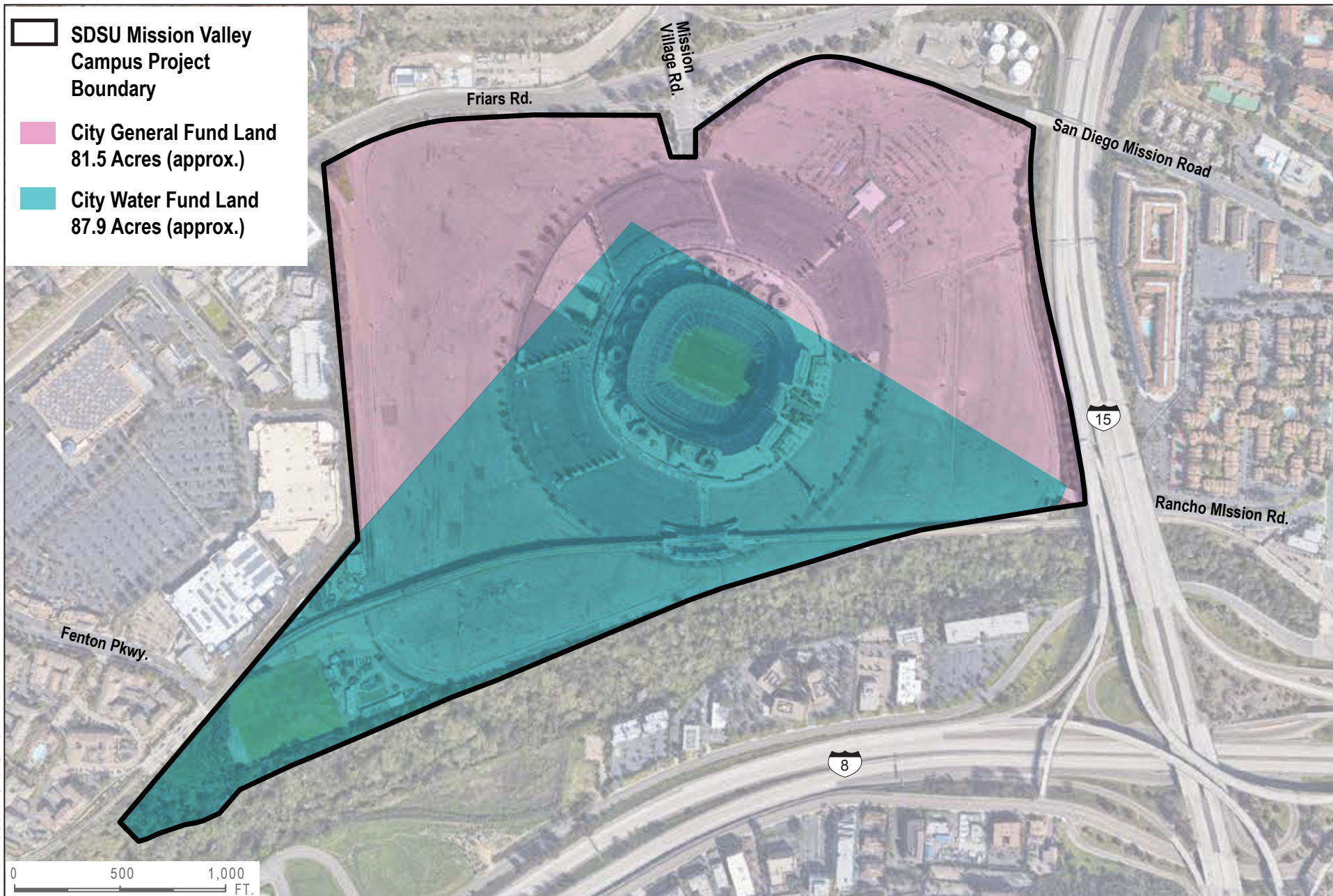


SOURCES: AERIAL-BING 2017; UTILITIES-RICK ENGINEERING 2019 USGS; FEMA; CARRIER JOHNSON; SDSU OCT 2018



Figure 2-5
Constraints Map

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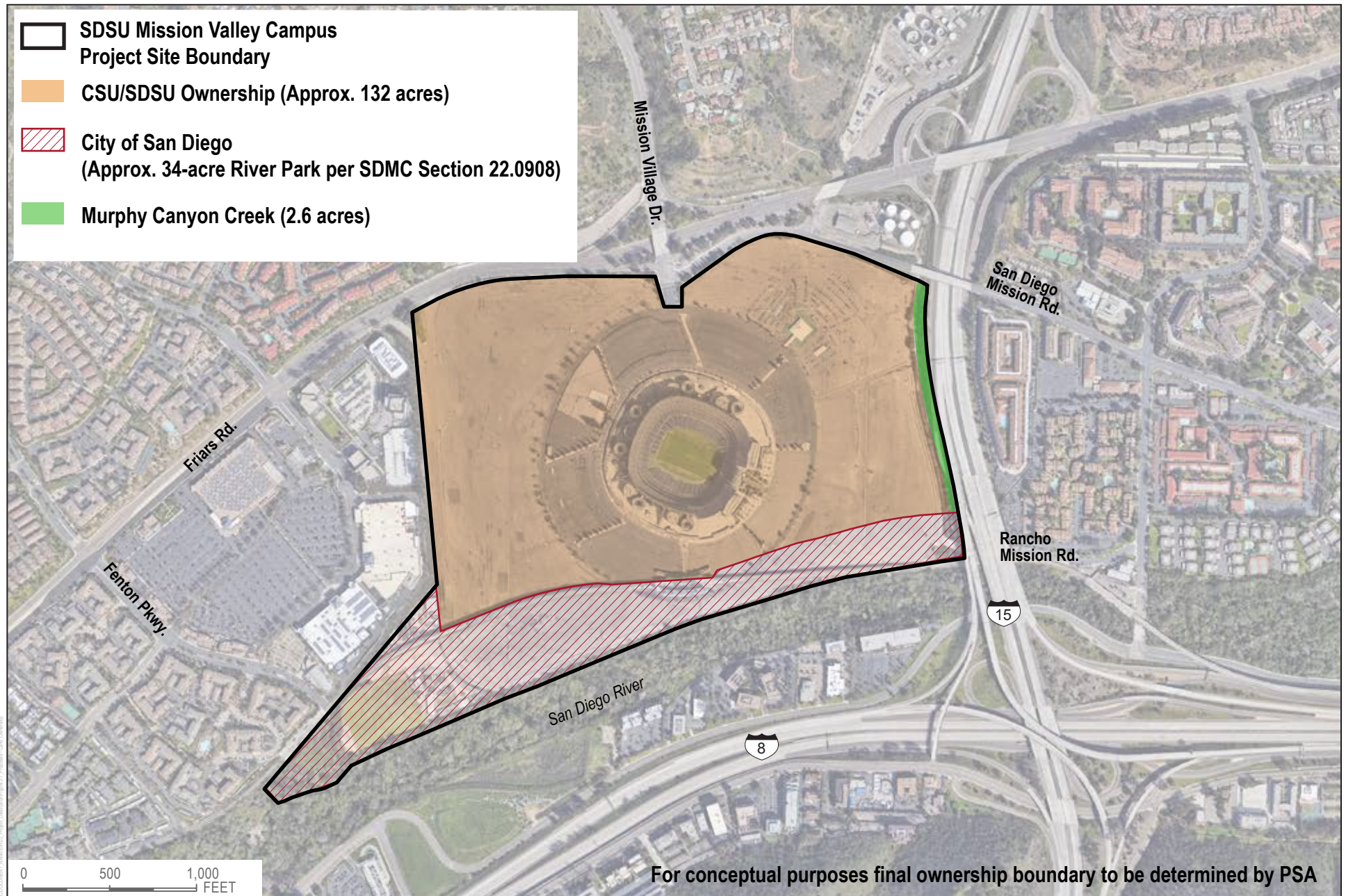
SOURCE: GOOGLE EARTH, CITY OF SAN DIEGO, SANGIS

SDSU Mission Valley Campus Master Plan EIR



Figure 2-6
Existing Ownership

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SOURCE: GOOGLE EARTH, SDMC SECTION 22.0908



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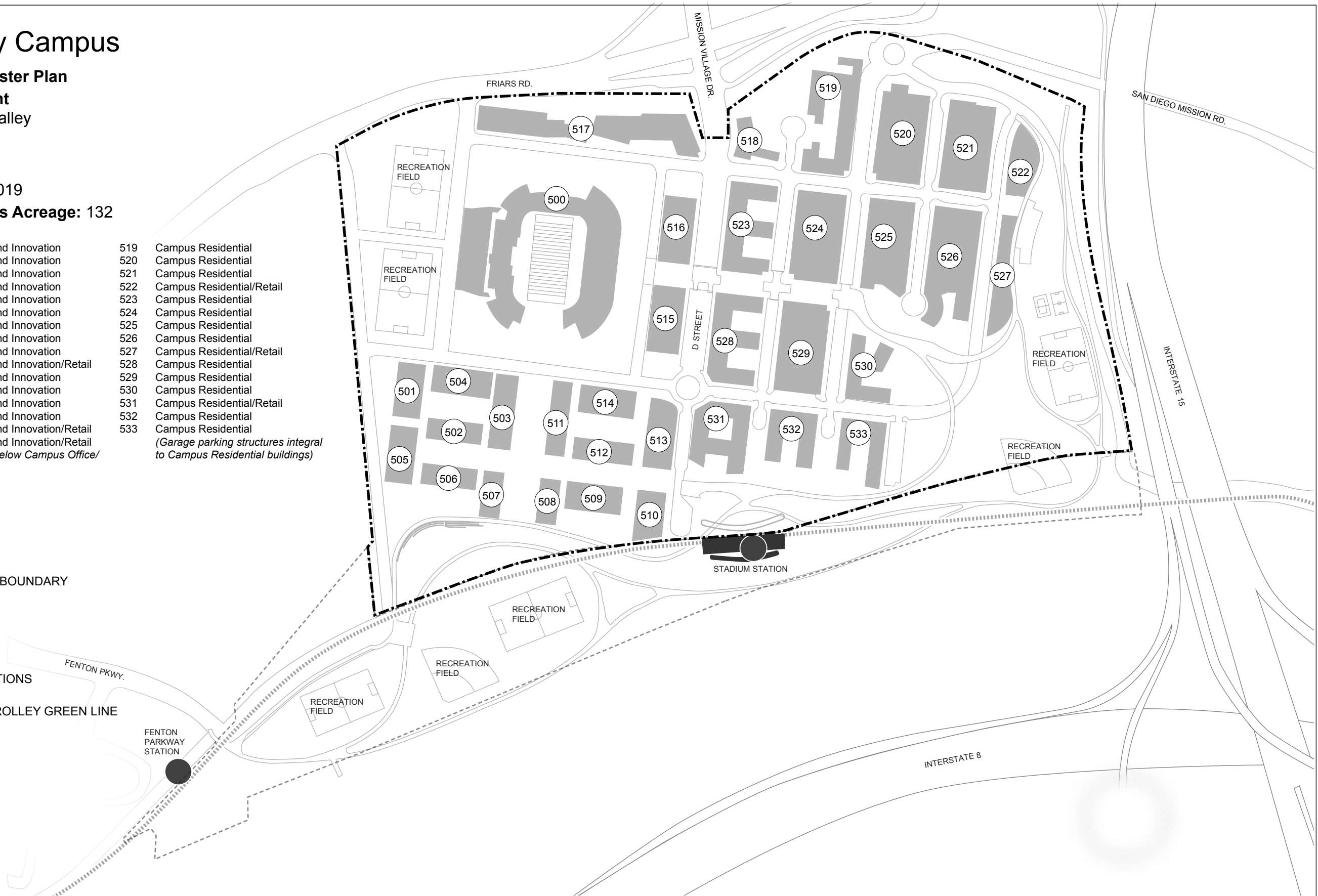
Mission Valley Campus

Proposed Campus Master Plan
Master Plan Enrollment
15,000 FTES Mission Valley

Approval Date:
Proposed Date: July 2019
Mission Valley Campus Acreage: 132



- | | | | |
|-----|---|-----|---------------------------|
| 501 | Campus Office/Research and Innovation | 519 | Campus Residential |
| 502 | Campus Office/Research and Innovation | 520 | Campus Residential |
| 503 | Campus Office/Research and Innovation | 521 | Campus Residential |
| 504 | Campus Office/Research and Innovation | 522 | Campus Residential/Retail |
| 505 | Campus Office/Research and Innovation | 523 | Campus Residential |
| 506 | Campus Office/Research and Innovation | 524 | Campus Residential |
| 507 | Campus Office/Research and Innovation | 525 | Campus Residential |
| 508 | Campus Office/Research and Innovation | 526 | Campus Residential |
| 509 | Campus Office/Research and Innovation | 527 | Campus Residential/Retail |
| 510 | Campus Office/Research and Innovation/Retail | 528 | Campus Residential |
| 511 | Campus Office/Research and Innovation | 529 | Campus Residential |
| 512 | Campus Office/Research and Innovation | 530 | Campus Residential |
| 513 | Campus Office/Research and Innovation | 531 | Campus Residential/Retail |
| 514 | Campus Office/Research and Innovation | 532 | Campus Residential |
| 515 | Campus Office/Research and Innovation/Retail | 533 | Campus Residential |
| 516 | Campus Office/Research and Innovation/Retail
(Garage parking structure below Campus Office/
Research buildings) | | |
| 517 | Campus Hospitality | | |
| 518 | Campus Hospitality | | |
| 500 | Stadium | | |

- CAMPUS MASTER PLAN BOUNDARY
- FUTURE BUILDING
- EXISTING BUILDING
- EXISTING TROLLEY STATIONS
- EXISTING SAN DIEGO TROLLEY GREEN LINE
- RIVER PARK



SOURCES: SDSU/AUGUST 2019, CITY OF SAN DIEGO SDMC SECTION 22.0908

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-  SDSU Mission Valley Campus Master Plan Project Boundary
-  35,000 Capacity Stadium (Approx. 15.4 acres)



SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-9A
Concept Design - Stadium Plan

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-  SDSU Mission Valley Campus Master Plan Project Boundary
-  Campus/Office/Research and Innovation (Approx. 1,565,800 sq. ft.)











SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-9B
Concept Design - Campus Plan

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-  SDSU Mission Valley Campus Master Plan Project Boundary
-  Parks, Recreation and Open Space
-  Campus Green Space
-  Paseos
-  SDSU/Community shared
-  Hike & Bike Trails/Loop
-  Existing San Diego Trolley Green Line
-  Existing Trolley Stations









SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-9C
Concept Design - Parks and Recreation Features

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-  SDSU Mission Valley Campus Master Plan Project Boundary
-  Parks, Recreation and Open Space Active & Passive
-  SDSU/Community shared
-  Hike & Bike Trails/Loop
-  Existing San Diego Trolley Green Line
-  Existing Trolley Stations












SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-9D
Concept Design – River Park Plan

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-  SDSU Mission Valley Campus Master Plan Project Boundary
-  Parks, Recreation and Open Space
-  Paseos
-  Community Hike and Bike Loop
-  Community Hike and Bike Trail
-  Bike Lane and Path
-  Sidewalks
-  Existing San Diego Trolley Green Line
-  Existing Trolley Stations



SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-9E
Concept Design – Trails and Open Space Plan

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 **SDSU Mission Valley Campus Master Plan Project Boundary**

 **Residential**

4,600 units

15 blocks

Townhome

Mid-Rise

Select High-Rise

Garage-Parked

*70 Residential Units in Hotel H1



SOURCE: CARRIER JOHNSON


SDSU Mission Valley Campus Master Plan EIR



Figure 2-9F
Concept Design - Residential Plan

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 **SDSU Mission Valley Campus
Master Plan Project Boundary**

 **Hotel**
400 keys total
70 residential units
485 Parking Spaces



SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-9G
Concept Design - Campus Hospitality Plan

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SOURCE: BUTSCO 2019

SDSU Mission Valley Campus Master Plan EIR



Figure 2-10A
Site Utilities - Concept Electrical Utilities

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SOURCE: RICK ENGINEERING

SDSU Mission Valley Campus Master Plan EIR



Figure 2-10B
Site Utilities - Concept Water Plan

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SOURCE: RICK ENGINEERING

SDSU Mission Valley Campus Master Plan EIR



Figure 2-10C
Site Utilities - Concept Sewer Plan

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SOURCE: RICK ENGINEERING

SDSU Mission Valley Campus Master Plan EIR



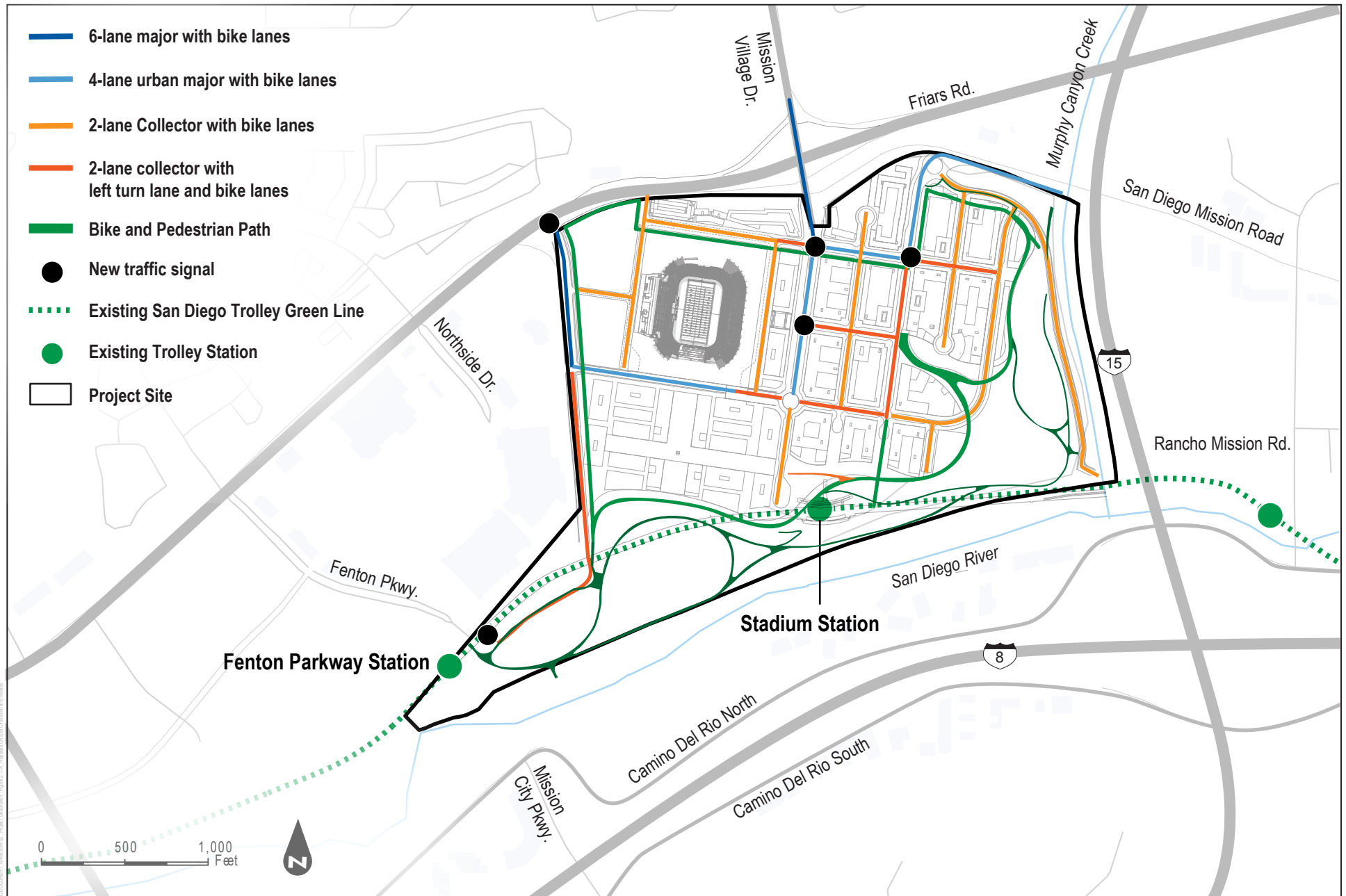
Figure 2-10D
Site Utilities - Concept Drainage Plan

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SOURCE: RICK ENGINEERING 4/8/2015

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SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-11A
Proposed On-Site Circulation and Access

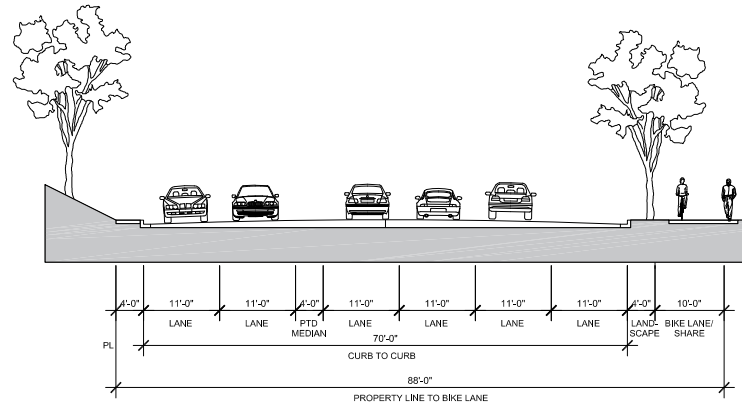
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KEY

- 6-lane Urban Major
- 4-lane Urban Major
- 2-lane Collector with left turn lane
- 2-lane Collector

6-lane Urban Major

Street A from Street 3 to Friars Rd.

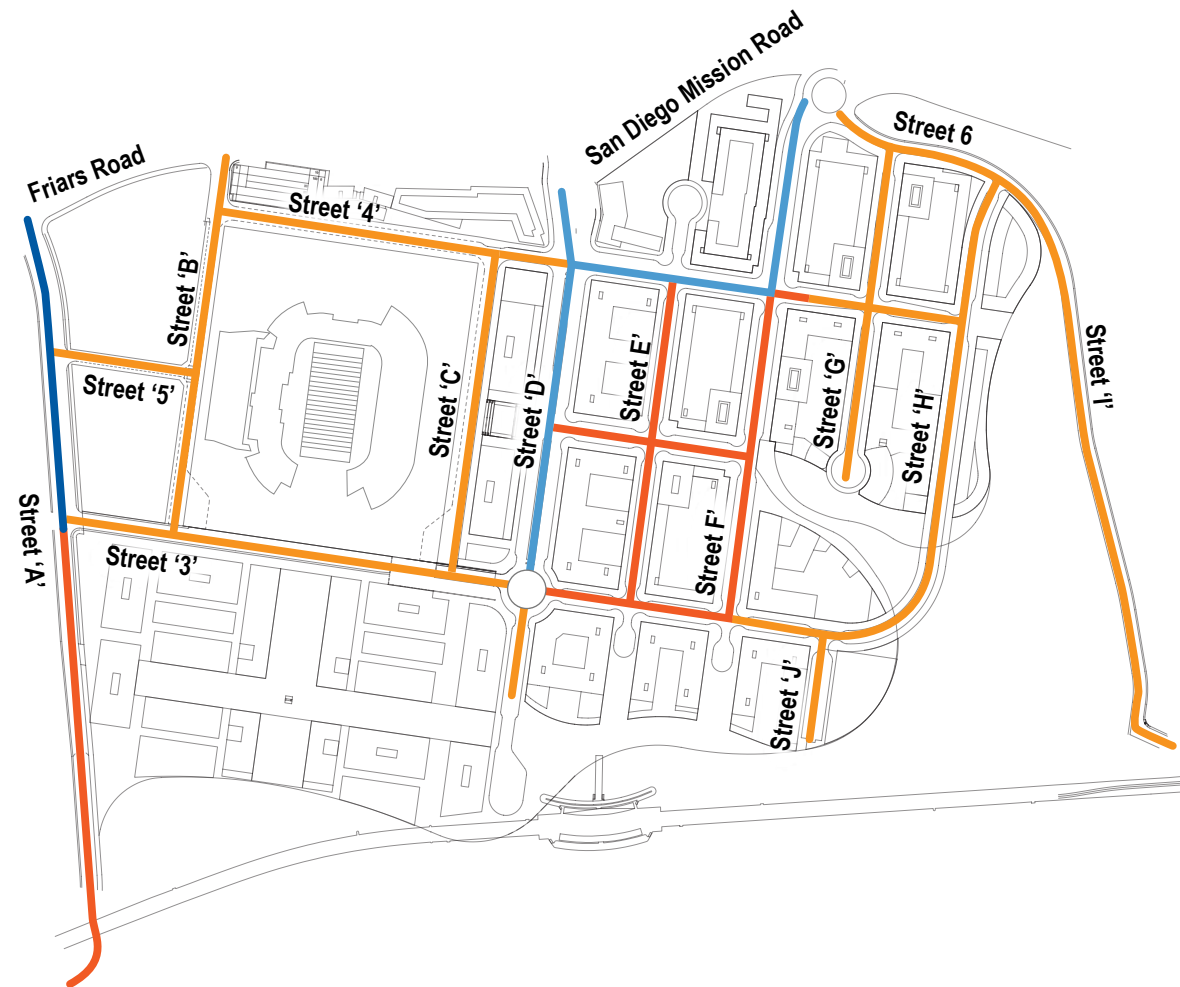
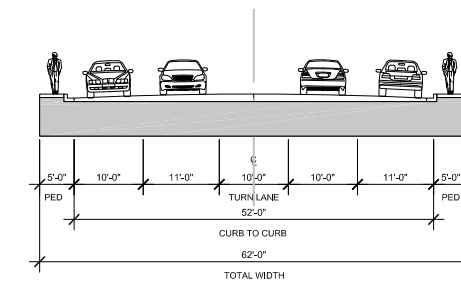
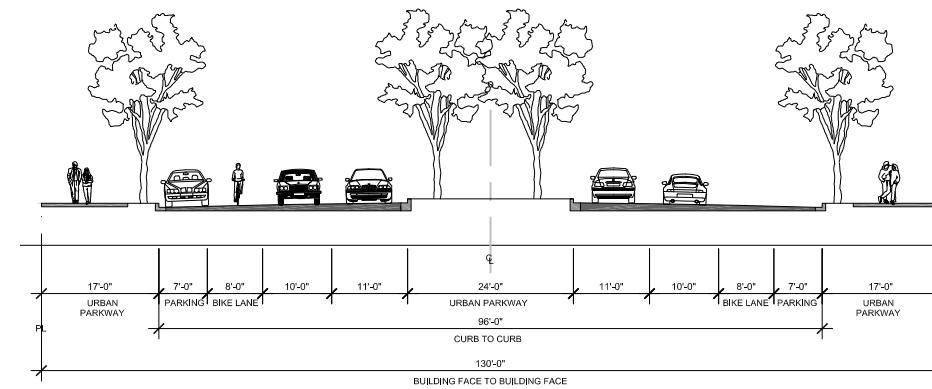
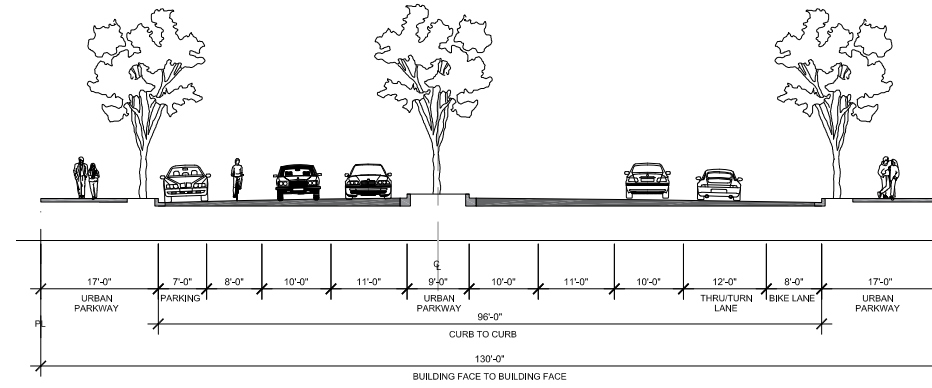


4-lane Urban Major

Street D north of Street 4

Street F north of Street 4

Street 4 between Street D and Street F



SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-11B
Street Sections

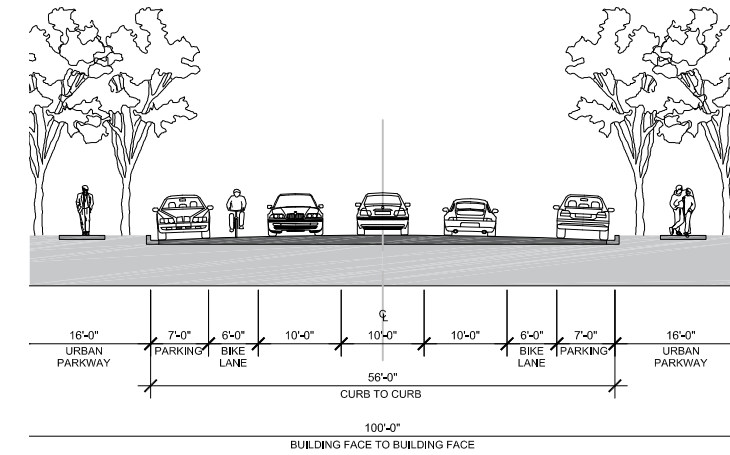
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KEY

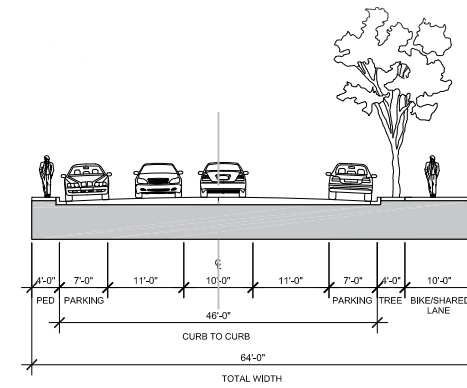
- 6-lane Urban Major
- 4-lane Urban Major
- 2-lane Collector with left-turn lane
- 2-lane Collector

2-lane Collector with left-turn lane

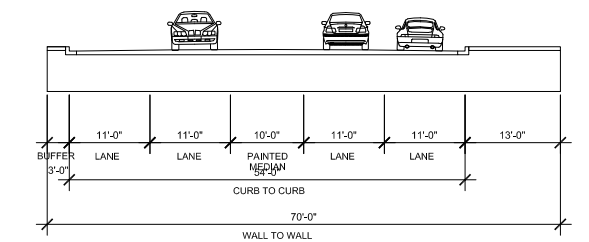
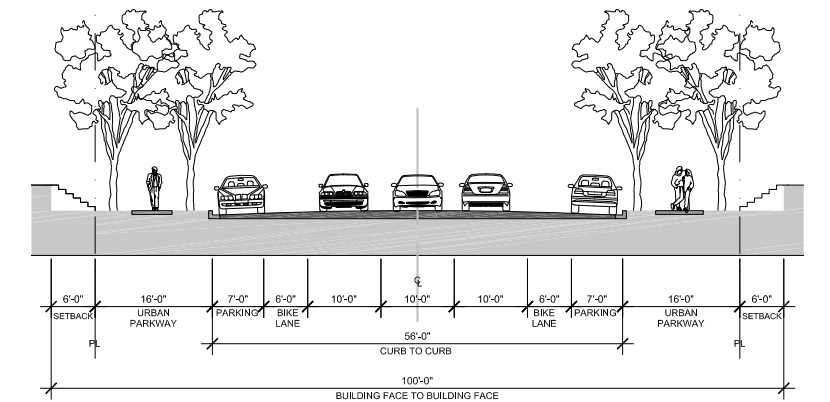
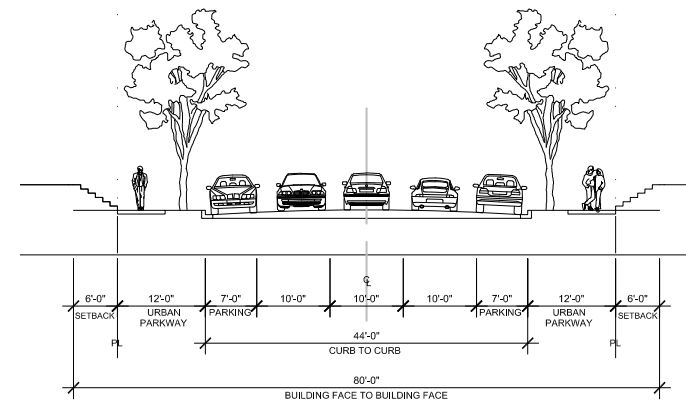
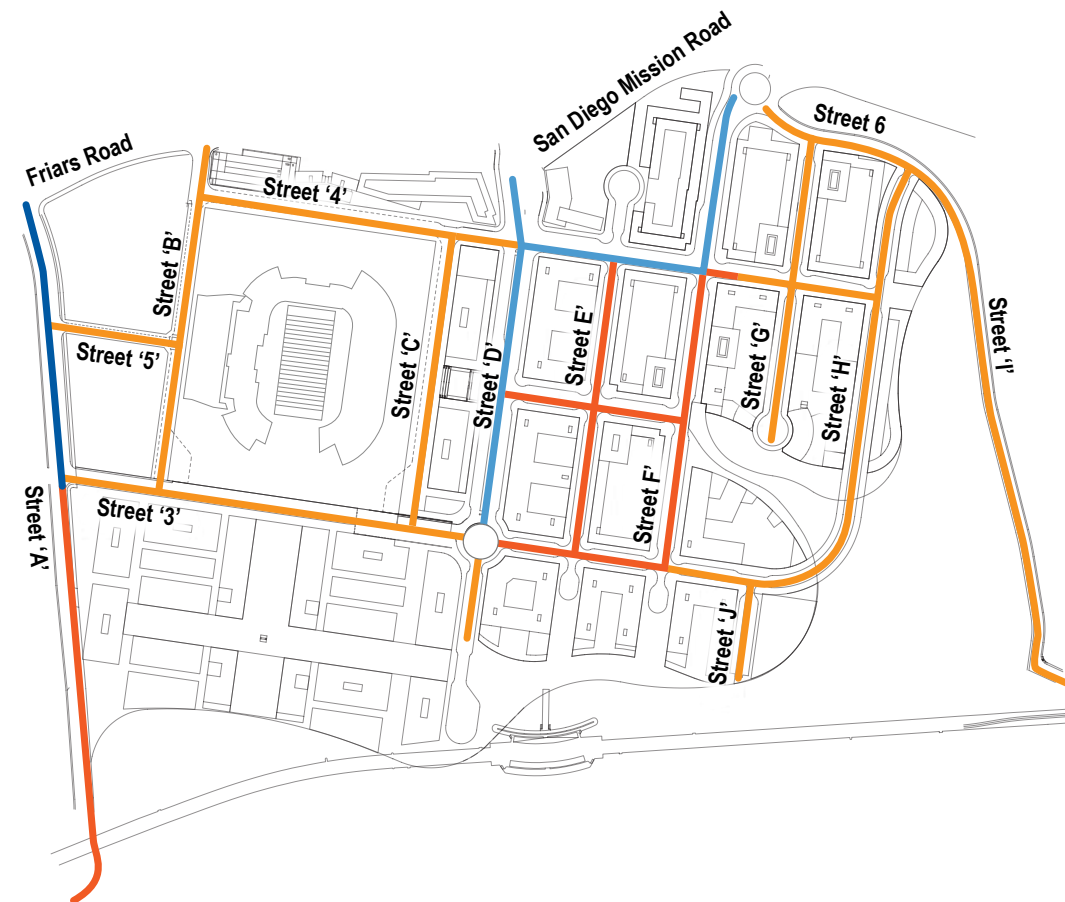
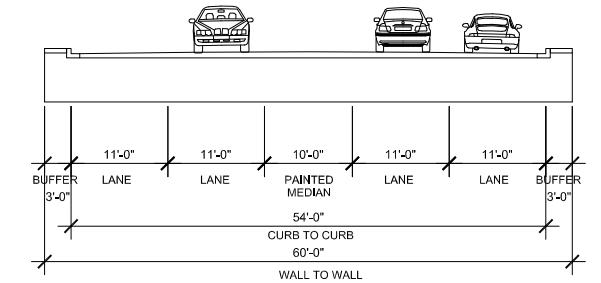
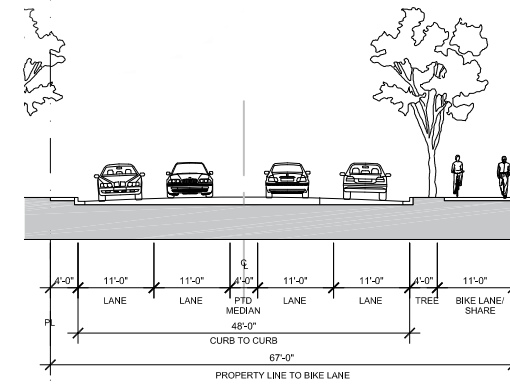
Street A south of Street 3
Street E



Street F between Street 1 and Street 3
Street 2



Street 3 between Street D and Street F



SOURCE: CARRIER JOHNSON

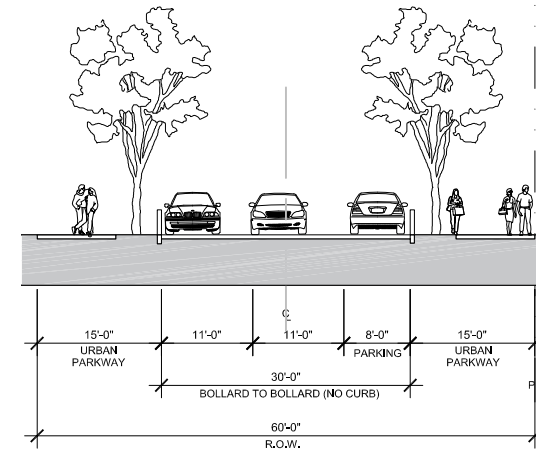
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KEY

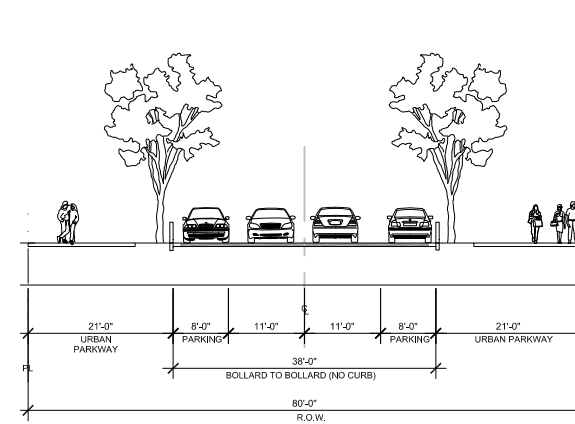
- 6-lane Urban Major
- 4-lane Urban Major
- 2-lane Collector with left turn lane
- 2-lane Collector

2-lane Collector

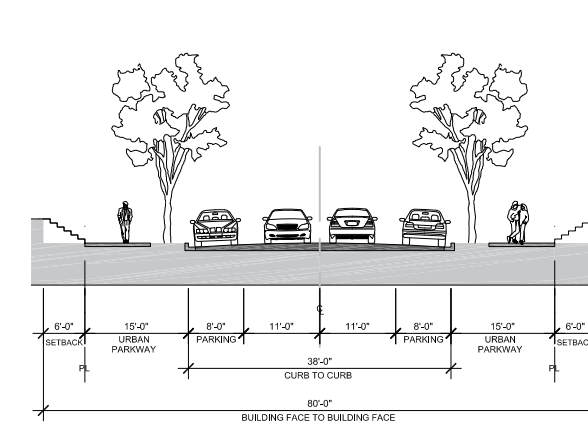
Street B
Street C
Street G



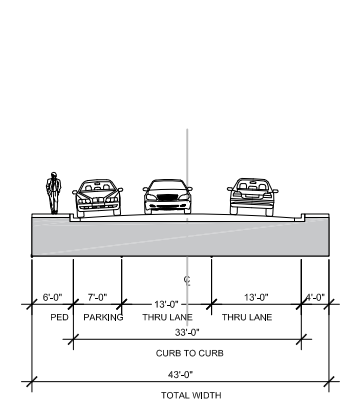
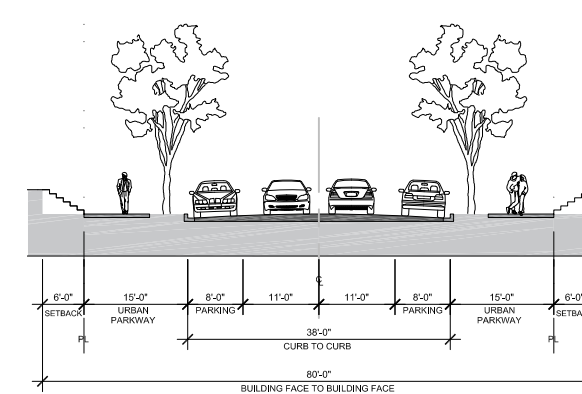
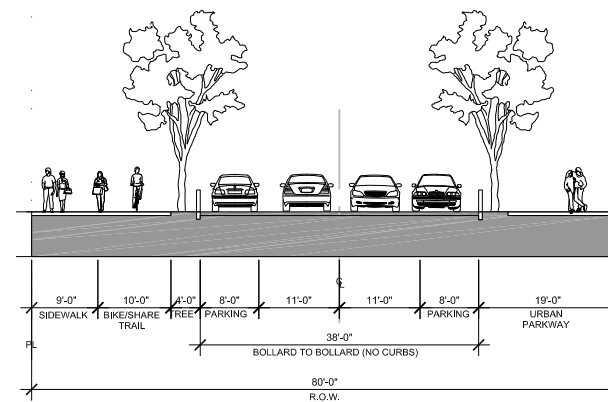
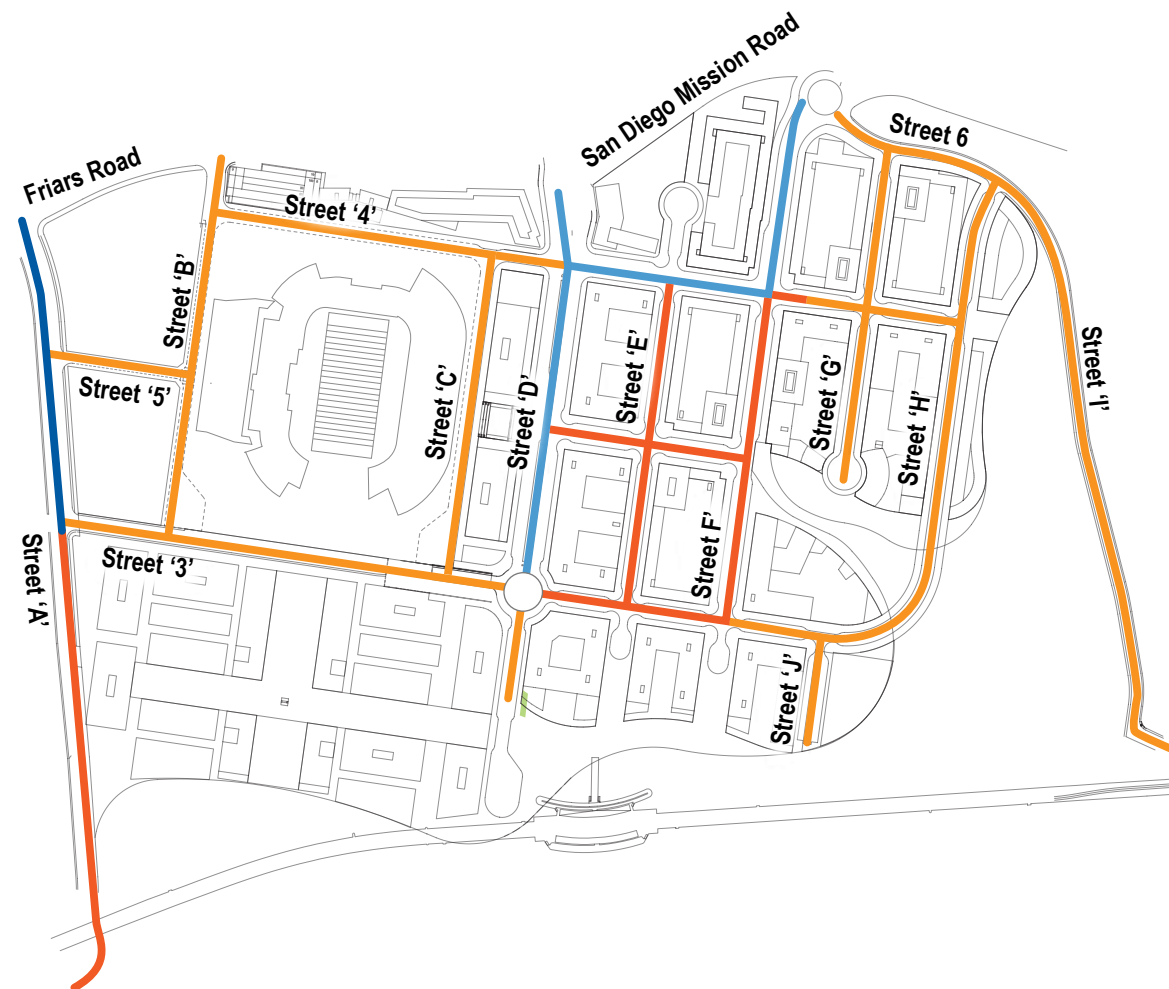
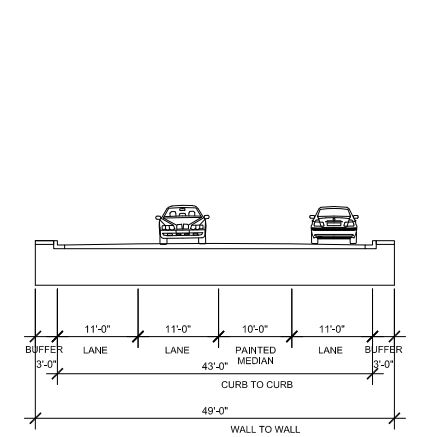
Street H
Street I
Street 3 between Street A and Street D



Street 3 between Street F and Street H
Street 4 between Street B and Street D
Street 4 between Street F and Street H



Street 5
Street 6



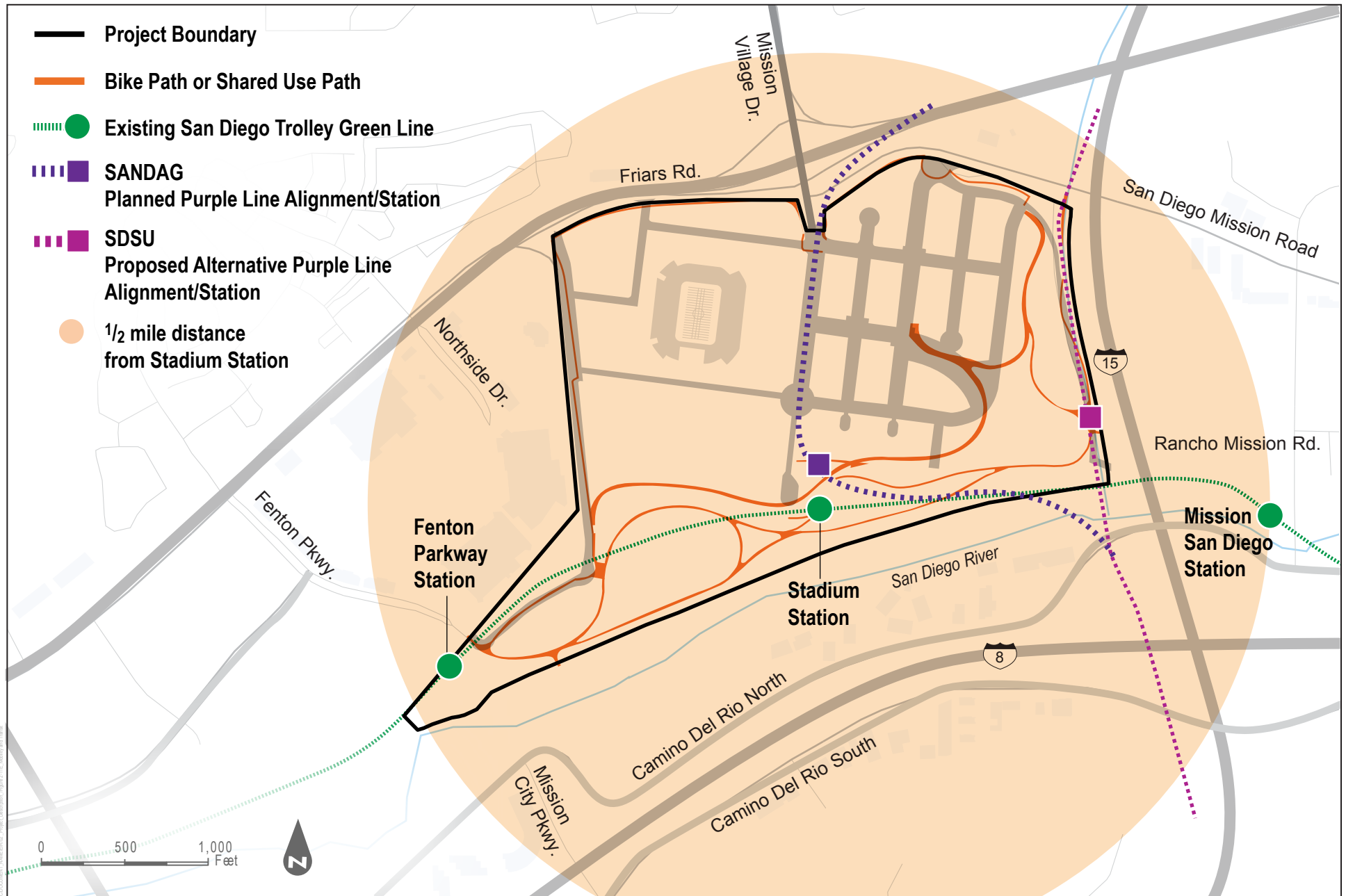
SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR



Figure 2-11D
Street Sections

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SOURCE: CARRIER JOHNSON, SANGIS 2018, USGS NHD 2018

SDSU Mission Valley Campus Master Plan EIR



Figure 2-11E
Mobility and Transit

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Representative above ground residential parking

5,662 spaces

Surface parking

■ **Street parking** 840 spaces

■ **Hotel parking** 334 spaces

■ **Tailgate parking**
1,141 spaces (game day)

■ **SDSU Campus Office, Innovation
and Research & Development**
(See underground parking below)

**River Park
street parking**
141 spaces

||||| **Existing San Diego
Trolley Green Line**

■ **Trolley Plaza
and Station**

■ **Hotel/Conference Center**

■ **Residential**

Underground parking

5,065 spaces

P0

67' -70' elevation

P1

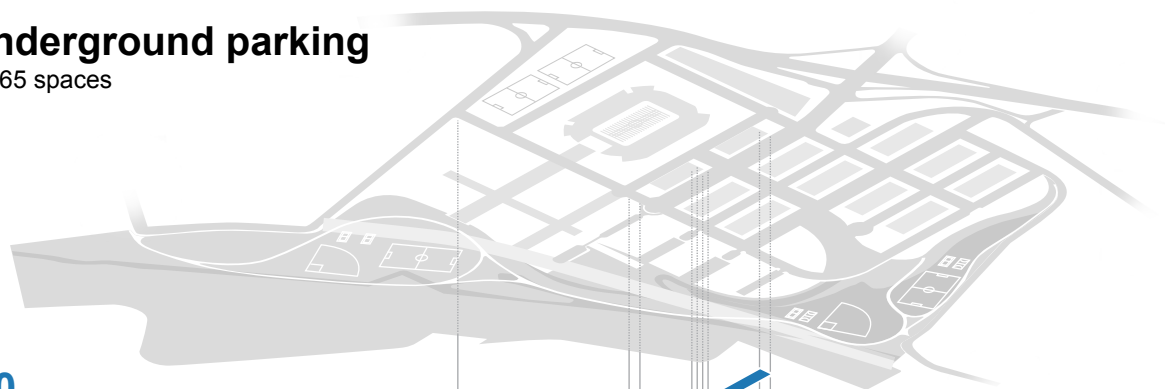
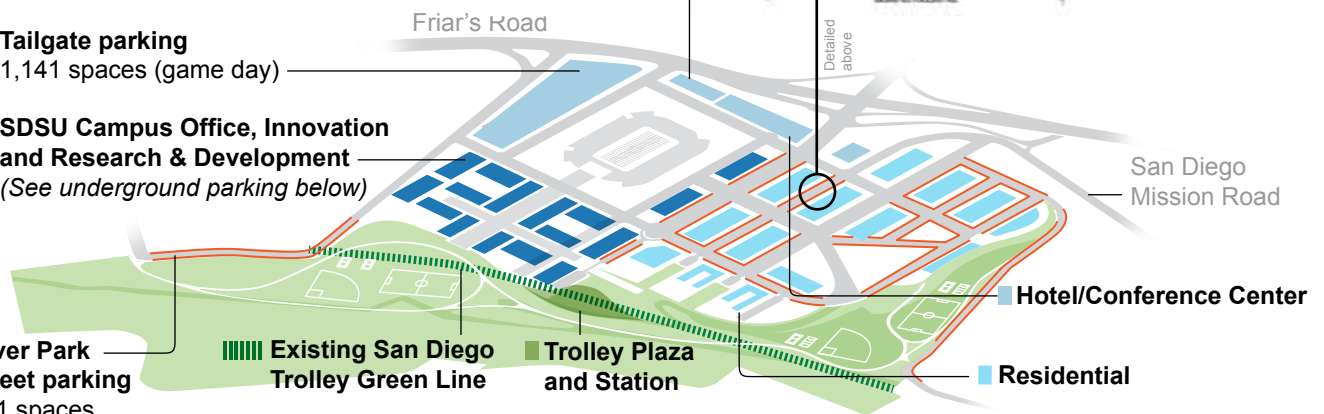
62-66'

P2

55'

P3

44'



SOURCE: 2/9/19 CARRIER JOHNSON

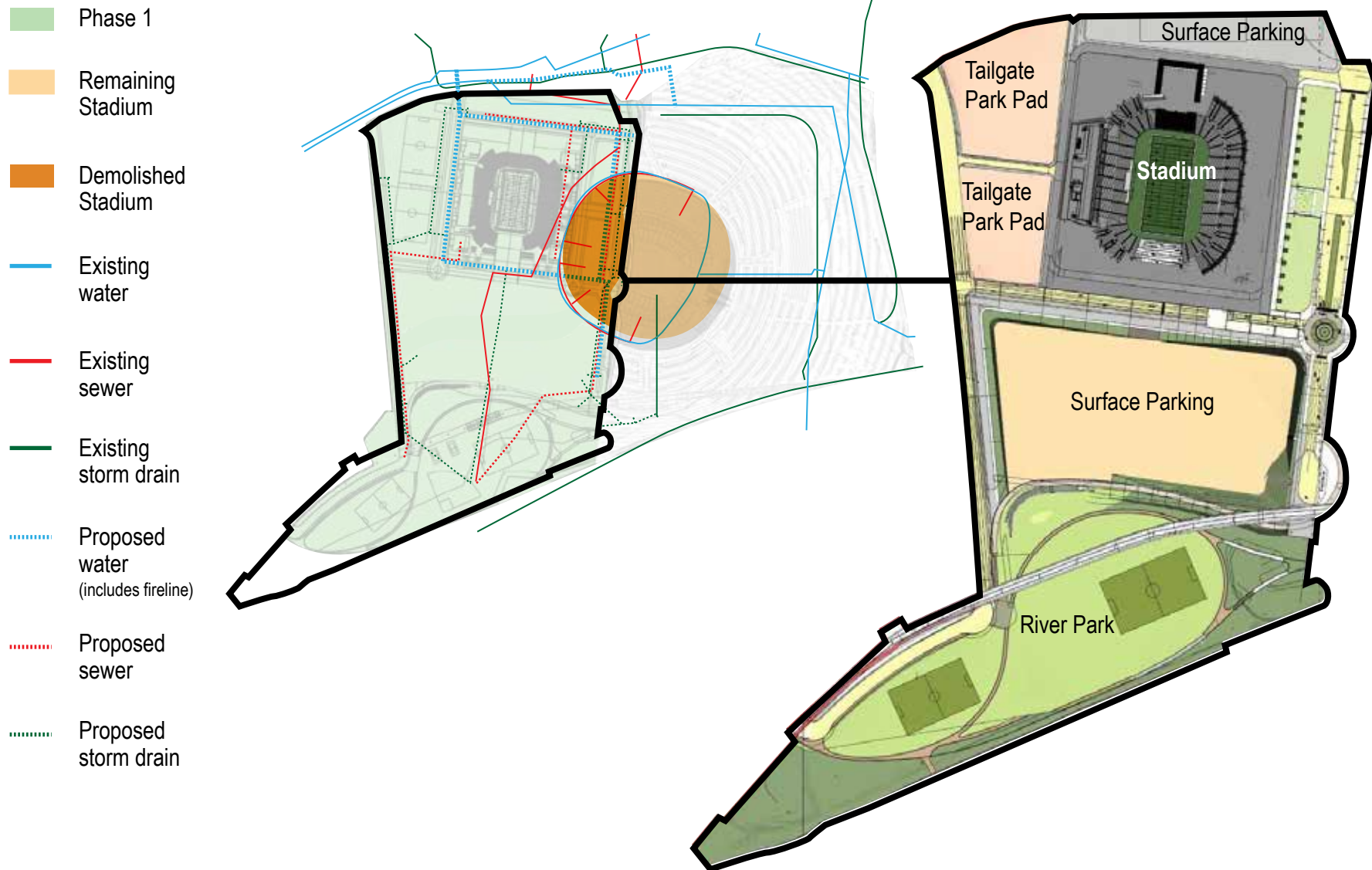
**SDSU Mission Valley
Campus Master Plan EIR**



**Figure 2-11F
Parking Plan**

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PHASE 1



SOURCE: CARRIER JOHNSON

SDSU Mission Valley Campus Master Plan EIR

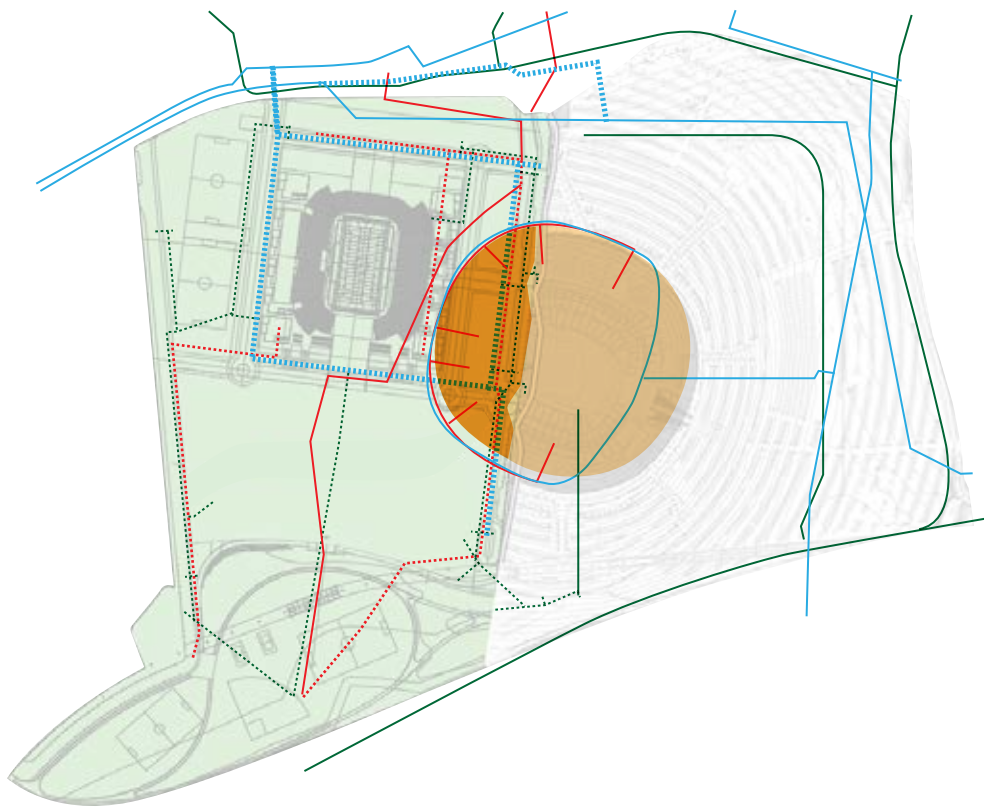


Figure 2-12A
Phasing Exhibit Opening Day

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PHASING PLANS

1 Opening Day



- Phase 1

Remaining Stadium

Demolished Stadium
- Existing water

Existing sewer

Existing storm drain
- Proposed water (includes fireline)

Proposed sewer

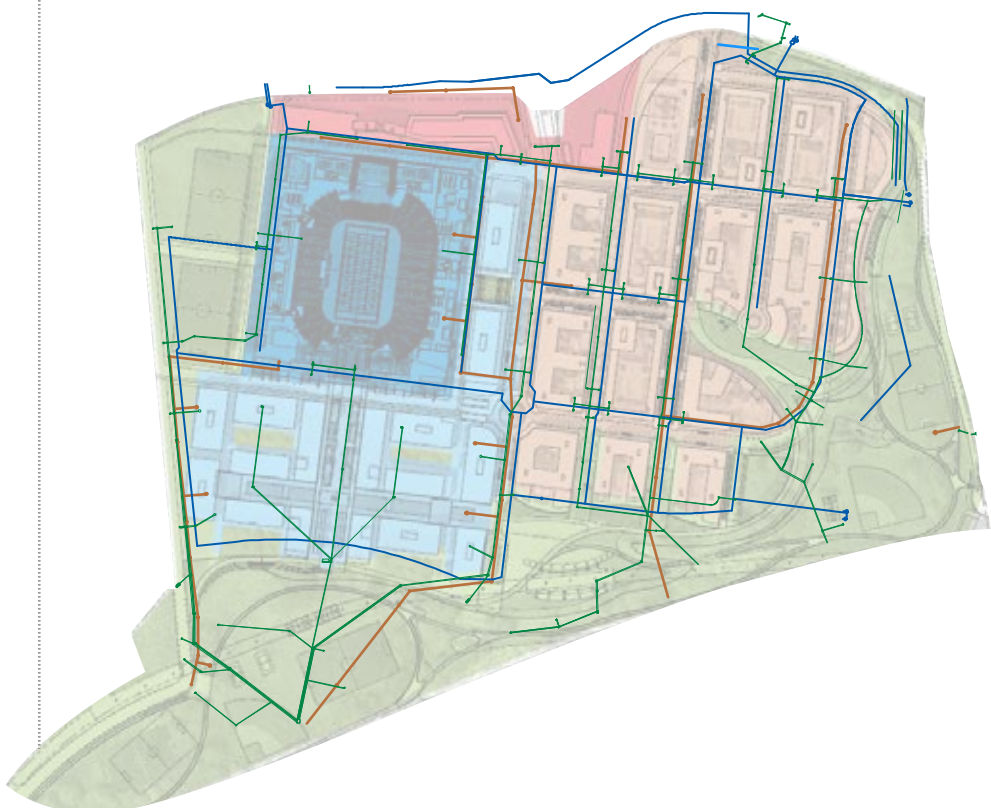
Proposed storm drain

2 River Park and Residential Sheet Grading



Sheet Graded

3 Vertical construction complete 2037



- Campus

Parks, Recreation and Open Space
- Residential

Hotel

Stadium
- Water

Sewer

Storm drain

SOURCE: CARRIER JOHNSON

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3 Cumulative Projects and Methods

3.1 Introduction

This chapter is an introduction to the cumulative impacts analysis contained within each respective environmental impact category subsection of Chapter 4, Environmental Analysis. This chapter explains the purpose of analyzing cumulative impacts, discusses the cumulative forecasting methodology, and presents a list of past, current, and probable future projects that were considered in assessing the proposed project's potential cumulative impacts.

3.2 Purpose

The California Environmental Quality Act (CEQA) Guidelines define “cumulative impacts” as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (14 CCR 15355).

Cumulative impacts generally may result from the combined effect of past, present, and future projects located in proximity to the proposed project under review. Therefore, a cumulative impacts analysis is to be viewed over time, the impacts of the proposed project viewed in conjunction with other related past, present, and reasonably foreseeable future projects whose impacts might compound or interrelate with those of the proposed project under review.

3.3 Cumulative Forecasting Methodology

To analyze the cumulative impacts of the proposed project with other planned or foreseeable projects in the project's vicinity, it is necessary to determine the type and specifics of the other planned or foreseeable projects in the area. One method to accomplish this is to compile a “list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency” (14 CCR 15130(b)).

Thus, to analyze the potential cumulative impacts of the proposed project, a list of past, present, and probable projects in the area is provided below. The list was compiled based on personal communications with the applicable jurisdictional agencies, and related database and internet research (City of San Diego 2019). The analysis of the proposed project's cumulative impacts is contained within the analysis of each separate environmental impact category presented in Chapter 4.

In addition, for purposes of the traffic analysis, baseline traffic forecasts for 2037 were developed using projections from the San Diego Association of Governments (SANDAG) Series 13 Year 2035 travel demand model, which is the best available long-range planning tool for traffic volume forecasting in the San Diego region. The SANDAG model reflects the forecasted population and employment from land uses based on the adopted General Plans of all 18 cities within the county, and the County of San Diego for the unincorporated areas. The subsequent traffic analysis, as well as the air quality, greenhouse gas, and noise analysis, all considered the results of the SANDAG model.

3.4 List of Cumulative Projects

Table 3-1, Cumulative Projects, provides a list of approved and proposed development projects in the vicinity of the proposed project. Future projects are determined based on the date of Notice of Preparation issuance (January 18, 2019) and are discussed to the extent that there is sufficient information available to determine the project's general scope and size. Every effort has been made to provide the most current and accurate information possible. The status of the projects included in the list may change over time as additional projects are proposed or as projects on the list are approved, withdrawn, and/or denied by the applicable jurisdiction.

Table 3-1 identifies the name, location, description, status, and projected buildout year (if available) of those cumulative projects within the vicinity of the proposed project. Figure 3-1, Cumulative Projects, depicts the location of each project listed in Table 3-1.

Table 3-1. Cumulative Projects

Map ID	Address	Project	Type	Status	Distance from Project
City of San Diego					
1	Mission Valley Community	Mission Valley Community Plan Update: Comprehensive Community Plan Update addressing land use, housing, urban design, parks and recreation and the mobility system within Mission Valley. Update would add approximately 28,000 dwelling units, 51,600 residents, 19,100 jobs, 55 acres of parks, and mobility and other infrastructure improvements.	MU	UR	—
2	10222 and 10306 San Diego Mission Road, San Diego, California 92108	Mission Town Homes: Proposal to demo 2 commercial buildings and construct 58 residential townhomes on a 2.6-acre site.	R	UC	Approx. 1,000 feet east
3	2450 Camino Del Rio North, San Diego, California 92108	Discovery Center: Proposal to construct a 9,950-square-foot interpretive building center with educational, meeting, and community uses; outdoor classroom space; concession with restrooms; extension of the San Diego River Trail and an observation pier at two vacant parcels, on a 17-acre site.	O	A	Approx. 1 mile west
4	7960 Civita Boulevard, San Diego, California 92108	Civita (Quarry Falls): Proposal is for 4,780 residential units, 603,000 square feet of retail/commercial, and 620,000 square feet of office. Civita is in the Quarry Falls Specific Plan.	MU	UC	Approx. 1 mile west
5	730 Camino Del Rio North, San Diego, California 92018	Camino Del Rio Mixed Use: Proposal to demolish existing structures and construct a mixed-use project consisting of residential units, shopkeeper units, and retail and office space located on a 5.37-acre site.	MU	C	Approx. 2.2 miles west

Table 3-1. Cumulative Projects

Map ID	Address	Project	Type	Status	Distance from Project
6	588 Camino Del Rio North, San Diego, California 92108	Witt Mission Valley: Proposal to demolish existing automotive dealership for the development of a 348,500-square-foot, five-story mixed-use building over a 175,000-square-foot parking garage with 267 residential units, 10 shopkeeper units, and 9,600 square feet of commercial and retail space on a 5.128-acre site.	MU	A	Approx. 2.3 miles west
7	State Route 163/Friars Road	State Route 163/Friars Road Interchange: Proposal to widen the Friars Road bridge and improvements to the State Route 163/Friars Road interchange.	PF	UC	Approx. 2.5 miles west
8	123 Camino de la Reina, San Diego, California 92108	Alexan Fashion Valley: Proposal to demolish existing commercial buildings and construct a mixed-use building with 284 residential units, 5,760 square feet of commercial office, 3,137 square feet of restaurant and attached six-level parking structure on a 4.94-acre site.	MU	UC	Approx. 2.5 miles west
9	350 Camino de la Reina, San Diego, California 92108	Union Tribune Mixed Use: Proposal is to construct 286,000 square feet total building area including: 2 seven-story buildings, 200 residential units, 3,000 square feet of retail, 60,000 square feet of outdoor amenities space, and a 212,000-square-foot parking structure on a 12.86-acre site.	MU	C	Approx. 2.6 miles west
10	875 Hotel Circle South, San Diego, California 92108	Legacy International Center: Proposal is to construct a mixed-use development with religious, lodging, administrative, recreational, and commercial uses. The project is located south of Interstate (I) 8 at 875 Hotel Circle South and consists of two parcels, approximately 18.1 acres. Religious center and associated buildings approximately 400,000 square feet. Total of 878 parking stalls (195 surface and 683 subterranean or parking structure).	MU	UC	Approx. 3 miles west
11	500 Hotel Circle North, San Diego, California 92108	Town & Country Specific Plan: Proposal is to amend the Atlas Specific Plan to create nine parcels, demolish some existing commercial structures, reduce existing hotel rooms (from 954 to 700), reduce existing conference area (from approximately 213,000 to 177,000 square feet), construct 840 dwelling units, and create 4.37 acres of park area.	MU	UC	Approx. 2.8 miles west

Table 3-1. Cumulative Projects

Map ID	Address	Project	Type	Status	Distance from Project
12	1150 Fashion Valley Road, San Diego, California 92108	Riverwalk Commercial Center: Proposal is to amend the Levi-Cushman Specific Plan, create a new specific plan, and apply for discretionary permits. The development is envisioned as a mixed-used, transit-oriented development, consisting of up to 4,000 new multifamily housing units, 200 acres of commercial office and hotel development, park facilities, and a new trolley stop.	MU	UR	Approx. 3.25 miles west
13	Citywide	North City Pure Water Phase 2: Phase 2 of the North City Pure Water Project would include development of a City of San Diego Public Utilities Department Groundwater Facility on approximately 2.83 acres within the project site.	PF	A, UR	On site
14	5998 Alcala Park, San Diego, California 92110	University of San Diego Master Plan: Proposal for Conditional Use Permit (CUP), amending CUP no. 92-0568 and 1996 Master Plan/Design Guidelines, would increase student enrollment to a maximum of 10,000 full time equivalent students with proposed development over a 20-year period. The 180 +/- acre site is located within the RS-1-7, RM-3-7, OR-1-1, and OP-2-1 zones within the Linda Vista Community Plan area.	I	A	Approx. 3.5 miles west
15	7610 Hazard Center Drive, San Diego, California 92108	Hazard Center Redevelopment: Proposal to demolish existing commercial to construct new residential uses and parking on site. Five-story row homes (73 residential units) and 22-story tower (198 residential units), with additional commercial along Hazard Center Drive. Also 21-story tower (202 residential units) and commercial on northeast corner of Friars Road and Frazee Road. A 0.63-acre public park is proposed in southwest corner of project site.	R	A	Approx. 2 miles west
16	6910 Mission Gorge Road, San Diego, California 92120	Shawnee LLC/CG 7600 Master Plan: Proposal is for a Master Plan that requires a Community Plan Amendment to alter the plan's Industrial uses to include a total of 1,023 multifamily residential units along with approximately 37,500 square feet of specialty retail, which would generate 7,692 average daily traffic. Proposal is at Mission Gorge Road at the intersection of Old Cliffs Road in the Navajo Community.	MU	A	Approx. 1.75 miles northeast

Table 3-1. Cumulative Projects

Map ID	Address	Project	Type	Status	Distance from Project
17	7020 Friars Road, San Diego, California 92108	Friars Rd Residential Mixed Use: Demolition of three commercial structures and construction of 410,000-square-foot, 70 market-rate residential condominiums and 249 residential apartment units (six of which are shopkeeper units) for total of 319 units.	MU	A	Approx. 3.15 miles west
18	Murphy Canyon Creek, between San Diego Mission Road and the San Diego River	Murphy Canyon Channel Master Storm Water System Maintenance Plan (MSWSMP): Proposal for channel maintenance under the MSWSMP to provide flood control. The project includes work within Murphy Canyon Creek channels adjacent to Qualcomm Stadium and Interstate 15.	PF	C	On site
19	9060 Friars Road, San Diego, California 92108	CALPEAK Power-Mission: Proposal to build an addition to an existing electrical substation (CUP 87-0490) and operate a 49.5-megawatt natural gas powered electrical generating facility on a 1.97-acre property.	PF	—	—
20	Citywide	Groundwater Extraction: The Public Utilities Department is planning or developing several groundwater basins for municipal water supply and other beneficial use. Currently, the groundwater available for beneficial use is 500 acre-feet per year from the existing production wells in the San Diego River Valley Groundwater Basin.	PF	UR	—
21	Citywide	Pure Water: Citywide phased, multi-year program to provide one-third of San Diego's water supply locally by 2035 using water purification technology to clean recycled water to produce potable drinking water.	PF	UR, A, UC	N/A
22	San Diego River Valley, between I-805 and I-15	Stadium Wetlands Mitigation Project: Enhancement and restoration of approximately 57.0 acres of riparian habitat in the San Diego River, removal of invasive species, and establishment of native plant communities for mitigation for wetlands impacts.	PF	C	Immediately south
23	Citywide	Municipal Waterways Maintenance Plan A new Municipal Waterways Maintenance Plan to guide maintenance of the storm drain system following the expiration of the current MSWSMP.	PF	UR	N/A

Table 3-1. Cumulative Projects

Map ID	Address	Project	Type	Status	Distance from Project
24	Citywide	Alternative Compliance Program Citywide program to provide for off-site storm water treatment facilities to supplement or offset on-site structural Best Management Practices requirements.	PF	UR	N/A

Notes:

Type: R – Residential; MU – Mixed Use; PF – Public Facility; I – Institutional; O – Other.

Status: UR – Under Review; A – Approved; UC – Under Construction; C – Completed; N/A – not applicable.

Two other proposals warrant discussion. The first is the Fenton Parkway Bridge Extension (two-lane or four-lane configuration), and the second is the Metropolitan Transit System (MTS) Trolley Purple Line. Neither proposal is considered a cumulative project for the following reasons: (1) neither proposal is at the stage where a project application has been filed, or where environmental review has been commenced to implement either proposal as a “project”; and (2) neither proposal is under environmental review for development, approved for construction, under construction, or completed. In addition, neither proposal is funded, such that it is “ready” to be submitted as a project application; therefore, neither proposal is “ready” to be the subject of environmental review at this time. Furthermore, neither proposal has any set design or construction plans in place for study purposes; as a result, there is uncertainty as to design, location, configuration, timing, and other factors.

The City’s adopted Mission Valley Community Plan (1984) includes a two-lane Fenton Parkway Bridge Extension in the plan, but it was not funded such that it can be planned or constructed within a set or forecasted time frame. The City’s Final Draft Mission Valley Community Plan (2019) includes a four-lane configuration for the Fenton Parkway Bridge Extension; but again, it is not funded such that it can be planned or constructed within a set or forecasted time frame. Moreover, there is no known funding to implement the MTS Trolley Purple Line at this time or in the future. For all of the above reasons, neither proposal is considered a “cumulative” project for CEQA purposes.

Nonetheless, this environmental impact report (EIR) describes MTS’s current plans regarding the Trolley Purple Line to-date and accommodates potential future alignments through the project site. In addition, at the request of the City, this EIR discloses the City’s Fenton Parkway Bridge Extension plans to-date. As to the Fenton Parkway Bridge Extension, this EIR’s traffic analysis evaluates the Fenton Parkway Bridge Extension in both the two-lane and four-lane configuration.



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4 Environmental Analysis

4.1 Aesthetics

This section describes the existing setting of the project site, identifies associated regulatory requirements, evaluates potential impacts related to aesthetics related to implementation of the proposed San Diego State University (SDSU) Mission Valley Campus Master Plan Project (proposed project).

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to aesthetics and/or visual quality focused on preparation of a high quality master plan with emphasis on design, Mission-style architecture branding, and guidelines to ensure harmonious design and sense of place; and the provision of additional connections to the site. Please see Appendix A, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.1.1 Existing Conditions

This section describes the existing conditions in the project area and identifies the visual resources that could be affected by the proposed project. The existing environmental setting discussion below provides a general description of the project vicinity and the project site. Following the general description, the environmental setting is organized according to visual/aesthetic resources identified in Appendix G of the California Environmental Quality Act (CEQA) Guidelines, i.e., scenic vistas, scenic highways, visual character and quality, etc.

Scenic Vistas

While there are no designated scenic vistas identified in the current Mission Valley Community Plan (City of San Diego 2013a), the City's Draft General Plan Final Program Environmental Impact Report (Final PEIR) (City of San Diego 2008a) identifies non-specific "communitywide" public views for Mission Valley. Specifically, the Final PEIR identifies public views to the San Diego River corridor from hillside streets and parks in the surrounding communities as public vantage points and further implies that these views are de facto scenic vistas.

The project site and adjacent San Diego River corridor are located in a valley bordered by higher elevation mesas to the north and south. In the immediate project area, the mesas are developed with single- and multifamily residential developments. Local mesas provided elevated vantage points from which the project site, San Diego River corridor, Mission Valley, and distant hills and mountains are visible. However, the majority of these views are offered from private residential properties and private views are not typically considered sensitive under CEQA. Views to the project site from public roads atop the developed mesas in the area are generally not available due to the presence of intervening residential development that routinely abut roads and line the mesa rims. In addition to Mission Valley, surrounding communities (i.e., Serra Mesa, North Park and Normal Heights) do not feature hillside or mesa edge public parks that provide views that include the San Diego River and the project site.

The project site is intermittently visible from Interstate (I) 15, I-8, and I-805. While not identified as scenic vistas in local planning documents, views from these freeways of the Mission Valley corridor are occasionally long and extend beyond the project site to hillsides and mesa landforms and to more distant hills and mountains to the east. In addition, San Diego County Credit Union (SDCCU) Stadium, identified as a cultural landmark in the current Mission Valley Community Plan (City of San Diego 2013a), is visible from these facilities.

The project site and surrounding Mission Valley area are visible from Cowles Mountain (1,594 feet above mean sea level) and Pyles Peak (1,379 feet above mean sea level). Located over 5 miles east of SDCCU Stadium in Mission Trails Regional Park, west-oriented views from the slopes and summits of these locations are long and broad and stretch to the Pacific Ocean. While the Stadium and site are visible from the elevated vantage points, these features are experienced within the broader context of the City of San Diego and development along I-8 corridor. Due to the broad westward view offered from prominent terrain in Mission Trails Regional Park, neither the Stadium nor site are particularly dominant features as viewed from these locations.

Scenic Highways

The nearest state scenic highways to the project site are I-8, State Route (SR-) 163, and I-5 (Caltrans 2019).

I-8, an eligible state scenic highway from the coast (Sunset Cliffs Boulevard) to SR-98 near Coyote Wells. Through Mission Valley, I-8 roughly parallels the southern boundary of the site for approximately 0.75 miles and is located approximately 485 feet from the San Diego River corridor. Between Mission Valley Parkway and I-15 (a distance of approximately 0.75 miles), the upper exterior of SDCCU Stadium structure are intermittently visible from eastbound I-8. Tall eucalyptus trees planted in the sloped interstate median and landscaping installed north of westbound I-8 occasionally block the Stadium and project site from view of eastbound motorists. The duration of view exposure to the Stadium from westbound I-8 is brief. Views are regularly blocked (or obstructed) on the approach from the east by the elevated ramps of east- and westbound I-8 and southbound I-15, and three-story office buildings and landscaping (including tall pine and eucalyptus trees) located north of I-8 and west of I-15. In addition, mature trees within the San Diego River corridor also block or obstruct SDCCU Stadium and the project site from view of westbound I-8 motorists between I-15 and the western boundary of the project site (a distance of approximately 0.6 miles).

From approximately Ash Street in downtown San Diego to I-8, SR-163 is an eligible state scenic highway. Due to intervening canyon slopes, vegetation and development, the project site is not visible from the designated scenic segment of SR-163. The segment of SR-163 that spans the San Diego River and extends north through Mission Valley is located over 2.4 miles from the project site and is not designated scenic. North of I-8, the project site is blocked from view of SR-163 motorists by elevated off-ramps, interstate landscaping, mature trees within the San Diego River corridor, the elevated track of the Metropolitan Transit System (MTS) Trolley Green Line, and a collection of tall office and hotel buildings and associated landscaping. These elements are all located east of SR-163 through Mission Valley and block SDCCU Stadium from view of northbound motorists. Tall hotel and office buildings also block the Stadium from view of southbound motorists on SR-163 as the highway descends adjacent hillsides and traverses Mission Valley.

I-5 through San Diego County is also an eligible state scenic highway. At the San Diego River crossing near Old Town, the project site is located nearly 5 miles from I-5. As viewed from I-5 at the river crossing, SDCCU Stadium is blocked from view by intervening terrain, vegetation, and assorted development along the I-8 corridor.

Visual Character and Quality

Project Site

The existing SDCCU Stadium and surrounding surface parking lots are located at 9449 Friars Road in the eastern portion of the Mission Valley Area, immediately to the south of Friars Road, to the west of I-15, and to the north of San Diego River and I-8. The primarily asphalt paved site is generally sloped from north to south and features

elevations ranging from approximately 100 feet above mean sea level in the northwest corner to 50 feet above mean sea level along the southern boundary. Vegetation is sparse within the boundary of the majority of the project site; however, small pockets of riparian and upland vegetation occur in the site's southwestern boundary near the turf practice fields. Located south of the MTS trolley corridor, these areas support a dense collection of mature trees and lower shrubs. In addition, single rows of evenly spaced ornamental trees are planted in two concentric rings around the inner parking lot and the concrete concourse that surrounds the Stadium. Radial lines of evenly spaced pine trees are also planted within seven of the eight concrete paths that collect and direct visitors from the parking lot to the Stadium's ticket gates.

SDCCU Stadium is centrally located within the project site boundaries. The approximately 120-foot-tall concrete Stadium structure is surrounded by over 150 acres of surface parking lots. According to the Historical Resources Technical Report prepared by Heritage Architecture & Planning for the San Diego Stadium Project in 2015, the configuration of the Stadium utilize a series of circular forms (i.e., ramps/walkways) that radiate from a central horseshoe-shaped structure that was once opened on the east end. Installed in 1997, video screens and signage now occupy the east end. A large "Jumbo-tron" video screen, scoreboard and second video screen are installed atop the Stadium on the west end. A series of paired vertical concrete columns run perpendicular to the horizontal horseshoe-shaped sections to support the uppermost portions of the Stadium. Two cylindrical elevator towers each that are connected to the central structure by bridges are located on the north and south sides of the Stadium. Several one to two-story curved concrete additions/features including Murphy's and a concessions stand are wedged between ramps and escalators along the structure exterior. The unpainted concrete exterior of the Stadium features visible staining in some area as well as exposed pipes, A/C units and wiring. Lastly, ticket gate and other informational signage is affixed to the exterior of the unadorned grey concrete structure in the concourse areas.

In addition to SDCCU Stadium, the southern portion of the site is traversed by an elevated section of the MTS-owned Trolley Green Line and Stadium Station. The elevated station is characterized by a collection of unpainted vertical and horizontal columns and red railing/fencing alongside ramps/walkways. The station and nearby surface parking spaces are accessible to the public.

Photos of SDCCU Stadium, surrounding parking lots, single-story prefabricated buildings and site landscaping are provided on Figure 4.1-1, Existing Conditions – Project Site.

Surrounding Area

Land uses in the surrounding area are depicted on Figure 2-3, Surrounding Land Use.

The project site is accessible from the north via Friars Road, Mission Village Drive, and San Diego Mission Road. The project boundary directly abuts Friars Road and San Diego Mission Road on the northwest and northeast, respectively. The Mission Valley East Fire Station and a large surface parking lot are located north of Friars Road and the fire station is adjacent to higher elevation terrain to the west and north. A densely landscaped multifamily residential development ("Monte Vista") comprised of numerous four-story apartment buildings is located to the west of the fire station. Several east- and south-facing buildings along the east and south exterior of the development are situated approximately 60 to 30 feet higher in elevation than the high point of the project site and have available views to SDCCU Stadium and surface parking lots.

To the north, a series of finger-like mesas separated by narrow canyons are developed with single-family residential neighborhoods. However, individual homes are setback from the edge of the mesa and abut a transmission line corridor featuring numerous steel lattice towers and tubular poles, and wood poles. Lastly, the northeastern corner

of the project site that parallels San Diego Mission Road is located near six white cylindrical storage tanks and a primarily white, prefabricated metallic single-story maintenance building. These features and nearby facilities to the north of Friars Road are part of the Kinder Morgan Energy Partners Mission Valley Terminal petroleum storage and distribution facility.

The western boundary of the proposed project site abuts the Fenton Market Place shopping center. The approximately 60-acre center consists of regional serving commercial uses, retail businesses, office space, and a large central surface parking lot. Anchor tenants include Costco, IKEA, and Lowe's Home Improvement and these businesses are housed in long, warehouse-style buildings adorned with corporate color schemes and logos. In addition, the shopping center features numerous restaurants and other services, office space (three- to seven-stories high buildings in the northeastern corner of the development site), and the Mission Valley branch of the City of San Diego Public Library. Multifamily residential developments encompassing numerous two- and three-story buildings are located to the west and north of the Fenton Market Place (i.e., to the north of Friars Road and west of Fenton Parkway, respectively). Landscaping consisting of palm and carotwood trees and shrubs is located throughout the center's parking lot.

The San Diego River borders the southern boundary of the proposed project site. Dark green, tall and spreading riparian trees within the riverbed are generally dense and the south-facing slope to the north of the river features pockets of sparse shrubby vegetation. Several multistory office buildings of brick, concrete and glass and associated surface parking lots are located south of the river and are bordered by Camino Del Rio North and I-8 to the south. Similar to the terrain to the north of the project site, valley terrain to the south of the project site (and south of I-8) rises and forms a series of canyons and elongated mesas developed with single-family residential development.

Lastly, Murphy Canyon Creek is located within the eastern project boundary; I-15, and multifamily apartment and low-profile office development, are located east of the project site. Murphy Canyon Creek is periodically maintained by the City of the San Diego and is characterized as a narrow channel flanked by slopes vegetation with trees and shrubs. Near the San Diego Mission Road bridge, trees within and/or adjacent to the creek bed partially block views to SDCCU Stadium to interstate motorists. South of the bridge views to the Stadium and site are available briefly before the elevated deck of the I-8 westbound on-ramp partially blocks available views to the west beyond the interstate corridor. Two or three-story multifamily residential development housed in a variety of off-white and earth tone colors and generally topped by tiled or wood shingle roofs are the predominant development to the east of the interstate and north of the San Diego River. The Mission Basilica San Diego de Alcala is located approximately 0.40 miles to the eastern boundary of the project site. Partially screened views to the project site are available from the southern and western areas of the mission campus that is comprised of numerous buildings constructed atop slightly elevated terrain.

Viewpoints

Eleven (11) locations from which representative views of SDCCU Stadium and the project site are available to viewer groups in the surrounding area were selected to evaluate the anticipated visual change associated with implementation and operation of the proposed project. These locations (i.e., viewpoints) form the basis of the impact analysis as it relates to visual character and quality of the site and surrounding area. The views at identified viewpoints are also characteristic of the range of viewing angles, distances, and general visibility to the project site available to local viewer groups in the surrounding area. The quality of the existing view and character of the landscape at the viewpoints was captured in photographs taken during the February 2019 photographic inventory. The location of the viewpoints and their relationship to the project site is depicted on Figure 4.1-2, Viewpoints. The existing photographs taken at each viewpoint are included on Figures 4.1-3 through 4.1-5, Existing Views to the Project Site, and a brief description of each view is provided below each image.

Table 4.1-1, Viewpoints and General Visibility, below lists the identified viewpoints and provides the location, approximate distance, viewing angle/observer position, and general visibility conditions to the project site. A brief description of the view and visual character of the landscape also is provided below by key view location.

Table 4.1-1. Viewpoints and General Visibility

Viewpoints	View Direction and Location	Approximate Distance to Project Site/Boundary	General Visibility Conditions to Project Site
1	Southward view to project site from Mission Village Drive	0.30 miles	Partially obstructed. Canyon slopes and trees focus views south the main gate entrance, parking lot, and north exterior of SDCCU Stadium.
2	Southwestward view to project site from I-15	0.50 miles	Partially obstructed. Upper portions of SDCCU Stadium structure visible above white tanks in the foreground. Parking lots blocked from view by intervening development and Friars Road off-ramp.
3	Southwestward view to project site from San Diego Mission Road	100 feet	Unobstructed. Parking lots in northeastern corner of site visible. Site landscaping and exterior of Stadium structure (including circular ramps) visible.
4	Westward view to project site from I-5 On-Ramp	100 feet	Unobstructed. Eastern parking lots and associated landscaping visible. East exterior of Stadium, signage, circular ramps, and exterior of Jumbo-tron visible.
5	Northeastward view to project site from Cliff Place	0.60 miles	Partially obstructed. West portion of site obstructed by foreground canyon terrain. South exterior of Stadium, south and eastern parking lots, and MTS Trolley Stadium Station (and elevated trolley track) visible.
6	Northward view to project site from eastbound Camino Del Rio	0.20 miles	Partially obstructed. Upper portions of south exterior of Stadium visible. Red components at MTS Trolley Stadium Station visible. Western parking lot and elevated trolley track visible through gaps in landscaping.
7	Northeastward view to project site from eastbound I-8	0.20 miles	Obstructed. Upper concrete components of south and west Stadium exterior visible. Trolley Stadium Station obstructed from view by mature trees and low concrete wall separating east- and westbound lanes. Parking lots and trolley not visible.
8	Northeastward view to project site from Mission City Parkway	0.10 miles	Partially obstructed. South and west exterior of Stadium (including circular ramps) visible. MTS Trolley Stadium Station obstructed by river corridor vegetation. Elevated trolley track and western parking lot visible but partially blocked from view by river corridor trees.

Table 4.1-1. Viewpoints and General Visibility

Viewpoints	View Direction and Location	Approximate Distance to Project Site/Boundary	General Visibility Conditions to Project Site
9	Eastward view to project site from northbound I-805	0.40 miles	Partially obstructed. South and west exterior of Stadium, MTS Trolley Stadium Station, and south parking lot visible. West, north, and east parking lots blocked from view.
10	Eastward view to project site from MTS Trolley Fenton Parkway Station	N/A*	Partially obstructed. West and south exterior of Stadium visible. Elevated trolley track and MTS Trolley Stadium Station visible. South parking lot partially visible.
11	Southeastward view to project site from Friars Road	30 feet	Unobstructed. North and east parking lots (and associated landscaping) visible. North and west exterior of Stadium, circular ramps, escalator ramps, and curved addition (Murphy's Bar and Restaurant [previously, Stadium Club]) visible.

Note:

* Within project site boundary.

Viewpoint 1: Mission Village Drive

Viewpoint 1 is located on Mission Village Drive, approximately 930 feet north of Friars Road, and offers a southward view to the main Stadium entrance marked by a horizontal, teal band and flag pole (see Figure 4.1-3, Viewpoint 1). Located 0.30 miles away, SDCCU Stadium towers above the main entrance and is characterized by greyish and off-white, horizontal and vertical concrete beams and pillars and circular access ramps. Densely vegetated, green canyon slopes are visible beyond the Stadium and create a short southern horizon line. Multiple conductor lines span Mission Village Drive and are silhouetted against the sky.

Viewpoint 1 is representative of views experienced by motorists, pedestrians, and cyclists traveling south on Mission Village Drive towards Friars Road and SDCCU Stadium. Mission Village Drive and SDCCU Stadium are prominent features in the existing view from Mission Village Drive.

Viewpoint 2: Southbound I-15

Viewpoint 2 is located on southbound I-15, approximately 0.35 miles north of Friars Road, and offers a southwesterly view beyond a collection of white, cylindrical tanks in the foreground towards a partially obstructed SDCCU Stadium (see Figure 4.1-3, Viewpoint 2). In addition to the I-15, storage tanks, asphalt surfaces and numerous vehicles at the Kinder Morgan Mission Valley Terminal are prominent features in the view. SDCCU Stadium (approximately 0.70 miles away) is located beyond these features and with the exception of concrete on the east exterior that is lightened in color by the sun, the structure displays dark tones that help it to partially blend in with the dark, distant hillside.

Viewpoint 2 is representative of views experienced by southbound interstate motorists on the approach towards Friars Road.

Viewpoint 3: San Diego Mission Road

Viewpoint 3 is located on San Diego Mission Road and offers an unobstructed, southwestward view beyond the elevated road and low concrete wall towards asphalt parking lots, scattered landscaping and SDCCU Stadium (see Figure 4.1-3, Viewpoint 3). Located 0.25 miles away, SDCCU Stadium is the prominent feature in the view and the bulk, scale and building materials of the structure are distinct. Thin light poles are distributed throughout the Stadium parking lots lightly colored, multistory building are visible south of the San Diego River corridor and west of the project site. In addition, rolling hills and steep canyon slopes are visible to the west and southwest.

Viewpoint 3 is representative of views experienced by motorists, pedestrians, and cyclists on the approach towards the San Diego Mission Road/Mission Village Drive intersection.

Viewpoint 4: I-15 Southbound On-ramps

Viewpoint 4 is located on the southbound I-15 on-ramp via Friars Road. South of Friars Road, the on-ramp gradually descends in elevation, spanning Murphy Canyon Creek, and parallels the I-15 alignment for approximately 0.40 miles before merging onto the interstate. Viewpoint 4 is located approximately 0.20 miles south of Friars Road, is adjacent to the banks of Murphy Canyon Creek, and offers an unobstructed westward view towards parking lots and the east exterior of SDCCU Stadium (located 0.20 miles away) (see Figure 4.1-3, Viewpoint 4). The rectangular, horizontal, and vertical concrete components of the structure are apparent in the view, and large Stadium signage is legible. The Stadium is centrally located in the view and is the prominent feature. Beyond the project site, a multistory tan with reddish tile roofs apartment development is detectable to the northeast, and the reflective glass exterior of a high-rise office building is visible above parking lot trees to the southwest.

Viewpoint 4 is representative of views experienced by local road motorists on the approach towards the southbound I-15 transition.

Viewpoint 5: Cliff Place

Viewpoint 5 is located on Cliff Place, a narrow road that lines a canyon system located south of the project site and I-8. Residences located on Cliff Place are located approximately 330 feet greater in elevation than the project site and are within the neighborhood of Normal Heights. Viewpoint 5 offers a northeastward view that includes the project site, MTS Trolley Stadium Station, SDCCU Stadium, I-15, and Murphy Canyon, and local and more distant regional mountains including Mount Woodson and Palomar Mountain (see Figure 4.1-4, Viewpoint 5). The bulk and scale of SDCCU Stadium (located 0.85 miles away) is evident in the view, but along with local and distant mountain terrain including peaks in Mission Trails Regional Park, the foreground canyon terrain are the prominent features in the landscape. Indistinct and lightly colored development east and north of the Stadium is detectable in the view.

Viewpoint 5 is representative of views experienced by a limited number of local road motorists and Normal Heights residents lining the canyons to the south of I-8.

Viewpoint 6: Camino Del Rio South

Viewpoint 6 is located on eastbound Camino Del Sur, a three-lane road with bike lanes and an unprotected center median that parallels I-8 through Mission Valley. Viewpoint 6 offers a northward view to the south and east elevation of the SDCCU Stadium (approximately 0.40 miles away) and parking lots that are partially obstructed by chain-link fencing, eucalyptus trees, and office development located north of I-8 (see Figure 4.1-4, Viewpoint 6). Hillsides and ridge developed with residential structures and electrical transmission infrastructure are visible to the north of

SDCCU Stadium. The terrain to the immediate north of I-8 is located approximately 15 feet lower in elevation than Camino Del Rio South and therefore, I-8 is not visible in the northward offered at Viewpoint 6.

Viewpoint 7: Eastbound I-8

Viewpoint 7 is located on eastbound I-8, approximately 615 feet east of the Mission City Parkway Bridge and offers a northeastward view across the interstate and towards SDCCU Stadium. Located 0.50 miles away, SDCCU Stadium is partially obstructed by tall eucalyptus trees installed in the median and north of I-8. Horizontal and vertical concrete components of the Stadium structure are visible above the low concrete wall of the interstate (see Figure 4.1-4, Viewpoint 7). In addition to the Stadium and tall eucalyptus trees, warehouse (yellow building) and office development (tall grey buildings) in the Fenton Market Place are visible as is the red-tile roofs of nearby multifamily residential development. Further, green and vegetated to tan and bare hillsides are detectable in the northward view, and the canyon rim is developed with tall support structures for electrical infrastructure and residential structures.

Viewpoint 8: Mission City Parkway

Located on the Mission City Parkway span of I-8, Viewpoint 8 offers a northeastward view towards SDCCU Stadium (approximately 0.55 miles away). Vegetated terrain occupies the immediate foreground of the view and is bisected by partially obstructed Camino Del Rio North (see Figure 4.1-4, Viewpoint 8). The grey branches of deciduous riparian trees is visible beyond rough green and grey shrubs in the foreground and marks the general alignment of the San Diego River. A low, horizontal line created by elevated MTS Trolley track supported by concrete piers is visible to the north and parallels the San Diego River. The tall southern and eastern exterior of the Stadium structure attracts attention and the circular access ramps are distinct. The red-tile roofs of multifamily residential development are visible to the beyond the Stadium, and visible hillsides to the north are green, vegetated, and developed with electrical infrastructure and residential structures.

Viewpoint 9: Northbound I-805

Viewpoint 9 is situated on northbound I-805, approximately 800 feet north of I-8, and offers an eastward view along the San Diego River corridor towards SDCCU Stadium. In the foreground beyond the parallel I-805 on-ramps, numerous deciduous and evergreen trees occupy the wide and undeveloped river corridor (see Figure 4.1-5, Viewpoint 9). A tall, reflective glass window exterior building is constructed south of the river and is distinct due to scale and materials. MTS Trolley track and multifamily residential development are located north of the river and mature trees regularly rise from the interior grounds of residential developments. In addition to the low, rectangular, blue and yellow retail warehouse buildings within the Fenton Market Place, taller grey office buildings and tan exterior with red-tile roof residential structures are distant but detectable. The large surface parking lots surrounding the Stadium stand out due to a lack of landscaping and densely clustered structures. Located approximately 1 mile away, SDCCU Stadium is partially obscured by shadow; however, the eastern and southern elevation is in the Sun, and the mass and scale of the structure is discernable. Hillsides developed with residential land uses are visible to the east and northeast; however, individual structures are indistinct due to distance.

Prominent terrain including Cowles Mountain, Pyles Peak, Kwaay Paay, South Fortuna, and North Fortuna in Mission Trails Regional Park are located over 6 miles away from Viewpoint 9. The peaks are visible in eastward views from the interstate at the San Diego River crossing and are experienced as a series of dark mounded features that create a near continuous undulating horizon. Lastly, the hazy silhouette of El Cajon Mountain (located over 20 miles away from Viewpoint 9), is visible to the east beyond Cowles Mountain.

Viewpoint 10: MTS Trolley Fenton Parkway Station

The eastward view from the MTS Trolley Fenton Parkway Station encompasses the trolley corridor, native shrubs and trees within a short, north-south channel of the San Diego River, and adjacent land uses. A marked, grass football/soccer field surrounded by chain-link fencing is visible south of the trolley corridor, and tall and thin light poles are installed around the perimeter (see Figure 4.1-5, Viewpoint 10). A large and long retail warehouse building and exterior storage area are visible to the north of the trolley line. SDCCU Stadium (0.50 miles away) is central to the view and visually prominent. Developed hillsides and Cowles Mountain comprise the eastern horizon, and a clear view to the mounded form of the mountain is available at Viewpoint 10.

Viewpoint 11: Eastbound Friars Road

Viewpoint 11 provides a representative southeastward view from eastbound Friars Road across surface parking lots to SDCCU Stadium. The local terrain slopes from north to south, and tall, thin light poles are scattered throughout the parking lot. A ring of trees is installed around an inner parking lot, and several low-profile tan/brown buildings are visible to the southeast. SDCCU Stadium (located 0.50 miles away) is visually prominent in the view and its tall and wide form is clear (see Figure 4.1-5, Viewpoint 11). Circular access ramps, diagonal escalator ramps, cylindrical elevator towers, and numerous horizontal and vertical concrete bands that comprise the Stadium exterior are distinct in the view. Beyond the Stadium, Canyon terrain rises to the east and south of the Stadium and includes residential development and undeveloped terrain.

Light and Glare

Existing development on the project site including SDCCU Stadium and associated signage installed near the northwestern entrance off Friars Road, the MTS Stadium Trolley Station, and surface parking lots is equipped with exterior lighting fixtures. With the exception of Stadium lights that operate during evening events, lighting installed on site primarily consists of low-level lighting affixed to tall poles. Lighting fixtures are installed on the exteriors of the trolley station concrete beams. During evening events, the use of Stadium lights increases ambient lighting levels and is noticeable to viewers in the surrounding area. With the exception of Stadium lights during evening events, the project site is not a substantial source of glare.

With the exception of the San Diego River to the immediate south, surrounding land uses contain sources of nighttime lighting that are also a potential source of glare. For example, businesses and parking lots at the nearby Fenton Marketplace feature exterior lighting and security lighting that operates nightly. In addition, local mall developments (i.e., Fashion Valley and Mission Valley) and mid-rise commercial, office, and residential developments feature internal and external lighting fixtures and parking lot lighting. Lastly, streetlights are installed throughout the Mission Valley community.

As a component of the Lighting Study prepared by Francis Krahe & Associates Inc. (see Appendix 4.1-1), existing illuminance (i.e., the level of lighting falling on a given area expressed in foot candles or lumens per square foot) was measured and documented at 12 monitoring locations. The 12 monitoring locations were established on- and off site and were used to inventory existing lighting levels at representative residential and wildlife habitat (i.e., the San Diego River) locations in the immediate area. The monitoring site are representative of the view to the project site from the vicinity of the residences and roadways surrounding the project site to the north, south, east, and west.

The locations of the monitoring sites are depicted on Figure 4.1-6, Monitoring Sites for Measured Illuminance (Existing Conditions), and horizontal and vertical plane lighting levels (and a qualitative evaluation of lighting level) are listed in

Table 4.1-2, Measured Illuminance at Monitoring Sites During Stadium Events). For context, the Lighting Study explains that measured illuminance greater than 1.5 footcandles (fc) is considered “high,” from 0.75 fc to 1.5 fc is “medium,” and levels of 0.74 fc or less is considered “low” (see Appendix 4.1-1).

With the exception of monitoring sites ME1 and ME2 (located on the project site’s existing eastern parking lots) and MN3 (located on the project site’s existing northwest parking lots and near Friars Road), monitoring sites are typically exposed to low (i.e., 74 fc or less) or medium (0.75 to 1.5 fc) horizontal and vertical luminance under existing conditions. The measured illuminance at the 12 monitoring sites is listed in Table 4.1-2 below. A brief description/evaluation of existing illuminance levels is also included in the table.

Table 4.1-2. Measured Illuminance at Monitoring Sites During Stadium Events (Existing Conditions)

Monitoring Site	Illuminance (footcandles)		Evaluation (High, Medium or Low)	
	Horizontal	Vertical	Horizontal	Vertical
ME1 ¹	2.58	2.24	High	High
ME2 ¹	1.91	1.93	High	High
ME3 ²	0.06	0.30	Low	Low
ME4 ²	0.16	0.17	Low	Low
MS1 ¹	0.14	0.58	Low	Low
MS2 ³	0.38	0.75	Low	Medium
MS3 ³	1.18	0.45	Medium	Low
MW1 ²	0.02	0.20	Low	Low
MN1 ²	0.34	1.52	Low	High
MN2 ²	0.03	0.52	Low	Low
MN3 ^{1, 2}	1.34	3.65	Medium	High
MN4 ¹	0.03	0.29	Low	Low

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1)

Notes:

- ¹ Used to evaluate illuminance at residential properties in the surrounding area.
- ² Used to evaluate illuminance at specific public roads in the surrounding area.
- ³ Used to evaluate illuminance at the San Diego River corridor.

In general, the measured illuminance listed in Table 4.1-2 is consistent with a sports and entertainment site lighting condition during operation of Stadium field lighting and other sources. Specifically, relatively high illuminance was measured within the project site (i.e., ME1, ME2, and MN3) and at the street and sidewalk within the adjacent public right-of-way and nearby commercial properties. With distance from primary lighting sources, lower illuminance was measured at the San Diego River corridor (i.e., MS2) and at surrounding residential property monitoring sites. The highest existing horizontal illuminance level was recorded at monitoring site ME1 with 2.58 fc, while the lowest horizontal illuminance was recorded at monitoring site MW1 at 0.02 fc. The highest existing vertical illuminance level was recorded at monitoring site MN3 at 3.65 fc, while the lowest vertical illuminance was recorded at monitoring site ME4 at 0.17 fc. The project site currently includes parking lot lighting, Stadium field lighting, roadway lighting, and lighting for sports fields and maintenance facilities in the southwestern corner of the property. Adjacent commercial properties to the west, street lighting on the surrounding streets, and lighting on I-15 and I-8 freeways contribute to illuminance at residential areas surrounding the project site.

In addition to existing illuminance levels, the Lighting Study evaluates measured luminance at the same twelve monitoring sites. Whereas illuminance indicates the amount of lumens falling on a given surface, *luminance* describes

the perceived brightness of an illuminated or luminous surface. Luminance is defined as the ratio of luminous intensity of a surface (candela or cd) to the projected area of this surface (square meter [m²] or square foot [ft²]). A maximum and average luminance is measured and the “luminance ratio” is the ratio of the highest Measured Luminance as compared to the Luminance within the field of view at an observer position. This ratio is referred to as “contrast”, and is determined by the variation of luminance. “high,” “medium,” and “low” contrast are terms used to describe effect of the contrast ratios of greater than 30:1, between 10:1 and 30:1, and below 10:1, respectively. The evaluation of high, medium, and low contrast describes the perception of how bright a visible object appears in comparison to the surrounding objects within any given field of view. High luminance contrast ratios above 30:1 are generally uncomfortable for the human eye to perceive and indicate a potential glare condition.

Table 4.1-3, Measured Luminance at Monitoring Sites, summarizes the measured luminance at each monitoring site along with qualitative evaluation of the existing luminance. As shown in the table, no luminance contrast ratios above 30:1 that would indicate a potential glare condition were measured at any of the 12 monitoring sites. The highest existing contrast ratio was 21.4:1 at monitoring site MN4, which is located north of the project site within a residential area on Harcourt Drive. Monitoring site MN4 is located approximately 0.25 miles north of the project site and approximately 240 feet higher in elevation. The lowest existing contrast ratio was 6.7:1 at monitoring site ME3, which is located east of the project site at the south side of San Diego Mission Road, north of the Bella Posta Apartments and approximately 350 feet east of the eastern project site boundary.

**Table 4.1-3. Measured Luminance at Monitoring Sites During Stadium Events
(Existing Conditions)**

Monitoring Site	Luminance (cd/m ²)		Contrast Ratio (Max/Average)	Evaluation
	Maximum	Average		
ME1 ¹	4975.0	613.2	8.1	High maximum and average luminance; Low contrast
ME2 ¹	7611.0	859.3	8.9	High maximum and average luminance; Low contrast
ME3 ²	417.1	62.2	6.7	Medium maximum and average luminance; Low contrast
ME4 ²	1721.0	106.2	16.2	High maximum and Medium average luminance; Medium contrast
MS1 ¹	2258.0	124.7	18.1	High maximum, Medium average luminance; Medium contrast
MS2 ³	1711.0	137.4	12.5	High maximum, Medium average luminance; Medium contrast
MS3 ³	6141.0	371.2	16.5	High maximum, Medium average luminance; Medium contrast
MW1 ²	426.4	50.6	8.4	Medium maximum, Medium average luminance; Low contrast
MN1 ²	8015.0	505.0	15.9	High maximum, Medium average luminance; Medium contrast
MN2 ²	2325.0	185.2	12.6	High maximum, Medium average luminance; Medium contrast

Table 4.1-3. Measured Luminance at Monitoring Sites During Stadium Events (Existing Conditions)

Monitoring Site	Luminance (cd/m ²)		Contrast Ratio (Max/Average)	Evaluation
	Maximum	Average		
MN3 ^{1, 2}	5665.0	531.6	10.7	High maximum, Medium average luminance; Medium contrast
MN4 ¹	2120.0	99.2	21.4	High maximum, Medium average luminance; Medium contrast

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1)

Notes: cd/m² = candelas per square meter.

¹ Used to evaluate illuminance at residential properties in the surrounding area.

² Used to evaluate illuminance at specific public roads in the surrounding area.

³ Used to evaluate illuminance at the San Diego River corridor.

As further detailed in Section 4.1.4, Impact Analysis, light trespass illuminance at the nearest sensitive use properties associated with the Project is calculated within a vertical plane at the sensitive use property line. The vertical plane extends from grade to a maximum viewing elevation above grade. Figure 4.1-7, Project Site and Vertical Plane Calculation Locations, identifies the vertical plane calculation locations in the surrounding area.

4.1.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal aesthetics or visual resource policies that would be applicable to the proposed project.

State

State Scenic Highway Program

The nearest state scenic highways to the project site are I-8 and SR-125. I-8, an eligible state scenic highway from the coast to SR-125, parallels the southern boundary of the site and is located approximately 485 feet from the San Diego River corridor which is south of the site. From approximately Ash Street in downtown San Diego to I-8, SR-163 is an eligible state scenic highway. The segment of SR-163 that spans the San Diego River and extends north through Mission Valley is not visible from the project site and is not designated scenic. I-5 through San Diego County is also an eligible state scenic highway; however, the project site is located nearly 5 miles from the segment of the highway spanning the San Diego River and is blocked from view by intervening terrain and vegetation. The availability of views to the project site from I-8 and SR-163 is discussed in Section 4.1.1, above.

California Code of Regulations, Title 24

Title 24 of the California Code of Regulations (CCR), also known as the California Building Standards Code, consists of regulations to control building standards throughout the State. The following components of Title 24 include standards related to lighting:

California Building Code (Title 24, Part 1) and California Electrical Code (Title 24, Part 3 stipulate minimum light intensities for safety and security at pedestrian pathways, circulation ways, and paths of egress. All lighting for the proposed project will comply with the requirements of the California Building Code.

California Energy Code (Title 24, Part 6)

The California Energy Code allowances for lighting power and lighting control requirements for various lighting systems, with the goal of reducing energy consumption through efficient and effective use of lighting equipment.

Section 130.2 sets forth requirements for Outdoor Lighting Controls and Luminaire Cutoff requirements. All outdoor luminaires rated above 150 watts shall comply with the backlight, up light, and glare “BUG” in accordance with IES TM-15-11, Addendum A, and shall be provided with a minimum of 40% dimming capability activated to full on by motion sensor or other automatic control. This requirement does not apply to street lights for the public right-of-way, signs or building façade lighting.

Section 140.7 requires that outdoor lighting power density allowances in terms of watts per area for lighting sources other than signage. The lighting allowances are provided by Lighting Zone, as defined in Section 10-114 of the California Energy Code. Under Section 10-114, all urban areas within California are designated as Lighting Zone 3.

Section 130.3 requires that sign lighting controls with any outdoor sign that is on day and night must include a minimum 65% dimming at night. Section 140.8 of the CEC sets forth lighting power density restrictions for signs.

California Green Building Standards Code (Title 24, Part 11)

The California Green Building Standards Code, which is Part 11 of Title 24, is commonly referred to as the CALGreen Code. Paragraph 5.106.8 Light pollution reduction, provides that all nonresidential outdoor lighting must comply with the following:

- The minimum requirements in the California Energy Code (CEC) for Lighting Zones (LZ) 0–4 as defined in Chapter 10 of the California Administrative Code. Lighting Zones are defined by qualitative levels of ambient illumination. For example, ambient illumination in Lighting Zone 0 (LZ0) is described as “Very Low,” and LZ0 is typically applied to undeveloped lands of government designated parks, recreation areas, and wildlife preserves. Ambient Illumination in LZ4 is described as “High,” and LZ4 is typically applied to outdoor areas of human activity where the vision of human residents and users is adapted to high light levels. As described in the Lighting Study (see Appendix 4.1-1), the existing conditions within and surrounding the project site are consistent with the definition of Lighting Zone 4; and
- Backlight, Uplight and Glare (BUG) ratings as defined in the Illuminating Engineering Society of North America’s Technical Memorandum on Luminaire Classification Systems for Outdoor Luminaires (IESNA TM-15-11, Appendix G); and
- Allowable BUG ratings not exceeding those shown in Table A5.106.8 in Section 5.106.85 of the CALGreen Code. The BUG ratings are lighting zone specific for LZ1–LZ4 (requirements are not defined for LZ0) and include limitations for luminaire mounting heights from property lines (applicable to backlight and glare ratings), and area and decorative luminaires (i.e., uplight ratings); ; or
- Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Senate Bill 743 and Public Resources Code 21099

September 2013, the Governor signed Senate Bill 743 (SB 743), which became effective on January 1, 2014. Among other provisions, SB 743 adds Public Resources Code (PRC) Section 21099, which provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." PRC Section 21099 defines a

"transit priority area" as an area within 0.5 miles of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an infill site as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75% of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

The project site is located within 0.5 miles of two MTS light rail transit stations (i.e., Fenton Parkway Station and Stadium Station) and therefore, the project site is within a transit priority area. Also, the project site is currently developed and is located in an urban area. Therefore, the project is proposed on an infill site. In accordance with PRC Section 21099, the potential aesthetic impacts of the proposed project shall not be considered significant impacts on the environment.

Local

Because SDSU is an entity of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, SDSU has considered these planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The ***Conservation Element*** of the City's General Plan (City of San Diego 2008b) contains policies that pertain to the natural landforms, including canyon lands that help make San Diego unique, including the following:

- **Policy CE-B.1.** Protect and conserve the landforms, canyon lands, and open spaces that: define the City's urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetlands habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.

- c. Protect urban canyons and other important community open spaces including those that have been designated in community plans for the many benefits they offer locally, and regionally as part of a collective citywide open space system
- **Policy CE-B.5.** Maximize the incorporation of trails and greenways linking local and regional open space and recreation areas into the planning and development review process.

The goal of the General Plan Urban Design Element is to "guide development toward a desired scale and character that is consistent with the social, economic and aesthetic values of the City of San Diego (City of San Diego 2008c). The term "urban design" encompasses the physical features present in the landscape that help characterize the image of a street, neighborhood or community and consists of both natural and man-made features. Canyons and

mesas are identified in the Urban Design Element as natural features that contribute to San Diego distinctive character. Relevant policies of the Urban Design Element include:

- **Policy UD-A.1.** Preserve and protect natural landforms and features
 - a. Protect the integrity of community plan designated open spaces.
- **Policy UD-A.2.** Use open space and landscape to define and link communities.
 - a. Link villages, public attractions, canyons, open space and other destinations together by connecting them with trail systems, bikeways, landscaped boulevards, formalized parks, and/or natural open space, as appropriate.
 - b. Preserve and encourage preservation of physical connectivity and access to open space.
- **Policy UD-A.3.** Design development adjacent to natural features in a sensitive manner to highlight and complement the natural environment in areas designated for development.
 - a. Integrate development on hillside parcels with the natural environment to preserve and enhance views, and protect areas of unique topography.
 - b. Minimize grading to maintain the natural topography, while contouring any landform alterations to blend into the natural terrain.

- e. Utilize a clustered development pattern, single-story structures or single-story roof elements, or roofs sloped toward the open space system or natural features, to ensure that the visibility of new developments from natural features and open space areas are minimized.
- f. Provide increased setbacks from canyon rims or open space areas to ensure that the visibility of new development is minimized.
- g. Screen development adjacent to natural features as appropriate so that development does not appear visually intrusive, or interfere with the experience within the open space system. The provision of enhanced landscaping adjacent to natural features could be used to soften the appearance of or buffer development from the natural features.
- h. Use building and landscape materials that blend with and do not create visual or other conflicts with the natural environment in instances where new buildings abut natural areas. This guideline must be balanced with a need to clear natural vegetation for fire protection to ensure public safety in some areas.
- i. Ensure that the visibility of new development from natural features and open space areas is minimized to preserve the landforms and ridgelines that provide a natural backdrop to the open space systems. For example, development should not be visible from canyon trails at the point the trail is located nearest to proposed development. Lines-of-sight from trails or the open space system could be used to determine compliance with this policy.
- j. Design and site buildings to permit visual and physical access to the natural features from the public right-of-way.
- k. Encourage location of entrances and windows in development adjacent to open space to overlook the natural features.
- l. Protect views from public roadways and parklands to natural canyons, resource areas, and scenic vistas.

- n. Provide public pedestrian, bicycle, and equestrian access paths to scenic viewpoints, parklands, and where consistent with resource protection, in natural resource open space areas.

- **Policy UD-A.5:** Design buildings that contribute to a positive neighborhood character and relate to neighborhood and community context.
 - a. Relate architecture to San Diego's unique climate and topography.
 - b. Encourage designs that are sensitive to the scale, form, rhythm, proportions, and materials in proximity to commercial areas and residential neighborhoods that have a well-established, distinctive character.
 - c. Provide architectural features that establish and define a building's appeal and enhance the neighborhood character.
 - d. Encourage the use of materials and finishes that reinforce a sense of quality and permanence.
 - e. Provide architectural interest to discourage the appearance of blank walls for development. This would include not only building walls, but fencing bordering the pedestrian network, where some form of architectural variation should be provided to add interest to the streetscape and enhance the pedestrian experience. For example, walls could protrude, recess, or change in color, height or texture to provide visual interest.
 - f. Design building wall planes to have shadow relief, where pop-outs, offsetting planes, overhangs and recessed doorways are used to provide visual interest at the pedestrian level.
 - g. Design rear elevations of buildings to be as well-detailed and visually interesting as the front elevation, if they will be visible from a public right-of-way or accessible public place or street.
 - h. Acknowledge the positive aspects of nearby existing buildings by incorporating compatible features in new developments.

- k. Design roofs to be visually appealing when visible from public vantage points and public rights-of-way.
- **Policy UD-A.6.** Create street frontages with architectural and landscape interest to provide visual appeal to the streetscape and enhance the pedestrian experience.
 - a. Locate buildings on the site so that they reinforce street frontages.
 - b. Relate buildings to existing and planned adjacent uses.
 - c. Ensure that building entries are prominent, visible, and well-located.
 - d. Maintain existing setback patterns, except where community plans call for a change to the existing pattern.
 - e. Minimize the visual impact of garages, parking and parking portals to the pedestrian and street façades.
- **Policy UD-A.8.** Landscape materials and design should enhance structures, create and define public and private spaces, and provide shade, aesthetic appeal, and environmental benefits.
 - a. Maximize the planting of new trees, street trees and other plants for their shading, air quality, and livability benefits.

- e. Landscape materials and design should complement and build upon the existing character of the neighborhood.
- f. Design landscape bordering the pedestrian network with new elements, such as a new plant form or material, at a scale and intervals appropriate to the site. This is not intended to discourage a uniform street tree or landscape theme, but to add interest to the streetscape and enhance the pedestrian experience.

- i. Demarcate public, semi-public/private, and private spaces clearly through the use of landscape, walls, fences, gates, pavement treatment, signs, and other methods to denote boundaries and/or buffers.

- k. Reduce barriers to views or light by selecting appropriate tree types, pruning thick hedges, and large overhanging tree canopies.
- l. Utilize landscape adjacent to natural features to soften the visual appearance of a development and provide a natural buffer between the development and open space areas.
- **Policy UD-A.9.** Incorporate existing and proposed transit stops or stations into project design.
 - a. Provide attractively designed transit stops and stations that are adjacent to active uses, recognizable by the public, and reflect desired neighborhood character.
- **Policy UD-A.10.** Design or retrofit streets to improve walkability, bicycling, and transit integration; to strengthen connectivity; and to enhance community identity. Streets are an important aspect of Urban Design as referenced in the Mobility Element.
- **Policy UD-A.11.** Encourage the use of underground or above-ground parking structures, rather than surface parking lots, to reduce land area devoted to parking.
 - a. Design safe, functional, and aesthetically pleasing parking structures.
 - b. Design structures to be of a height and mass that are compatible with the surrounding area.
 - c. Use building materials, detailing, and landscape that complement the surrounding neighborhood.

- e. Use appropriate screening mechanisms to screen views of parked vehicles from pedestrian areas, and headlights from adjacent buildings.
- f. Pursue development of parking structures that are wrapped on their exterior with other uses to conceal the parking structure and create an active streetscape. Where ground floor commercial is proposed, provide a tall, largely transparent ground floor along pedestrian active streets.
- g. Encourage the use of attendants, gates, natural lighting, or surveillance equipment in parking structures to promote safety and security.
- **Policy UD-A.12.** Reduce the amount and visual impact of surface parking lots.
 - a. Encourage placement of parking along the rear and sides of street-oriented buildings.
 - b. Avoid blank walls facing onto parking lots by promoting treatments that use colors, materials, landscape, selective openings or other means of creating interest. For example, the building should protrude, recess, or change in color, height or texture to reduce blank facades.
 - c. Design clear and attractive pedestrian paseos/pathways and signs that link parking and destinations.
 - d. Locate pedestrian pathways in areas where vehicular access is limited.
 - e. Avoid large areas of uninterrupted parking especially adjacent to community public view sheds.
 - f. Build multiple small parking lots in lieu of one large lot.
- **Policy UD-A.13.** Provide lighting from a variety of sources at appropriate intensities and qualities for safety.
 - a. Provide pedestrian-scaled lighting for pedestrian circulation and visibility.
 - b. Use effective lighting for vehicular traffic while not overwhelming the quality of pedestrian lighting.
 - c. Use lighting to convey a sense of safety while minimizing glare and contrast.
 - d. Use vandal-resistant light fixtures that complement the neighborhood and character.
 - e. Focus lighting to eliminate spill-over so that lighting is directed, and only the intended use is illuminated.

- **Policy UD-A.14.** Design project signage to effectively utilize sign area and complement the character of the structure and setting.
 - a. Architecturally integrate signage into project design.

 - d. Design signs to minimize negative visual impacts.
- **Policy UD-A.16.** Minimize the visual and functional impact of utility systems and equipment on streets, sidewalks, and the public realm.

 - b. Design and locate public and private utility infrastructure, such as phone, cable and communications boxes, transformers, meters, fuel ports, back-flow preventors, ventilation grilles, grease interceptors, irrigation valves, and any similar elements, to be integrated into adjacent development and as inconspicuous as possible. To minimize obstructions, elements in the sidewalk and public right of way should be located in below grade vaults or building recesses that do not encroach on the right of way (to the maximum extent permitted by codes). If located in a landscaped setback, they should be as far from the sidewalk as possible, clustered and integrated into the landscape design, and screened from public view with plant and/or fence-like elements.
 - c. Traffic operational features such as streetlights, traffic signals, control boxes, street signs and similar facilities should be located and consolidated on poles, to minimize clutter, improve safety, and maximize public pedestrian access, especially at intersections and sidewalk ramps. Other street utilities such as storm drains and vaults should be carefully located to afford proper placement of the vertical elements.
- **Policy UD-B.1.** Recognize that the quality of a neighborhood is linked to the overall quality of the built environment. Projects should not be viewed singularly, but viewed as part of the larger neighborhood or community plan area in which they are located for design continuity and compatibility.
 - a. Integrate new construction with the existing fabric and scale of development in surrounding neighborhoods. Taller or denser development is not necessarily inconsistent with older, lower-density neighborhoods but must be designed with sensitivity to existing development. For example, new development should not cast shadows or create wind tunnels that will significantly impact existing development and should not restrict vehicular or pedestrian movements from existing development.
 - b. Design new construction to respect the pedestrian orientation of neighborhoods.
 - c. Provide innovative designs for a variety of housing types to meet the needs of the population.
- **Policy UD-B.4.** Create street frontages with architectural and landscape interest for both pedestrians and neighboring residents.
 - a. Locate buildings on the site so that they reinforce street frontages.
 - b. Relate buildings to existing and planned adjacent uses.
 - c. Provide ground level entries and ensure that building entries are prominent and visible.
 - d. Maintain existing setback patterns, except where community plans call for redevelopment to change the existing pattern.
 - e. Locate transparent features such as porches, stoops, balconies, and windows facing the street to promote a sense of community.

- **Policy UD-B.8.**
 - a. Design attractive recreational facilities, common facilities, and open space that can be easily accessed by everyone in the development it serves.
- **Policy UD-C.7.** Enhance the public streetscape for greater walkability and neighborhood aesthetics.
 - a. Design or redesign buildings to include architecturally interesting elements, pedestrian-friendly entrances, outdoor dining areas, transparent windows, or other means that emphasize human-scaled design features at the ground floor level.
- **Policy UD-D.2.** Assure high quality design of buildings and structures. The design and orientation of buildings within projects affect the pedestrian- and transit-orientation.
 - a. Design buildings to have shadow-relief where pop-outs, offsetting planes, overhangs, and recessed doorways are used to provide visual interest, particularly at the street level.
 - b. Design rooftops and the rear elevations of buildings to be as well detailed and visually interesting as the front elevation, if it will be visible from a public street.
- **Policy UD-D.3.** Assure high-quality design in parking areas, which often provide the first impression and identification of a project to a client, employee, or resident.
 - a. Utilize a combination of trees and shrubs at the edge of parking areas to screen parking lots and structures from the street.
 - b. Distribute landscape areas between the periphery and interior landscaped islands.
 - c. Design landscape to break-up large paved areas.
- **Policy-E.2.**

 - d. Encourage innovative designs that civic and public buildings and landmarks from the surrounding neighborhood as a means of identifying their role as focal points for the community.
- **Policy UD-F.1.**

 - b. Use public art and cultural amenities to improve the design and public infrastructure projects.

Mission Valley Community Plan (2013)

The Mission Valley Community Plan, which serves as a blueprint for the future development of the neighborhood, was adopted by the City Council in 1984; and last amended in 2013. Overall objectives described in the community plan include encouragement of high quality urban development that offer occupational and recreational opportunities for all citizens, conservation of important wetland/riparian habitats balanced with expanded urban development, the provision of public facilities and services that attend to the needs of the community and region, and the provision of guidelines that facilitate urban design that is in keeping with the natural features of the land (City of San Diego 2013a). In regards to multi-use development projects, the following design elements are identified as development guidelines in the community plan:

- Multi-use development projects should include all of the following design elements:
 - People-oriented spaces
 - Compatibility with adjacent development
 - Uninterrupted pedestrian connections

- Encourage activity on a 24-hour basis within a development project by including one or more of the following types of uses in addition to office and retail:
 - Restaurants
 - Theatres
 - Hotels
 - Residences.

The project site is located north of the San Diego River and the following development guidelines related to open space, parks and recreation and urban design are applicable to all development along the river:

- The San Diego River Pathway for pedestrians and bicyclists should be included as part of the design for all development along the river. The San Diego River Pathway location and design to be in accordance with the Mission Valley Planned District Ordinance and be consistent with the meet the San Diego River Park Master Plan Design Guidelines.
- All new structures built adjacent to the River should be design to be in accordance with the Mission Valley Planned District Ordinance and be consistent with the meet the San Diego River Park Master Plan Design Guidelines.
- Develop a continuous pedestrian walkway and bikeway along the river consistent with the San Diego River Park Master Plan Design Guidelines.
- New development located nearby should complement the landmarks, and should be sited so as not to hide them from view. Special development considerations should be established within the landmark view sensitive areas of the Plan.
- Development surrounding the San Diego Stadium should maintain view corridors and landscaped areas to enhance the views into this major civic and architectural landmark.

Mission Valley Community Plan Update (2019)

The Draft Final Mission Valley Community Plan Update was released on May 31, 2019 (City of San Diego 2019). The Draft Final Mission Valley Community Plan Update includes policies for development, including permitted use and development within the River Corridor Area (i.e., the 35-foot setback area on both sides of the mapped 100-year floodway for the San Diego River). Relevant policies pertain to lighting, plant materials, visual openings, building height and massing, and setbacks. In addition, policies pertaining to building façade and entrance, building transparency and reflective, public access and signage are also relevant to the proposed project.

In addition to policies specific to the River Corridor Area, general and site-specific policies are provided for development topics including site planning, land use, resource protection, mobility, parks and recreation, and urban design.

Major transportation, libraries, parks and recreation and fire facilities needed to serve the community are identified in the Mission Valley Public Facilities Financing Plan (PFFP). The PFFP identifies a future park and recreation project, P-3, that consists of an approximate 20-acre community park that is assumed to be located on City-owned land in the vicinity of Qualcomm Stadium (City of San Diego 2013b, p. 55).

Navajo Community Plan

The San Diego City Council adopted the Navajo Community Plan in December 1982 and last amended the plan in June 2015. The Navajo Community Plan area of San Diego is approximately 8,000 acres; located in the eastern portion

of the City of San Diego; and includes the community areas of Allied Gardens, Del Cerro, Grantville, and San Carlos. The Plan's stated overriding objectives for the long-range development are to retain the residential character of the area; provide adequate community services, such as police and fire protection and rubbish collection; establish guidelines for the use of canyons and hillsides; and enhance the environment of the area as a pleasant, livable, walkable community (City of San Diego 2015a).

The Navajo Community Plan outlines a future "Qualcomm Major Park and Recreation Center," planned to include 30 acres within the SDCCU Stadium site, adjacent to the San Diego River. This planned park was outlined in the Navajo Community Plan to serve both the Mission Valley and Navajo communities, with Navajo's portion estimated to use approximately 10 acres of active and passive recreation uses, including sports fields, picnic areas, children's play areas, multipurpose courts, walkways, landscaping, and parking. The Navajo Community Plan also includes a 25,000-square-foot recreation center to serve both the Navajo and Mission Valley communities with an indoor gymnasium, multipurpose courts, multipurpose rooms, a kitchen, and other community-serving facilities (City of San Diego 2015a).

Navajo Public Facilities Financing Plan

The Navajo PFFP (approved in June 2015) identifies public facilities that are anticipated over the next 15 years (from the PFFP approval date) when full community buildout of the Navajo Community Plan area is anticipated, serves to establish a financing strategy for the provision of those facilities, and establishes a Development Impact Fee for new development (City of San Diego 2015b). Two of the facilities, "Qualcomm Major Park" and Navajo/Mission Valley Recreation Center, would be sited in Mission Valley on land in the vicinity of the SDCCU site. The PFFP, the 10-acre "major park" could include typical components of a community park including athletic fields, picnic areas, children's play areas, multipurpose courts and turf areas, walkways and landscaping (City of San Diego 2015b). The 25,000-square-foot recreation center would serve Mission Valley and the Navajo community and total costs would be shared by the communities via a 75% (Mission Valley) to 25% (Navajo) ratio (City of San Diego 2015b).

San Diego River Park Master Plan

The San Diego City Council adopted the San Diego River Park Master Plan on May 20, 2013. The San Diego River Park Master Plan's goal is to provide the vision and guidance to reverse the San Diego River's threatened condition, and restore the symbiotic relationship between the river and surrounding communities. The San Diego River Park Master Plan's vision, principles, recommendations, and implementation strategy provide the City with a strong policy document for the future development along the river. Recommendations are divided into general recommendations for the entire river park area, extending from the City of Julian to the Pacific Ocean, and specific reach recommendations for the six distinct geographic areas of the river (City of San Diego 2013c). The project site is located within the Lower Valley geographic area.

The San Diego River Park Master Plan includes Design Guidelines, consistent with community plans such as the Mission Valley Community Plan, to support development regulations of the City's Land Development Code and community-specific regulations, such as the Mission Valley Planned District Ordinance. These design guidelines apply only to the River Corridor Area, which includes the 100-year floodway and 35 feet on both sides of the floodway, and the River Influence Area, which extends 200 feet beyond the River Corridor Area on both sides of the river. Guidelines as to how the River Corridor Area interfaces with the City's Multi-Habitat Planning Area and wetland buffer overlay are also discussed in the San Diego River Park Master Plan (City of San Diego 2013c).

The visions and principles of the San Diego River Park Master Plan, and the recommendations for achieving these, include the following (City of San Diego 2013c):

- Vision: Reclaim the valley as a common, a synergy of water, wildlife and people
- Principle One: Restore and maintain a healthy river system
 - Recommendation H. Future development projects should incorporate hydrology and water quality considerations in all planning and guidance documents and monitor water quality following implementation of the projects.
- Principle Two: Unify fragmented lands and habitats
 - Recommendation A. Establish appropriate corridors for the river, wildlife and people.
 - Recommendation B. Acquire open lands and/or pursue conservation easements.
 - Recommendation C. Eliminate invasive plant species and reintroduce native species.
 - Recommendation D. Naturalize floodway areas.
 - Recommendation E. Use biological systems to treat all storm water before it enters the river.
 - Recommendation F. Separate pedestrian/wildlife and vehicular river crossings.
 - Recommendation G. Create “Green Gateways”
 - Recommendation H. Establish habitat corridors as secondary gateways at side canyons and tributaries.
- Principle Three: Create a connected continuum, with a sequence of unique places and experiences
 - Recommendation E. Upgrade and link existing parks into San Diego River Park system.
 - Recommendation H. Provide San Diego River Park way-finding signs.
- Principle Four: Reveal the river valley history
- Principle Five: Reorient development toward the river to create value and opportunities for people to embrace the river
- Lower Valley Reach Recommendation I: Consider public recreation, the San Diego River Pathway and a naturalized open space along the river when planning any future use of the City’s property at the Qualcomm Stadium site.

City of San Diego Municipal Code and Land Development Code

The San Diego Municipal Code (SDMC), Chapters 11 through 14, and a portion of Chapter 15, are referred to as the Land Development Code. These chapters contain the City’s planning, zoning, subdivision, and building regulations. The Mission Valley Planned District Ordinance is included as Article 14 of Chapter 15 of the Land Development Code and includes special regulations that apply to all development proposals subject to review under this ordinance. One of the purposes of the Mission Valley Planned District Ordinance is to support implementation of the River Park Master Plan. Section 1514.0302 of the Land Development Code also sets forth regulations to ensure that development along the San Diego River implements the River Park Master Plan and the Mission Valley Community Plan. Additional purposes set forth in Section 1514.0302 are to preserve and enhance the character of the San Diego River valley, to provide for sensitive rehabilitation and redevelopment, and to create the River Pathway. Where there is a conflict between the special regulations outlined in the Mission Valley Planned District Ordinance and those of Section 1514.0302 (San Diego River Park Subdistrict), the provisions of Section 1514.0302 shall apply.

4.1.3 Significance Criteria

Except as provided in PRC 21099 and in accordance with Appendix G of the CEQA Guidelines, the project would result in a potentially significant impact related to aesthetics if it would:

1. Have a substantial adverse effect on a scenic vista;
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state highway;
3. Conflict with applicable zoning and other regulations governing scenic quality; or
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

In the context of question no. 4 identified above, which is from Appendix G of the CEQA Guidelines, the determination of significance as presented in the Lighting Study for light and glare takes into account the following factors:

- The change in ambient nighttime levels as a result of project light sources; and
- The extent to which project lighting would spill off the Property and affect adjacent residential or other sensitive use properties.

Specifically, the Project Construction or Building Lighting would create a significant impact with regard to artificial light or glare if:

- The Project Construction or Building Lighting Trespass Illuminance exceeds 1.4 foot-candles at adjacent residential use zoned or wildlife habitat property lines. For purposes of this report, adjacent wildlife habitat specifically refers to the San Diego River located south of the project site)
- The Project Construction or Building Lighting creates high contrast conditions, greater than 600 cd/m² and greater than 30:1 contrast ratio.

The Project Sign Lighting would create a significant impact with regard to artificial light or glare if:

- The Project Sign Lighting Trespass Illuminance exceeds 1.4 foot-candles at adjacent residential use zoned property lines.
- The Project Sign Lighting creates high contrast conditions greater than 600 cd/m² and contrast ratio greater than 30:1.

PRC 21099 provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." As initially discussed in Section 4.1.2 above, the project site is located within 0.5 miles of two MTS light rail transit stations (i.e., Fenton Parkway Station and Stadium Station) and therefore, the project site is within a transit priority area. Also, the project site is currently developed and is located in an urban area. Therefore, the project is proposed on an infill site. In accordance with PRC Section 21099, the potential aesthetic impacts of the proposed project shall not be considered significant impacts on the environment.

4.1.4 Impacts Analysis

Would the project have a substantial adverse effect on a scenic vista?

PRC Section 21099(d) (1) states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered [to have a] significant impact on the environment.” The proposed project includes campus, residential, mixed-use residential and employment opportunities within the campus village and research park, is located on an infill site, and is within a Transit Priority Area as identified by the City of San Diego (City of San Diego 2019b). As such, any aesthetics impact the proposed project may produce, including effects to existing scenic views or scenic vistas as measured under the Appendix G threshold outlined above, cannot be considered a significant impact on the environment.

The following discussion addresses aesthetics impacts of the project to inform the public and Lead Agency decision-makers of such impacts even though they cannot be considered significant impacts on the environment under CEQA.

As discussed in Section 4.1.1, there are no designated scenic vistas or viewpoints identified in the Mission Valley Community Plan. However, the project site is intermittently visible from I-15, I-8, and I-805 and views from these locations extend to local scenic resources (i.e., hillsides) and more distant scenic features including mountain terrain to the east. Further, Mission Trails Regional Park is located 5 miles east of the project site and publicly accessible scenic vistas in the park include Cowles Mountain and Pyles Peak. Both Cowles Mountain and Pyles Peak are located over 5 miles from the project site. While the existing Stadium and site are visible from the peaks, these features are experienced within the broader context of the City of San Diego and development along I-8 corridor. Due to the broad westward view offered from prominent terrain in Mission Trails Regional Park, neither the existing Stadium nor site are dominant features as viewed from Cowles Mountain and Pyles Peak. However, the proposed project would entail demolition of the existing uses and the phased development of new vertical features to the project site including buildings ranging from 3 to 22 stories.

Construction

During construction, views of the project site would be available from nearby freeways and trails and peaks in Mission Trails Regional Park. While freeways abut and are located near the project site, prominent peaks in the regional park are located over 5 miles from the site. The exposure of I-15, I-8, and I-805 motorists to views of construction activities would be brief as they approach and travel parallel to the project site. Motorists on I-15 would be located closest to the project site (the freeway is located as close as 100 feet and parallels the project site for approximately 0.3 miles) and along with I-8 motorists, would be provided foreground (albeit partially obstructed) views to construction activities. I-805 motorists are located over 0.4 miles from the project site at the San Diego River crossing and at this location, the available eastward view is generally broad and long. Compared to motorists, trail-based recreationists on prominent Mission Valley Regional Park peaks would be provided slightly longer (albeit temporary) views to the project site due to a slower rate of travel. Lastly, the location of the Cowles Mountain trail on the south-facing slope of the landform and the near ridgeline trail to Pyles Peak offers opportunities for trail-based recreationists to reflect and observe the visible landscape.

Implementation of the proposed project would initially be experienced by motorists and trail-based recreationists through the erection of perimeter screening fencing and demolition of existing features including SDCCU Stadium, site landscaping and the various surface parking lots distributed across the project site. While motorists would be provided partial views to the various demolition activities occurring on site, elevated vantage points in Mission Trails Regional Park offer distant yet broader views of the project site and construction activities. Following demolition

and once mobilization and site preparation activities are completed for a particular phase, construction activities would then transition to the establishment of structure/building foundations and retaining walls that would then be followed by the installation of vertical structural elements. Despite the inclusion of a dynamic project site in views available from nearby freeways and mountain peaks, construction of the proposed project would not have a substantial adverse effect on a scenic vista.

Temporary view effects associated with construction of the proposed project would include an influx of construction workers, equipment, and vehicles and related alteration to the existing character of the project site. Alteration of the existing character of the primarily developed Stadium and surface parking lot covered site would result from vegetation removal, demolition and removal of existing uses, grading, the progressive introduction of structure/building and circulation elements and the installation of site landscaping. As viewed from more distant vantage points including I-805 and trails and peaks in Mission Trails Regional Park, construction equipment, activity, and alteration of the site would not result in the obstruction of scenic features in views available to motorists and recreationists. During construction, the hillsides and mesa landforms of the Mission Valley landscape would not be obscured by tall cranes or the structural elements of particularly tall development. Further, both I-805 and peaks and trails within the regional park are setback from the site such that broad and generally wide views of the valley landscape are available. Construction activities would be visible from these locations; however, they would not be visually prominent and would not occupy a particularly large portion of the visible landscape such that substantial view interruption would occur. Therefore, due to distant and the broad views available, impacts to existing scenic views during construction from I-805 and summits and trails in Mission Trails Regional Park would be less than significant.

Existing westward and southward views from I-15 and I-8 near the project site are included on Figure 4.1-3 (see Viewpoints 2 and 4) and Figure 4.1-4 (see Viewpoint 7). As previously stated, I-15 and I-8 are located in close proximity to the project site, and due to the elevation of the freeways in relation to the project site, motorists on these facilities would experience partially obstructed views of construction activities. However, with the exception of demolition of the SDCCU Stadium and the removal of structural concrete elements that would be visible, grading and other site modification activities occurring on the project site would be partially screened from view of I-15 and I-8 motorists. From I-15, the proposed project is partially obscured by the cylindrical tanks of the Kinder Morgan Mission Valley Terminal, the Friars Road and San Diego Mission Road bridges, and the elevated ramps of the I-8 interchange. Relatively clear and unimpeded westward views to the project site are available over a distance of approximately 0.2 miles starting south of the San Diego Mission Road Bridge and continuing to the south. The project site is generally located lower in elevation than the segment of I-8 between I-805 and I-15. Also, due to the presence of interstate adjacent office development and tall trees within the San Diego River corridor, the surface of the project site and all but the upper elements of SDCCU Stadium are obstructed from view of I-8 motorists between I-805 and I-15.

Demolition and removal of SDCCU Stadium (a community plan-designated Cultural Resources Landmark) would be noticeable from I-15 and I-8. In addition, vertical project components including the structural elements of taller development proposed in the residential and hospitality areas of the project site would partially obscure backing hillside and mesa elements from view. Despite the demolition of a community plan designated landmark and partial obstruction of scenic features from the view, a substantial adverse effect on scenic views from I-15 and I-8 would not occur during project construction. As previously stated, the exposure of freeway motorists to the project site and project elements would be brief. Views to the project site would be experienced within the wider context of urban development within the visually modified Mission Valley landscape. Although, construction of a new Stadium in the northwest corner of the site would appear similar to the existing Stadium, higher structural elements of the development would be visible to motorists. Tall project elements may partially block hillsides and mesa features from

view; however, views to these features are pervasive from I-15 and I-8 through Mission Valley. Partial obstruction of these features in specific views would not substantially obfuscate the overall influence of hillsides and mesa elements in the valley landscape as experienced from the freeways. Therefore, impacts to scenic resources in views from I-15 and I-8 during construction of the proposed project would be **less than significant**.

Operation

As previously stated, eleven (11) viewpoints were selected from which to analyze the visual change associated with the proposed project. The locations of selected viewpoints are presented on Figure 4.1-2, Viewpoints. Figures 4.1-8 through 4.1-18 present static images from the selected public viewpoints in the surrounding area where conditions generally offer clear visibility to the project site. Visual simulations are also included on Figures 4.1-8 through 4.1-18 and present 3-D computer simulations of the proposed project as anticipated to be experienced by receptors at these locations.

As demonstrated in the construction impacts analysis provided above, the project site is intermittently visible from I-15, I-8, and I-805 and is noticeable in westward oriented views from trails and peaks in Mission Trails Regional Park including Cowles Mountain and Pyles Peak. The proposed campus office/research and innovation center would be developed with buildings ranging from 3 to 5 stories and due to the lower elevation of the project site in relation to nearby freeways and mountain peaks, would not display scale capable of substantially obstructing or interrupting existing views across the site from these facilities. In addition and as viewed from nearby I-8 and I-805, the new Stadium would display a lower vertical scale than the existing SDCCU Stadium and would result in reduced obstruction of local hillside features in views. See Figures 4.1-14 (Viewpoint 7) and 4.1-16 (Viewpoint 9) which demonstrate a reduced scale for the new Stadium compared to SDCCU Stadium as experienced from particular vantage points on I-8 and I-805. Please note that because architectural details for the majority of the proposed project have yet to be developed, proposed structures are depicted a greyish features. The visual simulations depict the location and approximate bulk and scale of the proposed structures in the context of the existing environment. Due to intervening development on the eastern portion of the project site, the new Stadium would not be readily visible to I-15 motorists.

Proposed residential and hotel development ranging from approximately 20 to 24 stories would occur in the eastern and northeastern portion of the project site. Due to height and the lack of comparably scaled development on the project site under existing conditions, particularly tall hotel and residential development may affect and interrupt views across the site to local hillsides and mesa elements. Regarding scenic vistas, altered views across the project site due to residential and hotel development would be noticeable from I-15 I-8, and I-805. Because view effects are likely to be experienced from nearby freeways as opposed to elevated peaks and trails in Mission Trails Regional Park (tall development 5 miles away on the project site would not obstruct or substantially interrupt available broad and long views), the discussion below pertains to anticipated view effects to motorists on I-15, I-8, and I-805.

Representative views from I-15, I-8, and I-805 near the project site, and visual simulations of the proposed project, are provided at Viewpoints 2, 4, 7, and 9 (see Figures 4.1-9, 4.1-11, 4.1-14, and 4.1-16). While the existing view from southbound I-15 extends beyond the project site to hillsides south of I-8, the available view is short in length and the introduction of taller development on the project site would not substantially screen hillsides from view of interstate motorists (see Viewpoint 2, Figure 4.1-8). Prominent multistory residential and hotel development would be noticeable above the Kinder Morgan tanks in the foreground however, the existing view would not be substantially blocked or shortened by project development. Further, the interruption of the horizon associated with tall, multistory buildings on the project site would not substantially affect the quality of the available southward view. At Viewpoint 4, the introduction of multistory residential buildings and high-rise office structures would block from view the partially visible

hillsides to the south and northwest (see Figure 4.1-11). However, the modified hillsides are minor features in the existing view (parking lots and SDCCU Stadium are visually prominent) and these foreground features would be replaced by a landscaped park and long and tall buildings. Further, the existing view at Viewpoint 4 is generally short and has limited exposure to scenic natural elements. As such, the proposed project would not substantially affect a scenic view from I-15 and impacts would be **less than significant**.

From I-8, the existing northward view to the nearby hillside would be interrupted by the introduction of the proposed Stadium, seven-story clock tower and rectangular campus buildings, and prominent residential and hotel development on the project site (see Viewpoint 7, Figure 4.1-14). However, with the exception of taller residential and hotel development in the northern and eastern portions of the project site, proposed Stadium and campus development would display scale comparable to that of existing office buildings to the west. Tall and rectangular residential and hotel development would be visually prominent from I-8 and would rise above the southern horizon line (see Figure 4.1-14). Despite the introduction of taller development to the project site and screening of hillsides, the backing terrain has been noticeably modified and thinned to provide defensible space for mesa top residential development. Further, prominent project development would not substantially shorten the view or result in substantial blockage of a particular scenic feature(s). Lastly, from I-805 at the San Diego River crossing, redevelopment of the project site would be visible and taller residential and hotel development would rise above the ridgeline of local hills (see Viewpoint 9, Figure 4.1-16). However, the broad nature and length of the available view would not be substantially altered by new structures on the project site. Further, prominent scenic resources including mountain peaks would not be substantially blocked or interrupted by multistory residential and hotel development. As a result, the proposed project would not substantially block, screen, or impede the availability of views to particularly scenic resources available from I-8 or I-805. Impacts would be **less than significant**.

Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state highway?

PRC Section 21099(d) (1) states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” As such, any aesthetics impact the proposed project may produce, including damage to scenic resources within a state highway, as measured under the Appendix G outlined above, cannot be considered a significant impact on the environment.

Construction

As discussed in Section 4.1.1, obstructed views of the project site are available from eastbound I-8, an eligible state scenic highway. Brief durations of view exposure of the site are also available from westbound I-8. During construction of the proposed project, views from I-8 would remain dynamic as mobilization and site preparation activities would transition to establishment of building foundations and retaining walls, and would mobilize throughout different portions of the project site. Temporary visual impacts associated with construction activities would be primarily associated with the influx of construction workers, equipment, and vehicles to the project site and the demolition of the existing SDCCU Stadium. While construction workers, equipment, and vehicles would typically be screened from view of I-8 motorists by intervening development and landscaping, demolition of SDCCU Stadium would be noticeable. As shown in Figure 4.1-14 (Viewpoint 7), concrete work on the south and west elevations of the Stadium is currently visible above the low concrete wall that parallels the westbound lanes of I-8.

As further described in Section 4.4, Cultural Resources, the Stadium also had a profound influence on regional sports culture and civic history, and is an example of Brutalist architecture, and is recommended as eligible for listing as a

California Historical Landmark. As project construction would demolish SDCCU Stadium, the proposed project would substantially damage a scenic resource within an eligible state scenic highway. Mitigation in the form of documentation, interpretive displays, and architectural salvage (see Section 4.4, Cultural Resources, for additional detail) would help reduce these impacts, the demolition of the structure would result in a significant and unavoidable permanent effect on scenic resources (specifically, SDCCU Stadium, a historic structure) within the I-8 viewshed. However, as specified above, aesthetic impacts that the proposed project may produce (including damage to scenic resources within a state highway), cannot be considered a significant impact on the environment under PRC Section 21099 and therefore there would be no impact to scenic resources within a state scenic highway.

Noticeable changes to existing views and visual quality would result from demolition, removal of landscaping, grading activities, and the progressive introduction of rectangular building frames and forms to the project site. As viewed from I-8, non-Stadium related view effects would primarily be associated with the presence of taller construction equipment (i.e., cranes) and the construction of tall hotel and residential development. As the earlier stages of construction progresses, building frames would be introduced at the project site and envelopes would begin to materialize. These construction activities would be visible from eastbound I-8 and visibility would increase as the upper floors of high-rise development advances. Although more limited due to its lower elevation and some ornamental trees, interrupted views of the project site would be available to motorists traveling along westbound I-8. With the exception of parking lot landscaping, no trees or rock outcroppings are located on the project site. Because views from I-8 during construction would be temporary and dynamic, and because campus, residential, hotel, and park development would not result in substantial damage of trees, rock outcroppings, or other scenic resources, these uses would not damage scenic resources along I-8. Impacts would be **less than significant**.

SR-163 from approximately Ash Street in downtown San Diego to I-8 is an eligible state scenic highway. The project site is not visible from this particular segment of the state route. Further, the segment of SR-163 that spans the San Diego River and extends north through Mission Valley is located over 2.4 miles from the project site and is not designated scenic. North of I-8, the project site is blocked from view of motorists on this segment of SR-163 by elevated off-ramps, interstate landscaping, mature trees within the San Diego River corridor, the elevated track of the MTS Trolley Green Line, and a collection of tall office and hotel buildings and associated landscaping. As such, activities including demolition, grading, site preparation and installation of landscaping would not be visible, and **no impact** would occur. The construction of taller hotel and residential buildings may be visible from southbound SR-163 as the state route descends hillsides and enters Mission Valley. However, intervening (and tall) multistory office and hotel development effectively shorten the view and reduce opportunities for longer views that extend to the project site.

Although located approximately 5 miles west of the project site, I-5 is an eligible state scenic highway at the San Diego River crossing near Old Town. At this location, the existing SDCCU Stadium is blocked from view along I-5 by intervening terrain, vegetation, and assorted development. Tall building frames and forms on the project site would similarly be blocked from view. As such, **no impact** would occur to existing eastward views from I-5 during construction of the proposed project.

Operation

A visual simulation of the proposed project following completion of all phases of construction as viewed from eastbound I-8 is included on Figure 4.1-14, Viewpoint 7. Once construction activities on the site have ceased, the proposed project would result in no further impacts to on-site scenic resources. Similar to the existing SDCCU Stadium which is briefly visible from eastbound I-8 above the low concrete wall paralleling the interstate and prior to screening associated with tall eucalyptus trees, the new Stadium, 3- to 5-story campus, office, and research

development, and multistory residential and hotel development would be visible to eastbound I-8 motorists. Due to the presence of clustered office development and interstate-adjacent landscaping (including tall eucalyptus trees), most development on site with the exception of high-rise residential and hotel buildings would be fully to partially blocked from view of westbound motorists.

As viewed on Figure 4.1-14, the scale of proposed development would alter existing views across the project site. Specifically, the regular distribution of multistory development where an existing Stadium and expansive surface parking lots currently exist would result in increased blockage of the hillside terrain located north of the project site. However, due to the scale and bulk of SDCCU Stadium, residential development (including 20+ story high-rise structures) in the eastern portion of the campus would not result in greater blockage of the hillside. Rather, hotel development north of the new Stadium, the Stadium, and campus buildings would block features (i.e., hillsides) that are not currently blocked by on site development. Despite the introduction of buildings of greater scale on the project site and distribution of development, off-site scenic resources would not be substantially affected by Project buildings and features. Visible hillsides have been noticeably modified by thinning and other defensive space practices (the underlying brown and tan of terrain soils is visible and vegetation is noticeably scattered), and the mesa tops are developed with residential uses and high-voltage transmission lines. In addition, the denser and taller development on the project site as envisioned by the SDSU Mission Valley Campus Plan would be consistent with the existing assortment of residential, commercial, and office development theme along the I-8 corridor that includes high-rise glass structures (approximately 30 stories) 0.10 miles south of the project site. Additional high-rise development is located along the corridor between SR-163 and I-805 (between 0.45 and 2 miles from the project site).

Lastly, views of project development from I-8 would be primarily concentrated between SR-163 and I-15 and northward views along this segment of I-8 are typically short, extending less than 0.9 miles away to a visibly modified hillside and silhouetted ridgeline residential and electrical infrastructure development. Due to the established character of the corridor, brief nature of views available to motorists, and limitations of the view of the proposed project, impacts would be **less than significant**.

Would the project conflict with applicable zoning and other regulations governing scenic quality?

As stated above, PRC Section 21099(d) (1) states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” As such, any aesthetics impact the proposed project may produce, including conflicts with applicable zoning and other regulations governing scenic quality as measured under the Appendix G outlined above, cannot be considered a significant impact on the environment.

As the proposed project is located in urbanized San Diego, along the I-8 corridor in Mission Valley at the site of the existing SDCCU Stadium and surrounding parking lots, the relevant threshold of significance pertains to consistency with zoning and other scenic quality regulations governing scenic quality. As such, a general discussion of proposed development on the project site is provided below and is followed by an assessment of consistency with zoning and other local regulations governing scenic quality. Although this threshold specifically references zoning, it is important to note that zoning and local regulations as set forth by the City of San Diego (including those governing scenic quality) are not applicable to the proposed project. As a state agency, the CSU, is not subject to the City of SDMC and policies and guidelines outlined in the City of San Diego General Plan. However, a general statement of consistency pertaining to relevant components of the SDMC and local scenic quality regulations applicable to the site and surrounding community is provided below for disclosure purposes and to inform decision makers and the public.

Development of the proposed project would result in a change in the existing visual appearance of the project site. As proposed, the existing SDCCU Stadium would be demolished and the site would be redeveloped with an SDSU Mission Valley campus, including a multipurpose stadium, parks, playing fields, open space, trails, and other recreation features, facilities for educational, research, entrepreneurial, and technology programs, and multistory campus residential and hotel facilities. Illustrative renderings of site development were prepared for the proposed project to depict the envisioned character of future development on the site. For example, Figure 4.1-19, Conceptual Renderings of Campus Plan, illustrates the proposed campus center that would be developed with buildings ranging from 3 to 5 stories high and largely consisting of large glass facades, tan and beige stucco exteriors, and archways at the ground floor of campus buildings. In addition to the new Stadium and 20- to 24-story hotel and residential towers proposed to the north and east of the campus center, park uses, landscape walkways, and a tall, rectangular clock tower (approximately seven stories high) are depicted in the northward oriented conceptual rendering. Figure 4.1-20, Conceptual Rendering of Campus Plan and Stadium Plan, depicts a hub/plaza centered on a large traffic circle that is surrounded by three- to four-story campus educational, office, and research development and seven-story campus residential buildings featuring ground floor retail. The new Stadium and lighting stanchions are also included in the rendering. Lastly, Figure 4.1-21, Conceptual Rendering of Park and Residential Development, presents an isometric aerial depiction of proposed river park recreational features, open space, water features, and landscaping in the foreground. These uses would be bordered by multistory residential buildings and high-rise residential towers in the eastern portion of the project site.

Zoning and the Municipal Code

The proposed project includes development of the River Park, even though the CSU will not acquire the River Park from the City. As noted above, zoning and local regulations as set forth by the City of San Diego (including those governing scenic quality) are not applicable to the proposed project. As a state agency, the CSU is not subject to the City of SDMC, including the Land Development Code. However, a general statement of consistency pertaining to relevant components of the City's land development code including Chapter 13, Zones is provided for disclosure purposes and to inform decision-makers and the public.

As previously stated in Section 4.1.2, above, the Mission Valley Planned District Ordinance is included as Article 14 of Chapter 15, Planned Districts, of the Land Development Code and includes special regulations that apply to all development proposals subject to review under this ordinance. One of the purposes of the Mission Valley Planned District Ordinance is to support implementation of the San Diego River Park Master Plan. The proposed River Park is being designed to be consistent with applicable regulations of the land development code as well as the San Diego River Park Master Plan and River Influence Area. For example, Section 1514.0302 of the Land Development Code sets forth regulations to ensure that development along the San Diego River implements the River Park Master Plan and the Mission Valley Community Plan. Additional purposes set forth in Section 1514.0302 are to preserve and enhance the character of the San Diego River valley, to provide for sensitive rehabilitation and redevelopment, and to create the River Pathway. As depicted on Figure 2-9D, Concept Design – River Park Plan, the proposed project would implement the River Park Master Plan and enhance the character of the River Valley by activating the river influence area with passive and active recreation uses and natural, context-sensitive landscaping. In addition, public hiking and biking trails are proposed throughout the eastern and south portions of the site including roughly parallel to the San Diego River (see Figure 2-9D). As proposed, the project would include a River Park, which would include a river buffer of native vegetation and features to ensure consistency with water quality standards and Multiple Species Conservation Plan adjacency standards. The River Park would be retained by the City in fee. Through the inclusion of a River Park that has been designed to be consistent with applicable regulations established in Section 1514.0302, the proposed project is consistent with the Land Development Code concerning implementation of the River Park Master Plan.

Consistent with SDMC Chapter 2: Government, Section 22.0908 (Sale of Real Property to SDSU), the proposed project would include a Campus Master Plan Revision to increase the full-time-equivalent students by 15,000 students over time on the SDSU Mission Valley site. The draft update to the Mission Valley Community Plan contemplates the project site being subject to future redevelopment under a Specific Plan or Campus Master Plan. While the proposed project includes the SDSU Mission Valley Campus Master Plan, such a plan for redevelopment of the site is not considered under any adopted plan by the City. The proposed project includes a comprehensive set of Campus Guidelines which meet the content requirements of a specific plan pursuant to Government Code Section 65451, subdivision (a). The Campus Guidelines and Campus Master Plan would, over time, provide for 15,000 full-time-equivalent students in the new campus and would support the CSU/SDSU desire to accommodate demand for higher education. As such, the proposed project would not conflict with the requirements of SDMC Section 22.0908, and **no impact** would occur.

Remaining chapter and sections of the Land Development Code and City Council Ordinances were reviewed and none were determined to be particularly relevant to scenic quality and the proposed River Park.

Other Regulations Governing Scenic Quality

Because SDSU is a component of the CSU, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations, including those governing scenic quality. However, for informational purposes, SDSU has considered these planning documents and the project's site location within, and relationship to, each. A consistency analysis between the proposed project and Section 22.0908 of the SDMC and the San Diego River Park Master Plan is presented in Chapter 4.10, Land Use and Planning. In addition, the Mission Valley Community Plans (existing and proposed) are addressed. As detailed therein, the development as proposed would be consistent with Section 22.0908 of the SDMC (see Table 4.10-2, SDMC Section 22.0908 Consistency Analysis, in Chapter 4.10), the San Diego River Park Master Plan, and the Mission Valley Community Plan (existing and proposed). Therefore, impacts would be **less than significant**.

Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Any aesthetic impacts the proposed project cannot be considered a significant impact on the environment under CEQA and local regulation. CEQA states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” PRC Section 21099(d) (1). As such, any aesthetics impact the proposed project may produce, including new sources of substantial light and glare that would adversely affect day and nighttime views in the area as measured under the Appendix G outlined above, cannot be considered a significant impact on the environment.

Construction

Lighting

The proposed project is anticipated to be developed and built out over approximately 15 years beginning in 2020 and ending in approximately 2035. As further detailed in Section 2.5.7, Construction Activities and Phasing, of this EIR, proposed construction phasing is nonsequential in order to respond to changes in economic/market conditions. Project phasing is described in Section 2.5.7, Figures 2.12A and 2.12B, and Table 2-12 of this EIR.

Construction of the various phases would generally occur during daytime hours and would not typically require nighttime lighting. However, construction of the proposed new Stadium would likely extend to evening hours (a 16 hour construction effort from approximately 6:00 a.m. to 10:00 p.m. is anticipated) in order to meet the targeted opening day timeline of the 2022 college football season. Standard construction night lighting fixtures typically used on large construction sites would operate on the project site during construction. In addition to these sources, nighttime lighting necessary for security purposes may be installed throughout the site and during winter months when hours of daylight are reduced. Therefore, nighttime lighting of the proposed project site and more focused lighting of specific active areas of construction is likely to occur.

Sensitive receptors in the surrounding area potentially affected by nighttime construction lighting and susceptible to diminished nighttime views consist of nearby residents and wildlife associated with the San Diego River. More specifically, residential land uses are located to the west, northwest and north of the project site (as close as 100, 200, and 600 feet from the site, respectively) and as close as approximately 375 feet to the east of the project site (i.e., east of I-15). More distant residential land uses are located atop mesas to the south of the project site and south of I-8. The nearest home to the south of the project site is located approximately 1,875 feet away and approximately 300 feet higher in elevation. The San Diego River is located immediately adjacent to the project site's southern boundary and includes habitat for sensitive wildlife, including least Bell's vireo.

The use of nighttime lighting up to 10:00 p.m. during Stadium construction would generally replicate the operation of event field lighting use and therefore, would not be considered a new source of substantial nighttime lighting in the project area. However, the frequency of nighttime lighting on the project site would be increased and would deviate from existing conditions. As a component of the construction plan, the project contractor would develop a construction lighting plan that would comply with the current CALGreen standards requiring all exterior site lighting to comply with the Backlight Uplight and Glare (BUG) ratings identified in CALGreen Title 24, Part 11, Table 5.106.8 MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS which is included in the Lighting Study (see Appendix 4.1-1). The existing conditions within and surrounding the project site are consistent with the definition of LZ4. As such, the construction lighting plan would demonstrate compliance with the maximum allowable BUG ratings for LZ4. As further described in Section 4.1.2, ratings for Backlight (B0 through B5), Uplight (U0 through U5), and Glare (G0 through G5) are defined in the Illuminating Engineering Society of North America's Technical Memorandum on Luminaire Classification Systems for Outdoor Luminaires (IESNA TM-15-11; see Appendix 4.1-1). For backlight, uplight, and glare, maximum zonal lumen thresholds are established for each applicable rating (i.e., B0 through B5, U0 through U5, and G0 through G5). The plan review will involve confirmation that construction documents, including exterior lighting sources identified in the construction lighting plan, comply with BUG ratings for LZ4. While compliance with applicable BUG Ratings would minimize the potential for light trespass and skyglow during construction, due to the proximity of sensitive receptors to the project site an evaluation of construction light trespass is necessary to determine the potential for construction impacts.

Construction lighting is evaluated in the Lighting Study (see Appendix 4.1-1). The Lighting Study evaluated lighting sources defined and illustrated in a Construction Lighting Concept Plan (see Appendix 4.1-1) that assumed illumination of the Stadium construction site to an average of 10 foot-candles. In total, 7,773,000 lumens were assumed necessary to illuminate the construction site to an average of 10 fc. The Construction Lighting Concept Plan includes 17 light poles, each at 124 feet above grade, surrounding the construction site on all sides. Five additional poles (each at 124 feet above grade) are also located within the project site to provide the necessary illumination during nighttime (i.e., up to 10:00 p.m.) construction of the Stadium. Construction lighting would consist of high-power LED floodlights designed to limit direct view of any light sources from outside the project site boundary.

The construction light trespass analysis evaluates the illuminance (fc) at vertical planes that were located at the property line of sensitive uses in the surrounding area. Vertical planes extend from grade to maximum viewing elevation above grade (500 feet above grade for the proposed Project). Figure 4.1-7, Project Site and Vertical Plane Calculation Locations, identifies the calculation planes and sensitive uses evaluated in the Lighting Study. The results of the light trespass illumination calculations for construction lighting is presented in Table 4.1-4, Construction Light Trespass Illuminance (fc).

Table 4.1-4. Construction Light Trespass Illuminance (fc)

Vertical Plane	Description	Trespass Illuminance			Analysis Threshold: 1.4 fc
		Vertical fc			
		Max	Min	Avg	
VP-E1	East Residential Property Line	0.10	0.00	0.0	Below threshold
VP-E2	Center of I-15 Freeway ROW	0.20	0.00	0.00	Below threshold
VP-S1	South Project Property Line	0.20	0.00	0.02	Below threshold
VP-S2	South Residential Property Line	0.00	0.00	0.00	Below threshold
VP-S3	South Residential Property Line	0.10	0.00	0.00	Below threshold
VP-W1	West Residential Property Line	0.00	0.00	0.00	Below threshold
VP-W2	West Project Property Line	0.00	0.00	0.00	Below threshold
VP-W3	West Project Property Line	0.60	0.10	0.24	Below threshold
VP-N1	North Residential Property Line	0.50	0.00	0.13	Below threshold
VP-N2	North Residential Property Line	0.20	0.00	0.01	Below threshold
VP-N3	North Residential Property Line	0.20	0.00	0.00	Below threshold
VP-N4	North Project Property Line (Center of Friars Road ROW)	0.80	0.00	0.18	Below threshold

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1).

Note: fc = foot-candle.

As shown in Table 4.14 above, the Project Construction Light Trespass illuminance at the vertical planes varies from a minimum of 0.00 fc at multiple locations to a maximum of 0.80 fc at VP-N4. This location (i.e., VP-N4) is located at the north project site boundary and adjacent to Friars Road (see Figure 4.1-7). The calculated maximum trespass illuminance is below the 1.4 fc threshold at all analyzed locations and therefore, light trespass impacts during construction would be **less than significant**.

Based on the analysis presented above, lighting impacts during construction of the Stadium and remaining project elements would be **less than significant**.

Glare

Glare from project construction lighting occurs when the light source is visible against a dark background, such as a dark sky, or when a high brightness source is aimed at a low angle within the field of view. The direct view of any light source is a significant source of glare, or high contrast conditions. As a component of the construction plan, a construction lighting plan will be developed, complying with the current CALGreen standards that require all exterior site lighting to comply with the BUG ratings identified in CALGreen Title 24, Part 11, and Table 5.106.8.

As previously stated, the direct view of the project construction lighting may present a potential for high contrast and glare conditions. However, compliance with the BUG ratings would limit direct view of any light sources within the

project site from surrounding residential properties. For instance, for all the project's exterior lights, Title 24 limits the FVH (Forward Very High angle) and BVH (Backward Very High angle) zonal lumens to 10 to 500 lumens for Zone 4. IESNA defines Zone 4 as "areas of human activity where the vision of human residents and users is adapted to high light levels...lighting is generally considered necessary for safety, security and/or convenience and it is mostly uniform or continuous." Due to the presence of existing parking and field lighting, the project site is considered a Zone 4 area for purposes of this analysis. The zonal lumen limits prevent the use of light fixtures that would contain a light source visible to the surrounding properties. In addition, the requirements are more stringent at distances less than 0.5 mounting heights from the property line (roughly 10 to 20 feet from the property line), where the fixtures would be brightest due to the shortest distance from the adjacent residential properties.

Construction lighting would consist of high-power LED floodlights designed to limit direct view of any light sources from outside the project site boundary. The view angle from the monitoring sites to the highest elevation of the project construction light poles (approximately 124 feet above existing grade) is summarized below in Table 4.1-5, Contrast Ratio: Comparison of Existing and Project Construction Lighting @ 600 cd/m². For the majority of the monitoring site locations, the view to the project site is distant, and the viewing angle to the light source is very low. Therefore, the project design shielding would generally prevent any direct view of the light source. The most sensitive locations for potential glare impacts during construction are those sites close to the project site that are located at an elevation below the height of construction lights. As shown on Figure 4.1-6, these locations include monitoring sites MN1 (located north of Friars Road and northwest of the proposed Stadium site), MW1 (located west of Fenton Parkway and north of the Fenton Parkway Trolley Station), and MS2 and MS3 (both located along the southern property boundary at the edge of the San Diego River.

The maximum construction lighting source brightness is determined by the rated source luminance. For this analysis, the maximum night time construction lighting luminance is 600 cd/m². The measured existing luminance is summarized in Table 4.1-2 in Section 4.1.1 above. Table 4.1-5, Contrast Ratio: Comparison of Existing and Project Construction Lighting @ 600 cd/m², below summarizes the contrast ratio calculated for the maximum construction lighting luminance in comparison to the existing average measured luminance.

Table 4.1-5. Contrast Ratio: Comparison of Existing and Project Construction Lighting @ 600 cd/m²

Monitoring Site	Existing Measured Luminance (cd/m ²)		Project Construction Lighting		Analysis
	Average	Maximum	Construction Lighting Maximum Luminance (cd/m ²)	Contrast Ratio	
				Maximum to Existing Average Luminance	
ME1	613.2	4975	600	1.0	Low Contrast Ratio; No glare impact
ME2	859.3	7611	600	0.7	Low Contrast Ratio; No glare impact
ME3	62.2	417	600	9.6	Low Contrast Ratio; No glare impact
ME4	106.2	1721	600	5.7	Low Contrast Ratio; No glare impact;
MS1	124.7	2258	600	4.8	Low Contrast Ratio; No glare impact
MS2	137.4	1711	600	4.4	Low Contrast Ratio; No glare impact;

Table 4.1-5. Contrast Ratio: Comparison of Existing and Project Construction Lighting @ 600 cd/m²

Monitoring Site	Existing Measured Luminance (cd/m ²)		Project Construction Lighting		Analysis
	Average	Maximum	Construction Lighting Maximum Luminance (cd/m ²)	Contrast Ratio	
				Maximum to Existing Average Luminance	
MS3	371.2	6141	600	1.6	Low Contrast Ratio; No glare impact
MW1	50.6	426	600	11.9	Medium Contrast Ratio; No glare impact
MN1	505.0	8015	600	1.2	Low Contrast Ratio; No glare impact
MN2	185.2	2325	600	3.2	Low Contrast Ratio; No glare impact
MN3	531.6	5665	600	1.1	Low Contrast Ratio; No glare impact
MN4	99.2	2120	600	6.0	Low Contrast Ratio; No glare impact

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1)

Notes: cd/m² = candelas per square meter.

Contrast Ratios above 30:1 are considered high contrast, and may introduce a new source of glare. Contrast Ratios less than or equal to 30:1 are considered medium contrast, and will not introduce a new source of glare. Contrast Ratios less than 10:1 are considered low contrast, and will not introduce a new source of glare.

As shown in Table 4.1-5 above, when existing measured luminance is considered, project construction lighting would generate low to medium contrast ratios at the 12 monitoring sites. Assuming a maximum luminance of 600 cd/m², the calculated contrast ratios indicate that monitoring sites and in general, sensitive receptors in the surrounding area, would not be exposed to significant glare during construction. Therefore, project construction lighting glare impacts would be **less than significant**.

Lastly, the Lighting Study included an analysis specific to the project's potential glare effects on driver's visibility on surrounding area roadways. The glare analysis of the construction lighting during night assumes the simultaneous use of all project construction lighting at the maximum luminance (i.e., 600 cd/m²), and compares the resulting luminance to the most stringent requirements of the California Vehicle Code to determine if the construction lighting would introduce a source of distracting glare to drivers. The most stringent condition identified within the California Vehicle Code Section 21466.5, states: "except that when the minimum measured brightness in the field of view is 10 foot lamberts or less, the measured brightness of the light source in foot lamberts (fL) shall not exceed 500 plus 100 times the angle, in roadway degrees, between the driver's field of view and the light source." Thus, a conservative evaluation, occurs where the construction lighting is visible within the centerline of the driver's field of view, the angle noted above within the field of view is 0, the surrounding surface luminance is less than 10 fL, and therefore the maximum allowable luminance is 500 fL. Therefore, the most conservative condition at night evaluates construction lighting against a threshold for luminance of a maximum 500 fL.

A measured brightness within the driver's field of view of less than 10 fL may occur at night. The construction lighting is evaluated with a maximum luminance of 600 cd/m². Calculating the equivalent construction lighting luminance by converting to English units from metric units: 600 cd/m² equals 174.9 fL. The construction lighting would not exceed 174.9 fL, which is 65% less than the 500 fL maximum, the most conservative limit stipulated by the California Vehicle

Code for conditions where the minimum brightness in the driver's field of view is less than 10 fL construction lighting is designed to not exceed 600 candelas/m² (174.9 fL) luminance. These values are less than the California Vehicle Code standard, including 18% of the maximum allowable luminance identified as the threshold for glare. Therefore, construction lighting would not create a new source of glare and would not substantially affect the visibility of driver's on surrounding roads in the area. Impacts would be less than significant.

Operation

In addition to field lighting that would operate during SDSU football games, bowl and soccer games, and other events (see Table 2-6, Existing and Proposed Event characteristics), all interior and exterior areas of the Stadium and concourse would include an installed lighting system to maintain recommended illumination levels, CSU requirements, and other standards. In addition, illuminated signage, outdoor lighting for streets, building exterior lighting, sports fields, parks, lighting associated with hiking and biking trails and walkways would be introduced to the project site. On trails and walkways located closest to the San Diego River, lights with directional LEDs would be installed. Shields and if needed, other appropriate design features, would be incorporated into the design of trail and walkway lighting to minimize potential light spillover beyond the project site. Due to the inclusion of campus, park, residential, and hospitality uses, full buildout of the project site would substantially increase the number of lighting sources (and potential sources of glare) operating on the site.

Project Building Lighting

For purposes of this analysis, project building lighting includes including new outdoor lighting for streets, building exterior lighting, sports fields, parks, hiking and biking paths/trails, and the proposed new Stadium within the project site. Project sign lighting includes lighting from three identical, double-sided signs (approximately 40 feet wide by 50 feet high) installed on 70 foot high poles or pillars that for purposes of the Lighting Study, were assumed to be installed at the perimeter of the site at the north and east project boundaries. Project sign lighting is analyzed separately from project building lighting. Additional assumptions regarding the Sign Lighting Concept Plan are included in the Lighting Study (see Appendix 4.1-1).

Light trespass is evaluated by calculating illuminance (fc) at the monitoring site locations. The resulting illuminance from the proposed project lighting at full buildout as calculated at Vertical Planes at nearby residential property lines to the east, south, west, and north and along the project site's boundary with the adjacent San Diego River, is presented in Table 4.1-6, Building Light Trespass Illuminance (fc), below.

Table 4.1-6. Building Light Trespass Illuminance (fc)

Vertical Plane	Description	Trespass Illuminance			Analysis Threshold: 1.4 fc
		Vertical fc			
		Max	Min	Avg	
VP-E1	East Residential Property Line	0.30	0.00	0.12	Below threshold
VP-E2	Center of I-15 Freeway ROW	0.50	0.00	0.16	Below threshold
VP-S1	South Project Property Line	1.30	0.00	0.30	Below threshold
VP-S2	South Residential Property Line	0.10	0.00	0.00	Below threshold
VP-S3	South Residential Property Line	0.10	0.00	0.00	Below threshold
VP-W1	West Residential Property Line	0.80	0.00	0.21	Below threshold
VP-W2	West Project Property Line	1.00	0.00	0.31	Below threshold

Table 4.1-6. Building Light Trespass Illuminance (fc)

Vertical Plane	Description	Trespass Illuminance			Analysis Threshold: 1.4 fc
		Vertical fc			
		Max	Min	Avg	
VP-W3	West Project Property Line	1.70	0.10	0.48	Above threshold, commercial use property and therefore, not a significant impact
VP-N1	North Residential Property Line	0.50	0.00	0.18	Below threshold
VP-N2	North Residential Property Line	0.20	0.00	0.08	Below threshold
VP-N3	North Residential Property Line	0.00	0.00	0.00	Below threshold
VP-N4	North Project Property Line (Center of Friars Road ROW)	0.90	0.00	0.17	Below threshold

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1).

Note: fc = foot-candle.

The results of the Lighting Study demonstrate that light trespass associated with the proposed project building lighting sources would generally be below the identified threshold for residential receptors (i.e., 1.4-fc) at the nearest residential properties lines to the east, south, west, and north. As depicted on Figure 4.1-6, these would include VP-E1 (0.30 fc max), VP-N1, VP-N2 and VP-N3 (0.50, 0.20, and 0.00 fc max, respectively), VP-S2 and VP-S3 (0.10 fc max each, respectively), and VP-W1 (0.80 fc max).

The maximum Building Lighting Trespass Illuminance occurs at Vertical Plane VP-W3 at 1.7 fc, which is greater than the 1.4 fc maximum illuminance threshold. However, Vertical Plane VP-W3, which is located at the west project property line, is adjacent to existing commercial use properties. As commercial use properties are not a sensitive (i.e., residential) land use for purposes of this report, exceedance of the 1.4 fc threshold is not applicable and a significant impact would not occur.

The maximum Building Lighting Trespass Illuminance at the south project property line occurs at Vertical Plane VP-S1, at 1.3 fc, which is less than the 1.4 fc maximum illuminance threshold established for adjacent residential zoned property and wildlife habitat in Section 4.1.3. Vertical Plane VP-S1 is located at the south project property line adjacent to the San Diego River. Under existing conditions, there are lighted sports fields lighted parking lots adjacent to this area that generates the high to medium measured luminance noted at monitoring sites MS-2 and MS-3 in Table 4.1-3. The Project Building Lighting Plan includes new recreational athletic fields with sports lighting at similar locations to the existing fields in the southwest corner of the project site. The calculated illuminance at Vertical Plane VP-S1 is similar to the existing measured illuminance at monitoring site MS-3 (i.e., 1.18 fc) and below the 1.4 fc maximum illuminance threshold. The project building lighting would not introduce a new source of light trespass at VP-S1 and lighting levels would be below the established threshold of significance.

As indicated in Table 4.1-6 above, operation of project building lighting would result in light trespass illuminance at analyzed adjacent residential and wildlife habitat areas at levels below the established threshold of 1.4 fc. Therefore, impacts associated with project building lighting trespass would be **less than significant**.

Glare from Project Building Lighting

To evaluate potential glare from project building lighting, the June 2019 Lighting Study (Appendix 4.1-1) conservatively identified a maximum night time Building Lighting Illuminance of 1500 cd/m² which is a conservative luminance value, greater than the maximum visible brightness calculated from the shielded light sources proposed in the Project Building Lighting Plan. In regards to the Stadium, light fixtures would be aimed at various positions within the sports field and few would be aimed at the maximum aiming angle analyzed above. The probability of a direct in line view from the sensitive use residential properties adjacent to the monitoring sites to any of the Stadium light fixtures aimed at the maximum aiming angle is low. However, this worst case, higher luminance condition is evaluated for all monitoring sites to present a conservative analysis.

The calculated building lighting maximum luminance and contrast ratio (i.e., maximum to existing average luminance) is presented in Table 4.1-7, Contrast Ratio: Comparison of Existing Measured to Project Building Lighting @ 1500 cd/m². As indicated in the table, low or medium contrast ratios were calculated at each of the 12 monitoring sites. As stated previously, contrast ratios above 30:1 are considered high contrast, and may introduce a new source of glare. Contrast Ratios less than or equal to 30:1 are considered medium contrast, and will not introduce a new source of glare. Contrast Ratios less than 10:1 are considered low contrast, and will not introduce a new source of glare. The Building Lighting Contrast Ratio does not exceed 30:1 at any of the monitoring sites. Contrast Ratios vary from a minimum of 1.7:1 at monitoring site ME-2 (located within the project site) to a maximum of 29.7:1 at monitoring site MW-1 (located west of the project site and near the Del Rio Apartment Homes).

Table 4.1-7. Contrast Ratio: Comparison of Existing Measured to Project Building Lighting at 1500 cd/m²

Monitoring Site	Existing Measured Luminance (cd/m ²)		Project Building Lighting		
	Average	Maximum	Building Lighting Maximum Luminance (cd/m ²)	Contrast Ratio	Analysis
				Maximum to Existing Average Luminance	
ME1	613.2	4975	1500	2.4	Low Contrast Ratio, No Glare Impact
ME2	859.3	7611	1500	1.7	Low Contrast Ratio, No Glare Impact
ME3	62.2	417	1500	24.1	Medium Contrast Ratio, No Glare Impact
ME4	106.2	1721	1500	14.1	Medium Contrast Ratio, No Glare Impact
MS1	124.7	2258	1500	12.0	Medium Contrast Ratio, No Glare Impact
MS2	137.4	1711	1500	10.9	Medium Contrast Ratio, No Glare Impact
MS3	371.2	6141	1500	4.0	Low Contrast Ratio, No Glare Impact
MW1	50.6	426	1500	29.7	Medium Contrast Ratio, No Glare Impact
MN1	505.0	8015	1500	3.0	Low Contrast Ratio, No Glare Impact

Table 4.1-7. Contrast Ratio: Comparison of Existing Measured to Project Building Lighting at 1500 cd/m²

Monitoring Site	Existing Measured Luminance (cd/m ²)		Project Building Lighting		
	Average	Maximum	Building Lighting Maximum Luminance (cd/m ²)	Contrast Ratio	Analysis
				Maximum to Existing Average Luminance	
MN2	185.2	2325	1500	8.1	Low Contrast Ratio, No Glare Impact
MN3	531.6	5665	1500	2.8	Low Contrast Ratio, No Glare Impact
MN4	99.2	2120	1500	15.1	Medium Contrast Ratio, No Glare Impact

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1).

Note: cd/m² = candela per square meter.

As proposed, the project building lighting will provide more focused lighting, directed down to the project site, and with shields applied to the sports lighting fixtures to reduce luminance. Based on the results presented in Table 4.1-7 for project building lighting, operation of project building lighting would produce low to medium contrast, which indicates that project building lighting would not result in a new source of significant glare.

In addition, the Lighting Study concluded that at night and during sunset and sunrise, glare at sensitive residential or roadway sites in the surrounding area would be less than high contrast conditions assuming a maximum project building lighting luminance of 1500 cd/m². As further described in the June 2019 Lighting Study, calculating the equivalent Building Lighting luminance (1500 cd/m²) by converting to English units from metric units equates to 481.8 footlamberts (fL). The project building lighting would not exceed 481.8 fL (the equivalent maximum luminance in metric units is 1500 cd/m²), which is less than the most conservative limit stipulated by the California Vehicle Code for conditions where the minimum brightness in the driver's field of view is less than 10 fL (i.e., 500 fL maximum allowable luminance). Further, all project building lighting would operate at maximum of 481.8 fL at night, or less than approximately 50% of the maximum allowed by the California Vehicle code for those locations at 15 degrees from the center of the driver's field of view. For project building light fixtures located beyond the driver's 10 degree field of view, the maximum luminance is permitted to increase under the California Vehicle Code. For example, light sources located 15 degrees from the centerline of the driver's field of view would be limited to a maximum of 1,000 fL (500 fL plus 100 times the angle (5 degrees) = 1,000 fL). Therefore, as all project building lighting would operate at maximum of 481.8 fL at night, project building lighting would not exceed the applicable threshold of 1000 fL and would not introduce a new source of glare as defined by the California Vehicle Code Section 21466.5. As such, glare impacts associated with the operation of project building lighting would be **less than significant**.

Project Sign Lighting

As previously stated, the proposed project would include new exterior signage along the perimeter of the site. Specifically, for purposes of this analysis, three identical, double-sided signs (approximately 40 feet wide by 50 feet high) on 70 foot high poles or pillars were assumed to be installed at the perimeter of the site at the north and east project boundaries. The signs would be installed near the existing Friars Road Stadium sign in the northwestern corner of the project site and along the project site frontage of Friars Road near the northeastern corner of the site. Lastly, a third sign would be installed along the eastern project site property line and would be visible from I-15. All signs were

evaluated with a brightness of 600 cd/m² during daily evening nighttime operation and were oriented perpendicular to the adjacent roadways. Existing Stadium signage was assumed to be removed and inoperable in the analysis.

The Light Trespass analysis presented in the June 2019 Lighting Study (see Appendix 4.1-1) evaluates the proposed project sign illuminance (fc) at the vertical plane (VP) of project property lines and residential property lines. The results of the project sign lighting light trespass analysis are presented in Table 4.1-8, Project Sign Lighting Trespass Illuminance (fc), below.

Table 4.1-8. Project Sign Light Trespass Illuminance (fc)

Vertical Plane	Description	Trespass Illuminance			Analysis Threshold: 1.4 fc
		Vertical fc			
		Max	Min	Avg	
VP-E1	East Residential Property Line	0.40	0.00	0.18	Below threshold
VP-E2	Center of I-15 Freeway ROW	1.20	0.00	0.29	Below threshold
VP-S1	South Project Property Line	0.20	0.00	0.03	Below threshold
VP-S2	South Residential Property Line	0.00	0.00	0.00	Below threshold
VP-S3	South Residential Property Line	0.00	0.00	0.00	Below threshold
VP-W1	West Residential Property Line	0.00	0.00	0.00	Below threshold
VP-W2	West Project Property Line	0.00	0.00	0.00	Below threshold
VP-W3	West Project Property Line	0.60	0.00	0.11	Below threshold
VP-N1	North Residential Property Line	1.40	0.00	0.37	Does not exceed threshold
VP-N2	North Residential Property Line	0.10	0.00	0.06	Below threshold
VP-N3	North Residential Property Line	0.20	0.10	0.10	Below threshold
VP-N4	North Project Property Line (Center of Friars Road ROW)	13.80	0.00	0.72	Above threshold, location is a road/not sensitive and therefore, not a significant impact

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1).

Note: fc = foot-candle.

As summarized in Table 4.1-8, Sign Lighting Trespass Illuminance (fc), the proposed project sign light Trespass maximum illuminance at the evaluated Vertical Planes varies from a minimum of 0.00 fc to a maximum of 13.80 fc. The maximum Sign Lighting Trespass Illuminance (13.80 fc) occurs at the project north property line at Vertical Plane VP-N4. While the light trespass illuminance at this location is greater than 1.4 fc, Vertical Plane VP-N4 is located at the center of the Friars Road right-of-way, north of the project site north property line (see Figure 4.1-7). The Friars Road right-of-way is not considered a sensitive use and therefore, exceedance of the 1.4 fc illuminance threshold would not result in a significant light trespass impact.

Vertical plane VP-N1 is located adjacent to the Monte Vista Apartment Homes residential community, which is more distant from the project site than VP-N4. The calculated light trespass illuminance at VP-N1 is 1.40 fc which is substantially lower than at VP-N4 due to the increased distance. The light trespass illuminance at VP-N1 is equal to, but does not exceed 1.4 fc, therefore the project sign lighting is within the established threshold for residential land uses. As noted above, the Lighting Study (see Appendix 4.1-1) evaluated a conservative value for sign luminance (i.e., of 600 cd/m²) and ultimate sign luminance of installed signs may be less than that evaluated.

The light trespass illuminance levels from project sign lighting at all other evaluated locations were calculated to be less than the 1.4 fc maximum illuminance threshold and therefore, impacts associated with Project Sign Light would be **less than significant**.

Glare from Project Sign Lighting

Glare from project sign lighting would occur when the sign is visible against a dark background, such as a dark sky, or when a high brightness source is aimed at a low angle within the field of view. As indicated in the Lighting Study (see Appendix 4.1-1) and above, the maximum night time sign lighting luminance is 600 cd/m². As previously stated, the term which describes the extent of glare at an observer position or monitoring site for a view is referred to as contrast, and is determined by the variation of luminance within the field of view. “High,” “medium,” and “low” contrast are terms used to describe contrast ratios. The contrast ratio calculated for the maximum sign lighting luminance in comparison to the existing average measured luminance (initially presented in Table 4.1-3) is shown in Table 4.1-9, Contrast Ratio: Comparison of Existing Measured Luminance to Project Sign Lighting Luminance at 600 cd/m². Monitoring site locations are depicted on Figure 4.1-6.

Table 4.1-9. Contrast Ratio: Comparison of Existing Measured Luminance to Project Sign Lighting Luminance at 600 cd/m²

Monitoring Site	Existing Measured Luminance (cd/m ²)		Project Sign Lighting		
			Sign Lighting Maximum Luminance (cd/m ²)	Contrast Ratio	Analysis
	Average	Maximum		Maximum to Existing Average Luminance	
ME1	613.2	4975	600	1.0	Low Contrast Ratio, No Glare Impact
ME2	859.3	7611	600	0.7	Low Contrast Ratio, No Glare Impact
ME3	62.2	417	600	9.6	Low Contrast Ratio, No Glare Impact
ME4	106.2	1721	600	5.7	Low Contrast Ratio, No Glare Impact
MS1	124.7	2258	600	4.8	Low Contrast Ratio, No Glare Impact
MS2	137.4	1711	600	4.4	Low Contrast Ratio, No Glare Impact
MS3	371.2	6141	600	1.6	Low Contrast Ratio, No Glare Impact
MW1	50.6	426	600	11.9	Medium Contrast Ratio, No Glare Impact
MN1	505.0	8015	600	1.2	Low Contrast Ratio, No Glare Impact
MN2	185.2	2325	600	3.2	Low Contrast Ratio, No Glare Impact
MN3	531.6	5665	600	1.1	Low Contrast Ratio, No Glare Impact
MN4	99.2	2120	600	6.0	Low Contrast Ratio, No Glare Impact

Source: Francis Krahe & Associates 2019 (see Appendix 4.1-1).

Note: cd/m² = candela per square meter.

As shown in Table 4.1-9, the project sign lighting contrast ratio at all monitoring sites would be less than 30:1. With the exception of monitoring site MW1, low contrast ratios were calculated at the monitoring site locations. At

monitoring site MW1, contrast ratio of 11.9:1 was calculated and indicates medium contrast. A medium contrast ratio also indicates project sign lighting would not introduce a new source of glare at the monitoring site. Therefore, project sign lighting would not create a new source of high contrast or glare at monitoring sites and impacts would be **less than significant**.

In addition, the Lighting Study concluded that at night and during twilight (i.e., 20 minutes before sunrise and sunset), project sign lighting would not introduce a source of distracting glare to local area drivers. As further described in the Lighting Study (see Appendix 4.1-1), the proposed project sign lighting is designed to limit maximum luminance to less than 600 cd/m² (174.9 fL in English units) maximum luminance, from 20 minutes before sunset to 20 minutes after sunrise. Therefore, at 20 minutes before and including sunset and at sunrise and 20 minutes after, the project sign lighting would not exceed the threshold of 500 fL as established by the California Vehicle Code, and would therefore not introduce a new source of glare.

During the day (20 minutes after sunrise until 20 minutes before sunset) sunlight with clear sky conditions or light overcast conditions provides sufficient illuminance to generate surface brightness greater than 10 fL and up to 1200 fL on the least reflective surfaces, such as roadway pavement. Utilizing the value of 10fL as the minimum within the driver's field of view, the maximum allowable brightness would be 1,000 times 10 fL, or 10,000 fL. The Project Signs would not exceed 6,000 cd/m² (1749 fL) during the daytime hours of operation, and would therefore operate at less than 18% of the maximum luminance stipulated by the California Vehicle Code (i.e., 10,000 fL). Therefore, the project sign lighting would not create a new source of glare during day time hours of operation with clear sky or light overcast conditions.

Severe storms, heavy cloud cover, or other atmospheric conditions may occur during the day, which may cause the minimum brightness within the driver's field of view to be less than 10 fL. As proposed, project signs would include an electronic control system to reduce the sign luminance from 6,000 cd/m² (1749 fL) to 600 cd/m² (174.9 fL) maximum when the ambient sun light falls to illuminance values similar to night, less than 100 fc. During the day, when storms, cloud cover, or other low ambient sunlight conditions occur and when the ambient sunlight is less than 100 fc, the project signs would transition from the daytime 6,000 cd/m² (1749 fL) to 600 cd/m² (174.9 fL) maximum. This transition would ensure that the sign luminance remains less than 20% of the maximum stipulated by the California Vehicle Code. Therefore, the proposed project sign lighting would not create a new source of glare during daytime periods with storm or severe overcast weather conditions.

As detailed above, project sign lighting luminance would not exceed applicable thresholds established by the California Vehicle Code. Therefore, project sign lighting would not introduce a source of distracting glare to local area motorists during operation. Impacts would be **less than significant**.

Would the project contribute to a cumulatively considerable impact to aesthetics?

The geographic scope for the cumulative analysis for Aesthetics is the I-8 corridor viewshed through Mission Valley. While the existing SDCCU Stadium and surrounding parking lots have limited visibility from I-8, several high-rise, 20 to 24-story residential and hotel structures are proposed on the project site. The increased density and distribution of development on the project site, combined with high-rise structures, would result in a broader viewshed that would extend east and west along the I-8 corridor.

Scenic Vistas

Scenic vistas considered in the proposed project analysis above consisted of interstates (I-5, I-8, and I-805) and prominent peaks in Mission Trails Regional Park including Cowles Mountain and Pyles Peak.

As outlined above, the proposed project would be visible from I-8 and I-805. Due to intervening terrain and development to the east through Mission Valley, I-5 motorists would not be provided views to new development (including high-rise structures) on the project site. Therefore, the proposed project would not combine with cumulative development that would be visible from I-5 including development associated with the University of San Diego Master Plan (Project #14; Figure 3-1) or linear construction of the North City Pure Water Pipeline Alignment (Phase I) (Project #21; Figure 3-1) to create a cumulative scenic vista impact. Further, the proposed project would not contribute to a cumulatively considerable scenic vista impact on I-5.

At the I-805 crossing of the San Diego River, northbound motorists would be offered views of development of the project site. While cumulative projects are proposed to the east and west of I-805 at the river crossing, these projects would generally be screened from view or of a low-profile and be incapable of substantially interrupt or obstructing the available long views. For example, the San Diego River Discovery Center's 9,950-square-foot interpretive center and other uses (Project #3; Figure 3-1) would be located approximately 0.15 miles west of I-805 at the crossing and the low-profile development and site features would not substantially affect westward views from elevated interstate lanes. Also, the City's proposed Pure Water facility near the project site's western boundary at Fenton Parkway would be viewed in the context of the developed project site and nearby residential and commercial development. The assumed one- to two-story scale of the facility would be considerably shorter than prominent development on the project site and combined with the proposed project, would not contribute to a cumulatively considerable impact. Lastly, the proposed Fenton Parkway Bridge (Project #20; Figure 3-1) would be visible from I-805 at the river crossing and would create a noticeably north-south line across the San Diego River corridor. However, the new horizontal bridge feature would be located in the foreground viewing distance of northbound I-8 motorists and the assumed low-profile structure would not obstruct or interrupt available eastward views. Therefore, when combined with the cumulative projects considered in this analysis that would be visible from I-805 at or near the San Diego River, Project development would not contribute to a cumulatively considerable impact to scenic vistas or views from I-805.

While the majority of cumulative projects considered in this analysis are concentrated near SR-163, several projects are proposed north of I-8 and east of Qualcomm Way (see Figure 3-1). These projects in particular would be viewed alongside development on the project site and would be experienced from the east- and westbound travel lanes of I-8. The Fenton Parkway Bridge (Project #20; Figure 3-1) would likely result in the removal of vegetation from the San Diego River corridor in order to install pylons and construct a bridge platform between Fenton Parkway and Mission City Parkway. While the removal of vegetation (primarily trees) would be visible from I-8, the proposed project would not result in view obstruct or substantial interrupt of the available northward view from the interstate. Assuming trains would travel in the I-15 median, the MTS Purple Line Trolley (Project #25; Figure 3-1) would not contribute substantial scale such that the eastward view from I-8 near the I-15 underpass would be substantially altered. The existing eastward view is currently obstructed by the elevated spans of I-15 and the westbound I-8 ramp via northbound I-15. In addition, available northward and southward views from I-8 are short in length (generally extending for less than 1 mile) and are not particularly scenic. As such, proposed development on the project site including a new Stadium, campus and river park use, and multistory residential and hotel uses, would not contribute to a cumulatively considerable scenic vista impact on existing scenic views from I-8.

As with the proposed project, none of the cumulative projects considered in this analysis would substantially obstruct or noticeably interrupt the available long and broad westward views from prominent peaks in Mission Valley Regional Park. The nearest cumulative project to the peaks, the 58-residential townhome Mission Town Homes (Project #2; Figure 3-1) is situated approximately 5 miles southwest of Cowles Mountain and as of Summer 2019, is currently under construction. The proposed townhomes are situated on lower elevation lands than existing two- to three-story residential development to the north and would display a similar (or less) vertical scale as existing development in the immediate surrounding area. Other nearby cumulative projects including the MTS Purple Line Trolley (Project #25; Figure 3-1) and annual maintenance in Murphy Canyon channel adjacent to the Stadium site (Project #18; Figure 3-1) would not be distinct as viewed from elevated mountain peaks located approximately 5 miles away. Additional development identified on Figure 3-1 is proposed in the urbanized Mission Valley area and would not significantly alter the character of the valley such that existing westward views from Cowles Peak and Pyles Peak would be substantially interrupted or degraded. Therefore, combined with cumulative projects considered in this analysis, the proposed project would not contribute to a cumulative considerable impact on scenic views available from prominent peaks in Mission Trails Regional Park.

Scenic Highways

The nearest state scenic highways to the project site are I-8, SR-163, and I-5. However, as described in the scenic highways discussion above, the proposed project would not be readily or clearly visible from the designated scenic segments of SR-163 or I-5. As such, the analysis below pertains solely to potential cumulative scenic highway impacts from I-8.

Similar to the proposed project, development of cumulative projects would not likely require the removal of or damage to rock outcroppings. In addition, the majority of cumulative projects would not result in the removal of native and natural (i.e., non-landscaping related) trees. Cumulative projects considered in this analysis are generally located on previously or currently developed sites in urbanized Mission Valley. For example, the proposed Riverwalk Commercial Center (Project #12; Figure 3-1) entails the construction of new uses (multifamily residential units, commercial office and hotel) at the site of the Riverwalk Golf Course. While the golf course consists of green space (fairways and greens) and trees, managed golf courses are not typically considered scenic resources in planning documents or scenic resources for purposes of scenic vista assessments. Also, the cluster of cumulative projects north of I-8 and to the east and west of SR-163 (Projects 11, 9, 8, 6, and 5) primarily entail the demolition of existing development and on-site construction of new uses. Construction of the Fenton Parkway Bridge (Project #20; Figure 3-1) would likely entail the removal of trees however, impacts to vegetation would generally be limited to a narrow bridge corridor and would not substantially degrade or otherwise obstruct the scenic qualities of the San Diego River. Lastly, the City's Murphy Canyon Creek MSWSMP and Municipal Waterways Maintenance Plan (Projects # 18 and 23) would entail the management of vegetation and other activities for flood control purposes. However, the facilities included in these plans are subject to regular or periodic maintenance and as such, plant materials are subject to a dynamic cycle of growth-management-regrowth that defines the visual experience of these areas from I-8. Because cumulative projects are not anticipated to result in substantial damage to scenic resources (rock outcroppings and trees) within the I-8 viewshed and because the existing SDCCU Stadium site is developed, the proposed project would not contribute to a cumulatively considerable scenic highway impact associated with damage to rock outcrops and trees.

As described above in the proposed project analysis of impacts to scenic highways, demolition of SDCCU Stadium (a historic structure) would result in a significant and unavoidable permanent effect on scenic resources within the I-8 viewshed. However, under PRC Section 21099, aesthetic impacts that the proposed project may produce (including damage to scenic resources within a state highway), cannot be considered a significant impact on the

environment. Regarding the cumulative analysis, linear development (Fenton Parkway bridge (Project #20) and MTS Purple Line Trolley (Project #25) is unlikely to result in damage to historic buildings because alignments would not impact existing buildings. The majority of cumulative projects are located on developed sites in urbanized Mission Valley. Similar to the proposed project, cumulative projects on developed sites would be required to assess the historical significance of existing development and if determined to be historic, applicants would be required to recommend and identify avoidance, minimization, and/or mitigation measures to address potential impacts to the structure in question. However, damage to multiple historic structures within the viewshed of I-8 associated with development of cumulative projects is not anticipated. Based on review of the California Historical Resources Inventory Database (<http://sandiego.cfwebtools.com/search.cfm>), three addresses were identified in a general search of the Mission Valley Community Plan Area (California Historical Resources Inventory Database 2019). None of the listed addresses (1702 Camino Del Rio North, 500 Hotel Circle North and 10818 San Diego Mission Road) are associated with the addresses of cumulative projects considered in this analysis (see Table 3-1, Cumulative Projects, of this EIR). Therefore, when combined with the impacts of cumulative development proposed along the I-8 corridor and with consideration given to under PRC Section 21099, the proposed project would not contribute to a cumulatively considerable impacts to scenic highways.

Conflicts with Zoning and Other Regulations Governing Scenic Quality

As described above in the project-specific analysis, implementation of the proposed project would be consistent with the vision and principles of the San Diego River Park Master Plan. In addition, through the inclusion of a River Park that has been designed to be consistent with applicable regulations established in Section 1514.0302 of the Land Development Code, the proposed project would be consistent with the Land Development Code concerning implementation of the San Diego River Park Master Plan. Remaining chapters and sections of the Land Development Code and City Council Ordinances were reviewed and none were determined to be particularly relevant to scenic quality and the proposed River Park.

For projects under jurisdiction of City of San Diego, compliance with zoning and other local regulations would be required and assessed during environmental review. Several cumulative projects including Civita (Project #4; Figure 3-1), Town and County Specific Plan (Project #11; Figure 3-1) and the Riverwalk Commercial Center (Project #12; Figure 3-1) require the preparation of Specific Plans. Development associated with these projects will conform to development standards and land use distributions intended to implement the goals and policies of the City's General Plan. High-rise development proposed in the cumulative scenario could potentially conflict with scenic regulations through the introduction of tall and rectangular buildings to the Mission Valley area (and associated effects to existing views). However, the majority of cumulative projects would be subject to design review and other oversight by the City of San Diego and Mission Valley Planning Group. Potential conflicts with established zoning and scenic quality regulations are also assessed during the environmental review process. Also, given the stated intent of the Mission Valley Community Plan to focus on (among other items) infill development in Central Mission Valley and higher density development in Eastern Mission Valley (see Figure 3, Conceptual Changes; City of San Diego 2019a), projects considered in the cumulative scenario are not anticipated to result in substantial conflict with zoning or other regulations governing scenic quality. Therefore, for the reasons described above and because redevelopment of the project site would be accomplished under the direction of development standards, the proposed project would not contribute to a cumulative considerable impact related to conflicts with zoning or other regulations governing scenic quality.

Light and Glare

The majority of projects considered in the cumulative scenario would occur on currently developed sites along the I-8 corridor that currently contains multiple nighttime lighting sources and building materials capable of producing glare. Projects include intensification of development over existing uses (Witt Mission Valley, Project #6; Alexan Fashion Valley, Project #8; Union Tribune Mixed Use, Project #9; Hazard Center Redevelopment, Project #15) that would conceivably result in increased sources of lighting on the sites. However, similar to the proposed project, cumulative projects would be required to assess potential lighting impacts on nearby receptors and identify and recommend measures intended to minimize effects to existing nighttime views. Further, several of the proposed projects include specific plans and development of these sites would follow standards and policies intended to restrict light trespass onto adjacent properties (including areas of sensitive habitat) and opportunities for skyglow. It is assumed that most cumulatively considerable buildings would install hooded and downward directed lighting to limit light trespass and skyglow opportunities. While several projects represent an intensification of use over existing conditions, cumulative development would occur within the urbanized Mission Valley that contains multiple sources of nighttime lighting including local and regional commercial centers, hotels and office developments, streetlights, residential development and parking lots. While the introduction of denser development may result in additional lighting sources in the Mission Valley area, developments would be required to implement measures intended to minimize lighting effects to the extent practicable. Further, where adjacent to the San Diego River, development proposals including the Riverwalk Commercial Center (Project #12, Figure 3-1), San Diego River Park Discovery Center (Project #3) and the Fenton Parkway Bridge (Project #20) would be required to demonstrate compliance with general Multiple Species Conservation Plan Land Use Adjacency Guidelines related to reducing light spillover into sensitive habitat areas. Lastly, all cumulative residential development under the jurisdiction of the City would be required to conform to Section 1410.0401, Light Pollution Reduction of Residential Buildings, which includes standards regarding light pollution reduction. Therefore, when combined with cumulative development in the Mission Valley area, the proposed project would not result in a new substantial source of lighting that would substantially affect existing views in the area.

Similar to the proposed project, the development and redevelopment of sites in the Mission Valley area could entail the introduction of potentially reflective building materials and glare-producing lighting. For example, condominiums and apartment units associated with the Friars Road Residential Mixed Use Project (Project # 17, Figure 3-1) would feature glass windows and lighting fixtures through the project site. However, the existing commercial structures on site contain a similar mix of glass and lighting fixture elements. The 22-story residential tower of the proposed Hazard Center Redevelopment (Project #15, Figure 3-1) and 7-story buildings of the Union Tribune Mixed Use Project (Project #9, Figure 3-1) would feature repeated rows of windows. The widespread use of exposed steel building envelopes is not anticipated. While denser development along the I-8 corridor may entail the use of potentially reflective features and materials, similar materials and features are utilized in existing developments in the Mission Valley area. Further, proposed developments that front the River Corridor Area would be subject to compliance with Mission Valley Community Plan policies regarding building reflectivity. The Draft Final Mission Valley Community Plan for Community Review (City of San Diego 2019a) requires that building facades fronting the River Corridor Area not include materials with a visible light reflectivity factor greater than 10%. Further, the SDMC contains light pollution reduction standards for residential development (see Section 1410.0401) that includes the use of shields and flat lenses in lighting that reduce opportunities for glare. Through compliance with existing regulations and environmental review, glare effects associated with cumulative development considered in the analysis is not anticipated to substantially affect the quality of existing day and nighttime view. Therefore, when combined with cumulative development in the Mission Valley area, the proposed project would not result in a new substantial source of glare that would substantially affect existing views in the area.

4.1.5 Significant Impacts Prior to Mitigation

As described in Section 4.15.4, above, direct impacts to aesthetics would be **less than significant**.

4.1.6 Mitigation Measures

As described in Section 4.1.4, any aesthetic impacts the proposed project cannot be considered a significant impact on the environment under CEQA and local regulation. CEQA states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” PRC Section 21099(d) (1). The proposed project includes campus residential, mixed-use residential and employment opportunities within the campus village and research park, is located on an infill site, and is within a Transit Priority Area as identified by the City of San Diego (City of San Diego 2019c). As such, any aesthetics impact the proposed project may produce as measured under the Appendix G outlined above, cannot be considered a significant impact on the environment. In addition and as demonstrated in Section 4.1.4 above, construction and operation of the project as proposed would not result in significant impacts to existing view, visual quality and character, or substantial conflicts with zoning and other regulations governing scenic quality. Accordingly, no mitigation is needed or required.

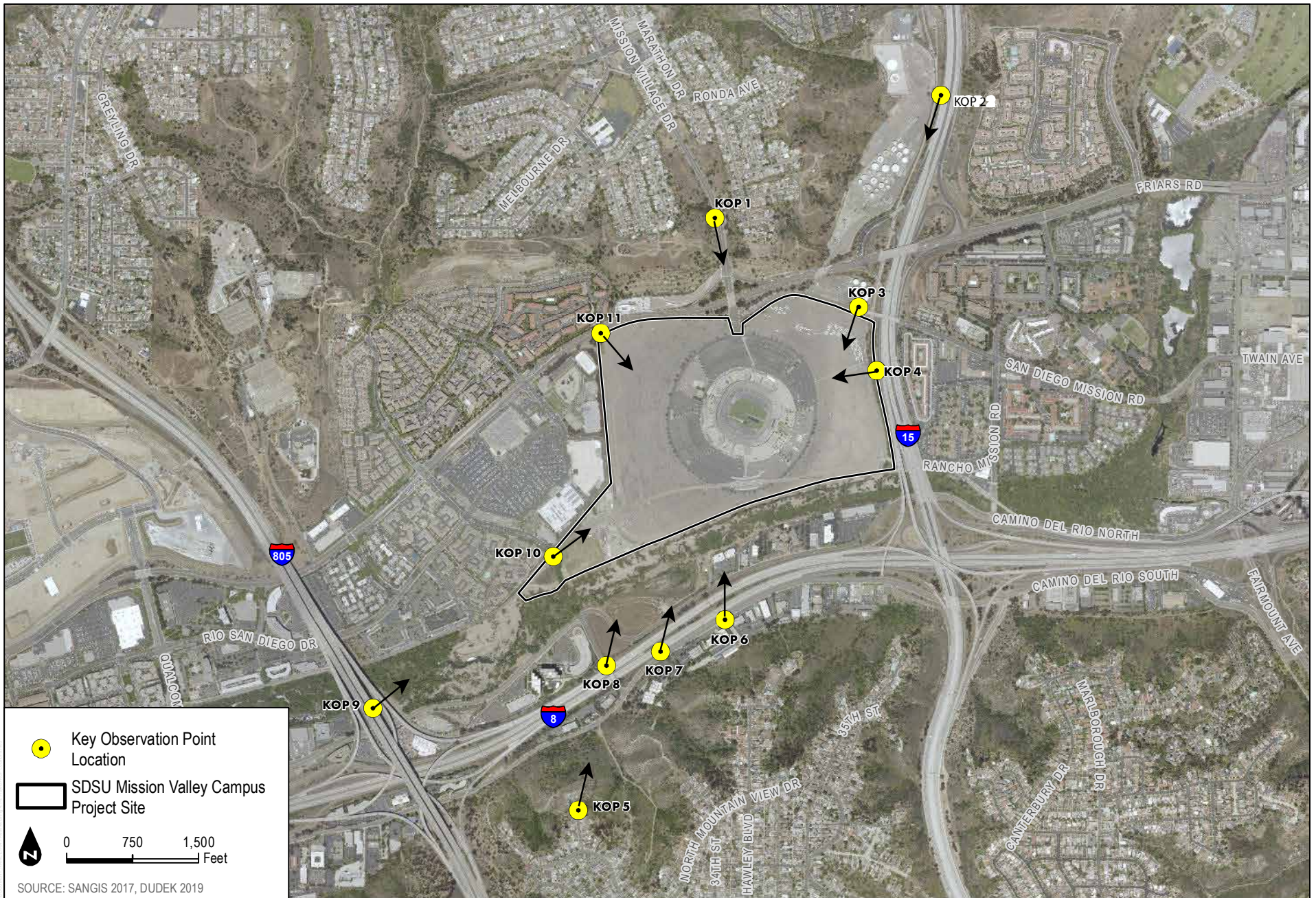
4.1.7 Level of Significance After Mitigation

Impacts related to aesthetics would be **less than significant**.

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Viewpoint 1: View south from Mission Village Drive



Viewpoint 2: View southwest from southbound I-15

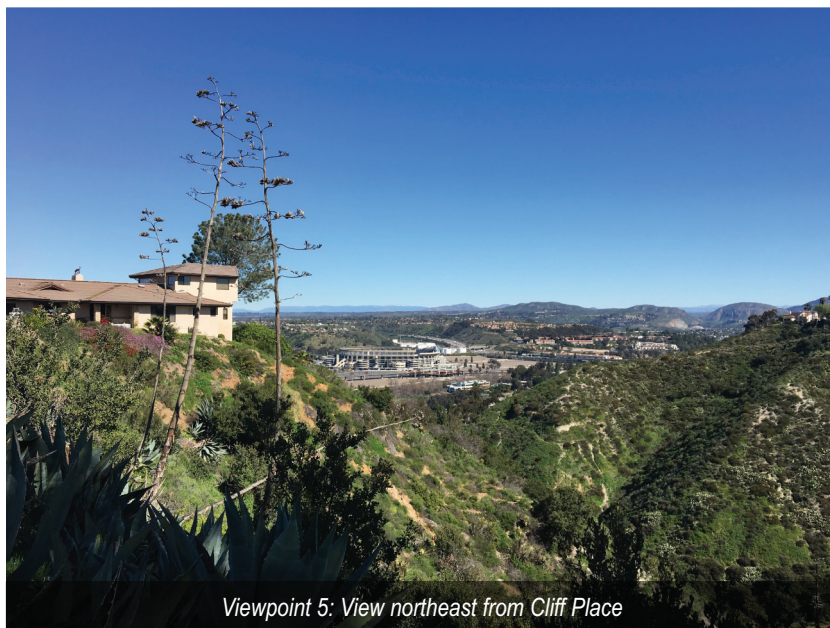


Viewpoint 3: View southwest from San Diego Mission Road



Viewpoint 4: Viewpoint west from southbound I-15 on-ramps

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Viewpoint 9: View east from northbound I-805 at San Diego River



Viewpoint 10: View east from MTS Trolley Fenton Parkway Station



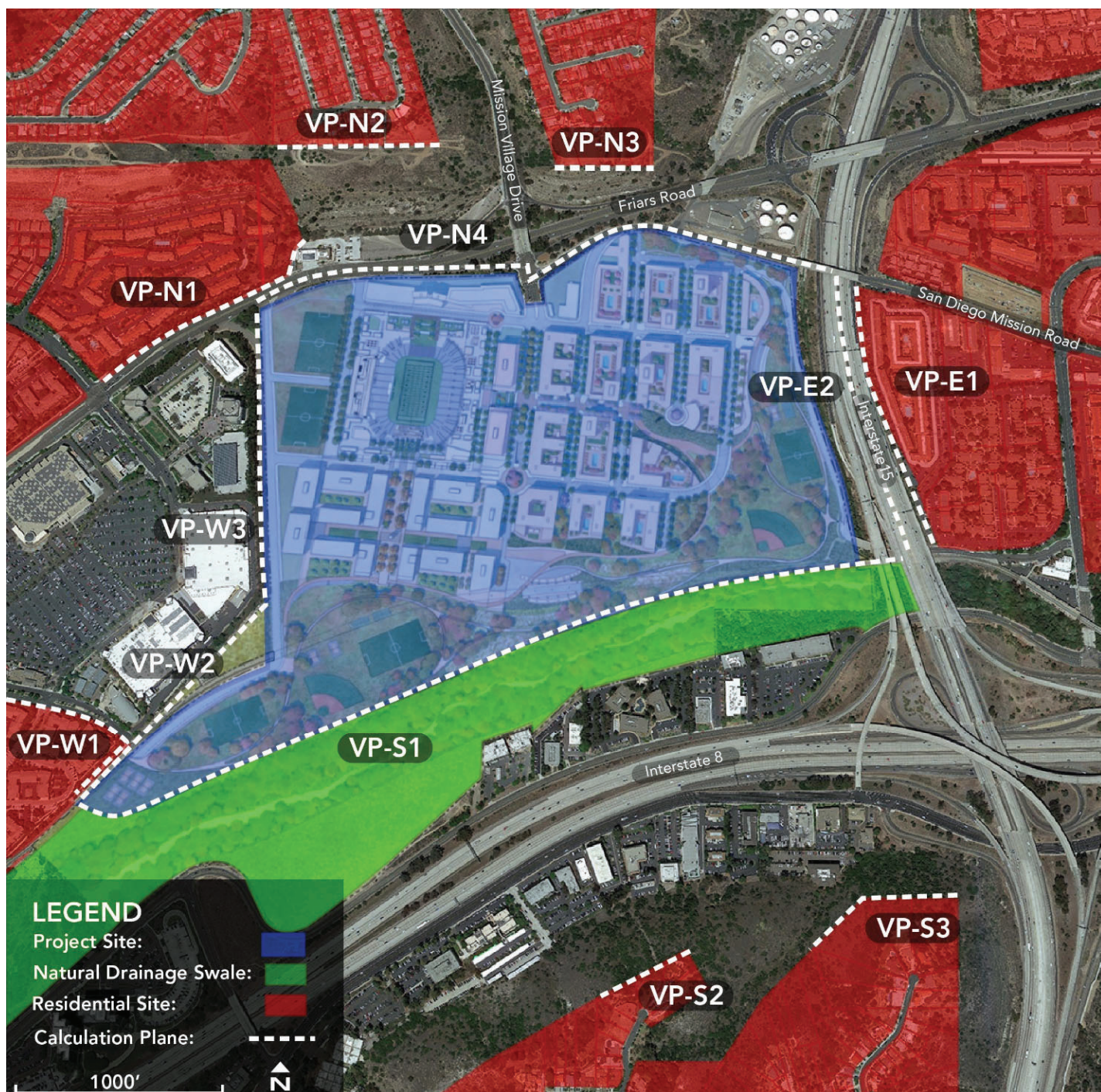
Viewpoint 11: View east from Friars Road

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SOURCE: FRANCIS KRAHE & ASSOCIATES INC. 2019

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SOURCE: FRANCIS KRAHE & ASSOCIATES INC. 2019

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Existing Conditions: Southward View to Project Site from Mission Village Drive (located approximately 0.3 mile away)



Visual Simulation of Project (landscaping shown at 15-20 years growth)

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Existing Conditions: Southwestward View to Project Site from San Diego Mission Road (located approximately 100 feet away)



Visual Simulation of Project (landscaping shown at 5-10 years growth)



Visual Simulation of Project (landscaping shown at 15-20 years growth)

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Existing Conditions: Westward view to Project Site from I-5 On-Ramp (located approximately 100 feet away)



Visual Simulation of Project (landscaping shown at 5-10 years growth)



Visual Simulation of Project (landscaping shown at 15-20 years growth)

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Existing Conditions: Northward view to Project Site from eastbound Camino Del Rio (located approximately 0.2 mile away)



Visual Simulation of Project

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Existing Conditions: Northeastward view to Project Site from eastbound I-8 (located approximately 0.2 mile away)



Visual Simulation of Project

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Existing Conditions: Eastward view to Project Site from northbound I-805 (located approximately 0.4 mile away)



Visual Simulation of Project (landscaping shown at 15-20 years growth)

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Existing Conditions: Eastward view to Project Site from MTS Trolley Fenton Parkway Station



Visual Simulation of Project (landscaping shown at 5-10 years growth)

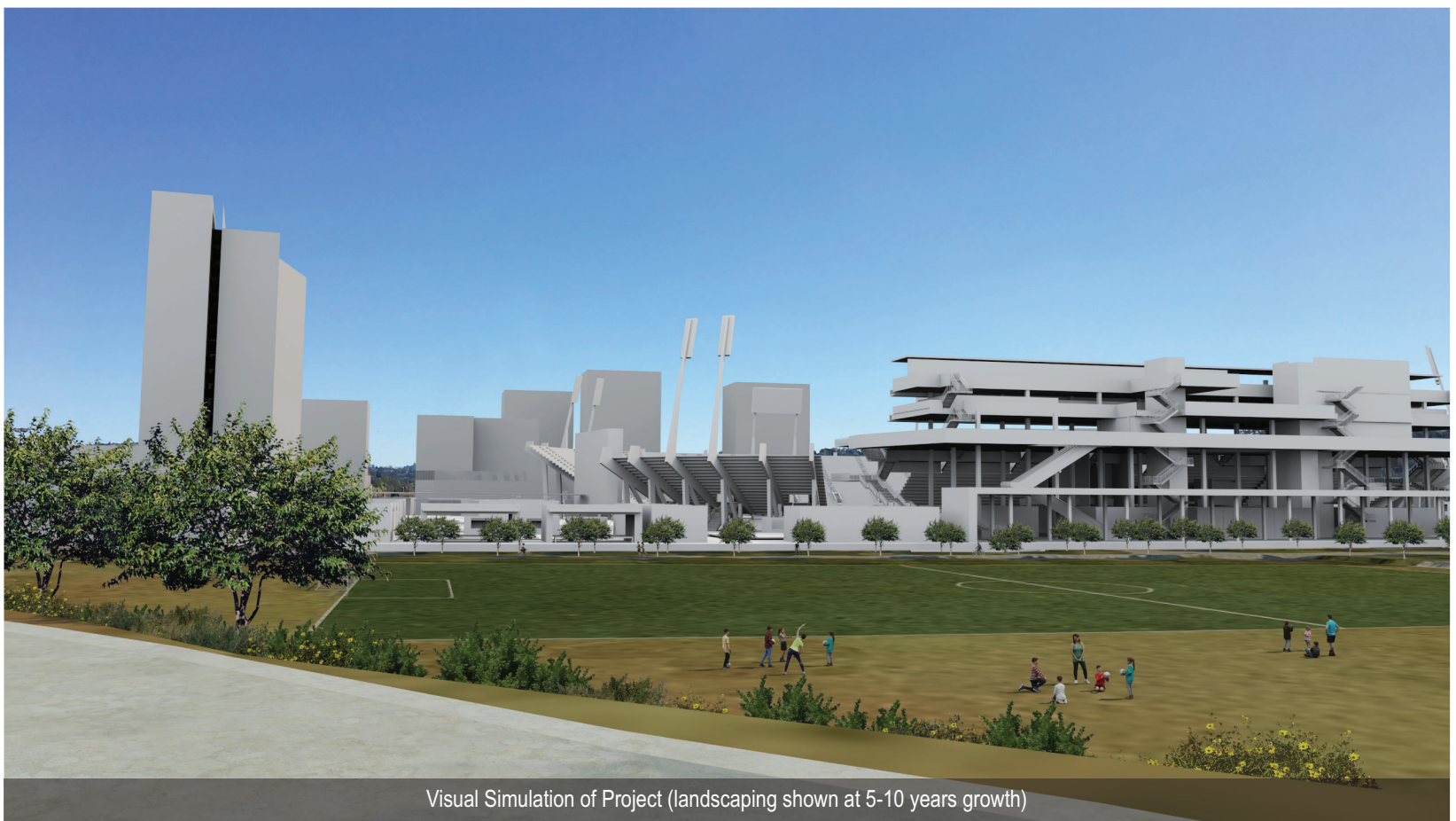


Visual Simulation of Project (landscaping shown at 15-20 years growth)

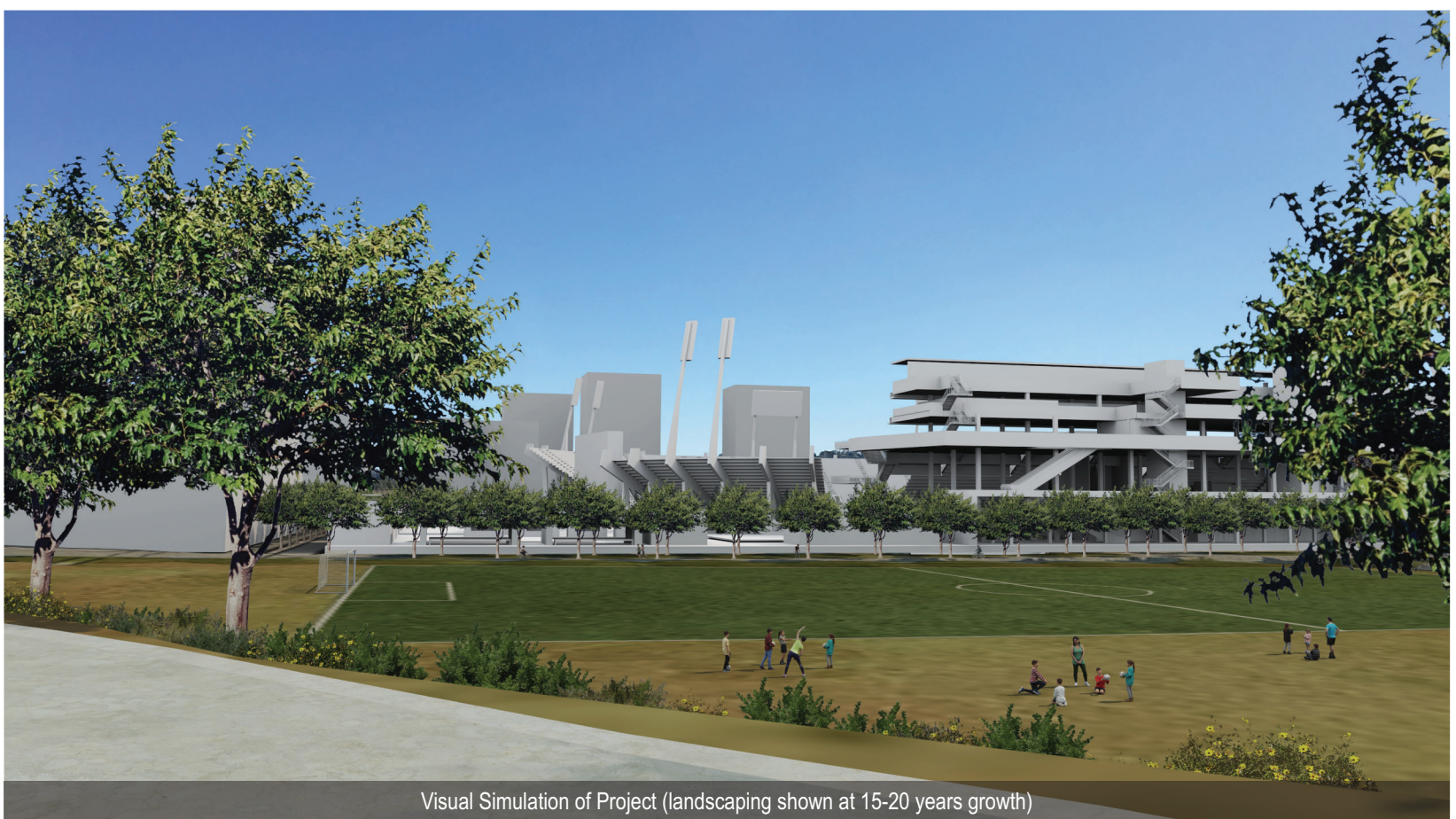
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Existing Conditions: Southeastward view to Project Site from Friars Road (approximately 30 feet)



Visual Simulation of Project (landscaping shown at 5-10 years growth)



Visual Simulation of Project (landscaping shown at 15-20 years growth)

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4.2 Air Quality

This section describes the existing conditions on the project site and in its vicinity related to air quality, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the San Diego State University (SDSU) Mission Valley Master Plan Project (proposed project).

Methods for Analysis

This section summarizes the air quality analysis for the proposed project that was prepared by Ramboll US Corporation (Ramboll) in May 2019. The complete technical report prepared on this subject is included as Appendix 4.2-1 of the environmental impact report (EIR).

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to air quality focused on fugitive dust emissions from construction and demolition activities, and potential criteria air pollutant emissions from combustion of gas in household appliances and traffic. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.2.1 Existing Conditions

Site Conditions

The property comprising the project site includes four existing uses: (1) a multipurpose stadium (San Diego County Credit Union Stadium [SDCCU] Stadium, formerly “Qualcomm Stadium”) with an existing capacity of approximately 71,500 seats for football and other events; (2) an associated surface parking lot with approximately 18,870 parking spaces; (3) the Metropolitan Transit System (MTS) existing Green Line transit station, which provides trolley service running toward downtown San Diego to the west and Santee to the east; and (4) Murphy Canyon Creek. The SDSU main campus is three trolley stops from the existing on-site trolley station.

Climate and Topography

The weather of the San Diego region, as in most of Southern California, is influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average temperature ranges (in degrees Fahrenheit [°F]) from the mid-40s to the high 90s. Most of the region’s precipitation falls from November to April, with infrequent (approximately 10%) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches; the amount increases with elevation as moist air is lifted over the mountains (WRCC 2016).

The topography in the San Diego region varies greatly, from beaches on the west to mountains and desert on the east; along with local meteorology, it influences the dispersal and movement of pollutants in the San Diego Air Basin (SDAB). The mountains to the east prohibit dispersal of pollutants in that direction and help trap them in inversion layers.

The interaction of ocean, land, and the Pacific High-Pressure Zone maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

San Diego Air Basin Climatology

The project area is located within the SDAB. The SDAB is one of 15 air basins that geographically divide the State of California. The SDAB lies in the southwest corner of California and comprises the entire San Diego region, covering 4,260 square miles, and is an area of high air pollution potential. The SDAB experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The SDAB experiences frequent temperature inversions. Subsidence inversions occur during the warmer months as descending air associated with the Pacific High-Pressure Zone meets cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone (O₃), which contributes to the formation of smog. Smog is a combination of smoke and other particulates, O₃, hydrocarbons, oxides of nitrogen (NO_x) and other chemically reactive compounds which, under certain conditions of weather and sunlight, may result in a murky brown haze that causes adverse health effects (CARB 2014).

Light daytime winds, predominately from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_x emissions. CO concentrations are generally higher in the morning and late evening. In the morning, CO levels are elevated due to cold temperatures and the large number of motor vehicles traveling. Higher CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the SDAB are associated with heavy traffic. Nitrogen dioxide (NO₂) levels are also generally higher during fall and winter days.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O₃ concentrations, as measured at air pollutant monitoring stations within the County. The transport of air pollutants from Los Angeles to San Diego has also occurred within the stable layer of the elevated subsidence inversion, where high levels of O₃ are transported.

Local Air Quality Monitoring Data

The San Diego Air Pollution Control District (SDAPCD) operates a network of ambient air monitoring stations throughout San Diego County, which measure ambient concentrations of pollutants and determine whether the ambient air quality meets the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS). The air quality conditions in San Diego County are monitored at 12 locations throughout the County. The Kearny Villa Road monitoring station represents the closest monitoring station to the project site for air pollutant concentration data. In the absence of data at this station, data available for the next closest monitoring station were included. Ambient concentrations of pollutants from 2015 through 2017 are presented in Table 4.2-1.

Table 4.2-1. Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year		
					2015	2016	2017
Ozone (O ₃)							
Kearny Villa Road Station	ppm	Maximum 1-hour concentration	State	0.09	0.077	0.087	0.097
	ppm	Maximum 8-hour concentration	State	0.070	0.070	0.075	0.083
			Federal	0.070	0.070	0.075	0.083
Nitrogen Dioxide (NO ₂)							
Kearny Villa Road Station	ppm	Maximum 1-hour concentration	State	0.18	0.051	0.053	0.054
			Federal	0.100	0.051	0.053	0.054
	ppm	Annual concentration	State	0.030	0.009	0.008	0.009
			Federal	0.053	0.009	0.008	0.009
Carbon Monoxide (CO)							
Beardsley Street Station (2015–2016); El Cajon – First Street Station (2017)	ppm	Maximum 1-hour concentration	State	20	0.0026	0.0022	0.0015
			Federal	35	0.0026	0.0022	0.0015
	ppm	Maximum 8-hour concentration	State	9.0	0.0019	0.0017	0.0014
			Federal	9	0.0019	0.0017	0.0014
Sulfur Dioxide (SO ₂)							
El Cajon – Floyd Smith Drive (2015–2016); El Cajon – First Street Station (2017)	ppm	Maximum 1-hour concentration	Federal	0.075	0.0012	0.0018	0.0011
	ppm	Maximum 24-hour concentration	Federal	0.14	0.0004	0.0005	0.0004
Coarse Particulate Matter (PM ₁₀)							
Kearny Villa Road Station	µg/m ³	Maximum 24-hour concentration	State	50	37.0	35.0	47.0
			Federal	150	37.0	35.0	47.0
	µg/m ³	Annual concentration	State	20	17.0	17.1	17.6
Fine Particulate Matter (PM _{2.5})							
Kearny Villa Road Station	µg/m ³	Maximum 24-hour concentration	Federal	35	25.7	19.4	27.5
	µg/m ³	Annual concentration	State	12	7.2	7.5	7.9
			Federal	12.0	7.2	7.5	7.9

Sources: CARB 2019a; EPA 2019a.

Notes: ppm = parts per million; µg/m³ = micrograms per cubic meter.

¹ Ozone, PM₁₀, PM_{2.5} data obtained from CARB iADAM: Air Quality Data Statistics. Daily exceedances for particulate matter are estimated days because PM₁₀ and PM_{2.5} are not monitored daily.

² SO₂, NO₂, and CO data obtained from EPA AirData.

The number of days exceeding the O₃ ambient air quality standards (AAQS) is shown in Table 4.2-2; no AAQS exceedances for other pollutants were reported during the monitoring period. The state 1-hour O₃ standard was exceeded in 2017, and the state and federal 8-hour O₃ standards were exceeded in 2016 and 2017.

Table 4.2-2. Frequency of Ambient Air Quality Standard Violations

Monitoring Site	Year	Number of Days Exceeding Standard					
		National 24-Hour PM ₁₀	State 24-Hour PM ₁₀	National 24-Hour PM _{2.5}	State 1-Hour O ₃	State 8-Hour O ₃	National 8-Hour O ₃
Kearny Villa Road	2015	0	0	0	0	0	0
	2016	0	ND	0	0	3	3
	2017	0	0	0	2	6	6

Source: CARB 2019a.

Notes: PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; O₃ = ozone; ND = insufficient data available to determine the value.

Air quality within the project region was in compliance with both CAAQS and NAAQS for NO₂, CO, particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), and sulfur dioxide (SO₂) during this monitoring period. The SDAB is currently classified as a federal nonattainment area for O₃ and a state nonattainment area for PM₁₀, PM_{2.5}, and O₃ (SDAPCD n.d.).

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, athletic fields, hospitals, and residential communities; these are referred to as sensitive sites or sensitive land uses (CalEPA and CARB 2005).

The proposed project would be located within approximately 125 feet of Mission Hospice Services of San Diego, Inc., which would be the closest sensitive receptor.

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive people from illness or discomfort. Pollutants of concern include O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and lead. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. These pollutants are discussed in the following paragraphs (EPA 2018; CARB 2019b; CARB 2009).

Ozone

Ozone is a colorless gas that is formed in the atmosphere when volatile organic compounds (VOCs), sometimes referred to as reactive organic gases, and NO_x react in the presence of ultraviolet sunlight. O₃ is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of VOCs and NO_x, the precursors of O₃, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O₃ formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term

exposures (lasting for a few hours) to O₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide

Most NO₂, like O₃, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO₂ are collectively referred to as NO_x and are major contributors to O₃ formation. The primary sources of NO, the precursor to NO₂, include automobile exhaust and industrial sources. High concentrations of NO₂ can cause breathing difficulties and result in a brownish-red cast to the atmosphere, causing reduced visibility. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis, and some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million by volume (ppm).

Carbon Monoxide

CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions, where a layer of warm air sits atop cool air, are more frequent and can trap pollutants close to the ground. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide

SO₂ is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. The main sources of SO₂ are coal and oil used in power plants and industries; as such, the highest levels of SO₂ are generally found near large industrial complexes. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO₂ and limits placed on the sulfur content of fuels. SO₂ is an irritant gas that attacks the throat and lungs, and can cause acute respiratory symptoms and diminished ventilator function in children. SO₂ can also yellow plant leaves and erode iron and steel.

Particulate Matter

Particulate matter (PM) pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM_{2.5} and PM₁₀ represent fractions of particulate matter. Fine particulate matter, or PM_{2.5}, is roughly 1/28 the diameter of a human hair. PM_{2.5} results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and woodstoves. In addition, PM_{2.5} can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs. Inhalable or coarse particulate matter, or PM₁₀, is about one-seventh the thickness of a human hair. Major sources of PM₁₀

include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

PM_{2.5} and PM₁₀ pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM_{2.5} and PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM₁₀ tends to collect in the upper portion of the respiratory system, PM_{2.5} is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead

Lead (Pb) in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline, the manufacturing of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Sulfates

Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO₂ in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride

Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide

Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles

Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reduced airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for PM_{2.5} described above.

Non-Criteria Air Pollutants

Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter

Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. The California Air Resources Board (CARB) classified “particulate emissions from diesel-fueled engines” (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

4.2.2 Relevant Plans, Policies, and Ordinances

Federal

Federal and State Ambient Air Quality Standards for Criteria Air Pollutants

The Federal Clean Air Act requires the adoption of NAAQS, which are periodically updated, to protect the public health and welfare from the effects of air pollution. Current federal standards are set for SO₂, CO, NO₂, O₃, PM₁₀, PM_{2.5}, and Lead (Pb) (CARB 2019c).

The State of California also has established additional standards, known as the CAAQS, which are generally more restrictive than the NAAQS. The current NAAQS and CAAQS are shown in Table 4.2-3.

Table 4.2-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a	National Standards ^b	
		Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}
O ₃	1 hour	0.09 ppm (180 µg/m ³)	—	Same as Primary Standard ^f
	8 hours	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³) ^f	
NO ₂ ^g	1 hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	
CO	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	None
	8 hours	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	
SO ₂ ^h	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m ³)
	24 hours	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas) ^g	—
	Annual	—	0.030 ppm (for certain areas) ^g	—
PM ₁₀ ⁱ	24 hours	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m ³	—	
PM _{2.5} ⁱ	24 hours	—	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	15.0 µg/m ³
Lead ^{j,k}	30-day Average	1.5 µg/m ³	—	—
	Calendar Quarter	—	1.5 µg/m ³ (for certain areas) ^k	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m ³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)	—	—
Vinyl chloride ^l	24 hours	0.01 ppm (26 µg/m ³)	—	—
Sulfates	24- hours	25 µg/m ³	—	—
Visibility-reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016.

Notes: µg/m³ = micrograms per cubic meter; CO = carbon monoxide; mg/m³ = milligrams per cubic meter; NO₂ = nitrogen dioxide; O₃ = ozone; PM₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns; PM_{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns; ppm = parts per million by volume; SO₂ = sulfur dioxide

^a California standards for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, suspended particulate matter (PM₁₀, PM_{2.5}), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

- ^b National standards (other than O₃, NO₂, SO₂, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- ^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25° Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ^d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- ^e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ^f On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- ^g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- ^h On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- ⁱ On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
- ^j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- ^k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Specific geographic areas are classified as either “attainment” or “nonattainment” areas for each pollutant based upon the comparison of measured data with the NAAQS and CAAQS. Those areas designated as “nonattainment” for purposes of NAAQS compliance are required to prepare regional air quality plans, which set forth a strategy for bringing an area into compliance with the standards. These regional air quality plans developed to meet federal requirements are included in an overall program referred to as the State Implementation Plan (SIP). If the SIP is deemed acceptable, the U.S. Environmental Protection Agency (EPA) will delegate responsibility for implementation pursuant to the SIP to the state and/or its air districts therein.

Whenever the EPA revises or establishes a new NAAQS, the state and the EPA have specific obligations to ensure that the NAAQS is met (EPA n.d.). These are listed below:

- The EPA must designate areas as meeting (attainment areas) or not meeting (nonattainment areas) the NAAQS within 2 years after its promulgation.
- States must submit “infrastructure SIPs” to show that they have the basic air quality management program components in place to implement the NAAQS within 3 years after its promulgation.
- States must submit nonattainment area SIPs that outline the strategies and emission control measures that will improve air quality and make the area meet the NAAQS within 18 to 36 months after designation.

The steps involved in the SIP process are described below (EPA n.d.).

- SIPs must be developed with public input and be formally adopted by the state and submitted to the EPA by the Governor’s designee (CARB in California).
- The EPA reviews each SIP and proposes to approve or disapprove all or part it. The public is then provided with an opportunity to comment on the EPA’s proposed action. The EPA considers public input before taking final action on a state’s plan.
- If the EPA approves all or part of a SIP, those control measures are enforceable in federal court. In the event a state fails to submit an approvable SIP or if the EPA disapproves a SIP, the EPA is required to develop a Federal Implementation Plan.

Table 4.2-4 summarizes the attainment status of San Diego County for the pollutants regulated by the NAAQS and CAAQS. As seen in Table 4.2-4, San Diego County is currently in attainment (or unclassified or maintenance) for the federal 1-hour O₃ standard, federal PM_{2.5} standard, the federal and state CO standards, the federal and state NO₂ standards, the federal and state SO₂ standards, the federal and state lead standards, and the state visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride standards. However, as also shown in Table 4.2-4, San Diego County is currently designated as nonattainment for the state 1-hour O₃ standard, the federal and state 8-hour O₃ standards, the state PM₁₀ standards, and the state PM_{2.5} standard (EPA 2019b; CARB 2018; SDAPCD n.d.).

Table 4.2-4. SDAPCD NAAQS and CAAQS Attainment Status

Pollutant	Federal Designation	State Designation
O ₃ (1 hour)	Attainment ^a	Nonattainment
O ₃ (8 hours – 2008)	Nonattainment	Nonattainment
CO	Attainment ^b	Attainment
PM ₁₀	Unclassifiable	Nonattainment
PM _{2.5}	Attainment	Nonattainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Pb	Attainment	Attainment
Sulfates	(no federal standard)	Attainment
Hydrogen sulfide	(no federal standard)	Unclassified
Visibility-reducing particles	(no federal standard)	Unclassified

Sources: EPA 2019b (federal); CARB 2018 (state).

Notes: CO = carbon monoxide; NO₂ = nitrogen dioxide; O₃ = ozone; Pb = lead; PM₁₀ = particulate matter less than 10 microns; PM_{2.5} = particulate matter less than 2.5 microns; SO₂ = sulfur dioxide; Bold text = not in attainment; Attainment = meets the standards; Attainment/Maintenance = achieves the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

^a The federal 1-hour standard of 12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in SIPs.

^b The western and central portions of the SDAB are designated attainment, while the eastern portion is designated unclassifiable/attainment.

Federal Hazardous Air Pollutants Program

The 1977 Clean Air Act Amendments required the EPA to identify National Emissions Standards for Hazardous Air Pollutants to protect the public health and welfare. Hazardous air pollutants include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans

and other mammals. Under the 1990 Clean Air Act Amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

Federal Heavy-Duty Engines and Vehicles Fuel Efficiency Standards

On August 9, 2011, the EPA and the National Highway Traffic Safety Administration announced fuel economy and greenhouse gas (GHG) standards for medium- and heavy-duty trucks. EPA and National Highway Traffic Safety Administration have adopted standards for carbon dioxide (CO₂) emissions and fuel consumption, respectively, tailored to each of three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles.

The implementation of this program was adopted in two phases. Phase 1 was adopted in 2011, which applied to vehicles from model year 2014–2018 (EPA 2011). This phase was intended to reduce fuel use and GHG emissions from medium and heavy-duty vehicles, semi-trucks, pickup trucks and vans, and all work trucks and buses. According to EPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 9% to 23% over the 2010 baselines. Phase 2 was adopted in 2016 for medium- and heavy-duty trucks for model years 2018 and beyond (EPA 2016). This phase was intended to include technology-advancing standards that substantially reduce GHG emissions and fuel consumption resulting in an ambitious, yet achievable, program that will allow manufacturers to meet the applicable standards over time, at reasonable cost, through a mix of different technologies. For semi-trucks, large pickup trucks, vans, and other trucks, phase 2 standards will be phased in beginning with model year 2021 and culminating with model year 2027. While this regulation focuses on the reduction of GHG emissions, it is anticipated that this regulation would also help reduce criteria air pollutants.

The emissions reductions for Phase 1 of this regulation were included in the project emissions inventory; however, the emission reductions from Phase 2 were not included due to difficulty in quantifying the reductions from Phase 2 consistent with other analysis assumptions. Excluding these reductions results in a more conservative (i.e., higher) project emissions inventory.

State

California's Air Toxics Program

The state Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and non-carcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) hazardous air pollutants.

The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not reduce the quantity of air toxics emissions. Instead, under AB 2588, TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The plan is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel)

Engines and Equipment program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There also are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

This section of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

California's Pavley Standards

AB 1493 ("the Pavley Standard" or AB 1493) required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial-passenger vehicles and light-duty trucks of model year 2009 through 2016.

CARB's approach to passenger vehicles (cars and light trucks), under AB 1493, combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. This new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. These standards will apply to all passenger and light-duty trucks used by customers, employees of, and deliveries to the proposed project. While AB 1493 focuses on the reduction of GHG emissions, it is anticipated that this regulation would also help reduce criteria air pollutants.

California's Advanced Clean Cars

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model year 2017 through 2025 (CARB n.d.). The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34% fewer global warming gases and 75% fewer smog-forming emissions. While the Advanced Clean Cars program focuses on the reduction of GHG emissions, it is anticipated that this regulation would also help reduce criteria air pollutants.

California's Diesel Emissions Control Measures

CARB has adopted a number of Airborne Toxic Control Measures (ATCMs) to control diesel particulate emissions and emissions from in-use on- and off-road diesel-fueled vehicles. With the assistance of the Advisory Committee and its subcommittees, CARB developed and approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB 2000) and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines (CARB 2008). Various control measures adopted by CARB to reduce diesel emissions are summarized below.

Airborne Toxic Control Measure: School Bus Idling

This ATCM limits school bus idling and idling at or near schools. School bus, transit bus, and commercial motor vehicle drivers are required to turn off the engine upon arriving at a school, and restart it no more than 30 seconds before departing. School bus drivers also are prohibited from idling more than 5 minutes at locations beyond

schools, such as at school bus stops or school activity destinations 13 CCR 2480). While this ATCM focuses on the reduction of diesel particulate emissions as a toxic, this regulation would also help reduce criteria air pollutants.

Airborne Toxic Control Measure: Diesel-Fueled Commercial Motor Vehicle Idling

This ATCM applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. The measure limits idling of trucks to a maximum of 5 minutes, except when the vehicle is queuing (13 CCR 2485). While this ATCM focuses on the reduction of diesel particulate emissions as a toxic, this regulation would also help reduce criteria air pollutants.

Airborne Toxic Control Measure: Stationary Compression Ignition Engines

This ATCM establishes emission standards and fuel use requirements for new and in-use stationary engines used in prime and emergency back-up applications (non-agricultural) and for new stationary engines used in agricultural applications (17 CCR 93115). While this ATCM focuses on the reduction of diesel particulate emissions as a toxic, this regulation would also help reduce criteria air pollutants.

In-Use Off-Road Diesel-Fueled Fleets

These regulations reduce DPM and NO_x emissions from in-use, off-road heavy-duty diesel vehicles in California. Such vehicles typically are used in construction, mining, and industrial operations. The regulations, among other requirements, impose limits on idling; require all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; restrict the adding of older vehicles into fleets; and, require fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).

The requirements and compliance dates of the regulations vary by fleet size. Large fleets have compliance deadlines each year from 2014 through 2023, medium fleets each year from 2017 through 2023, and small fleets each year from 2019 through 2028 (13 CCR 2449).

In-Use On-Road Diesel-Fueled Fleets

These regulations require diesel trucks and buses to be upgraded to reduce emissions; newer heavier trucks and buses must meet PM filter requirements; lighter and older heavier trucks must be replaced; and, by January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses, and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.

Local

Air pollution often does not conform to city and/or county jurisdictional boundaries, and the state has been divided into air basins based on geographical and meteorological conditions. Air pollution within each air basin is regulated by the regional air pollution control districts/air quality management districts, in a manner that is consistent with and in furtherance of standards adopted by the EPA and CARB. The project site is located within the SDAB and the jurisdictional boundaries of the SDAPCD, and is subject to the guidelines and regulations of the SDAPCD, as explained below.

San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources.

In San Diego County, O₃ and PM are the pollutants of main concern, as exceedances of AAQS for those pollutants are experienced here in most years. For this reason, the SDAB has been designated as a nonattainment area for the federal 8-hour O₃ standard, and the state 1-hour and 8-hour O₃, PM₁₀, and PM_{2.5} standards.

The SDAPCD is responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The Regional Air Quality Strategy (RAQS) was initially adopted in 1991 and is updated on a triennial basis, most recently in 2016 (SDAPCD 2016a). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards (i.e., CAAQS) for O₃. The RAQS relies on information from CARB and the San Diego Association of Governments (SANDAG), including mobile and area source emissions, and information regarding projected growth in the cities and San Diego County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the cities and San Diego County as part of the development of their general plans.

The Eight-Hour Ozone Attainment Plan for San Diego County identifies local controls and state projects designed to bring the region into attainment with the federal 1997 8-hour O₃ standard (i.e., NAAQS) (SDAPCD 2007). In this plan, SDAPCD relies on the RAQS to demonstrate how the region will comply with the federal O₃ standard. The RAQS details how the region will manage and reduce O₃ precursors (NO_x and VOCs) by identifying measures and regulations intended to reduce these contaminants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and the EPA. Incentive projects for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS. According to the Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County, the SDAB was classified as a nonattainment area in 2012 for the 1997 8-hour standard based on data from 2001–2003 (CARB 2012). This plan demonstrates the region's attainment of the 1997 O₃ NAAQS and outlines the plan for maintaining attainment status.

In December 2005, SDAPCD prepared a report titled Measures to Reduce Particulate Matter in San Diego County to address implementation of Senate Bill 656 in San Diego County (Senate Bill 656 required additional controls to reduce ambient concentrations of PM₁₀ and PM_{2.5}) (SDAPCD 2005). In the report, SDAPCD evaluated the implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities including earthmoving, demolition, and grading; bulk material storage and handling; carryout and trackout removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust.

As stated earlier, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD.

Regulation II: Permits

Regulation II (Rules 10-27.1) contains a series of rules covering permitting requirements within the SDAB.

Rule 50: Visible Emissions

Prohibits the discharge, from any single source of emissions, any air contaminant that aggregates for more than three minutes in any period of 60 consecutive minutes, which is darker in shade than that designated as Number 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

Rule 51: Nuisance

Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, and annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).

Rule 55: Fugitive Dust Control

Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009).

Rule 67.0.1: Architectural Coating

Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2016b).

Rule 67.7: Cutback and Emulsified Asphalts

Applies to the application and sale of cutback and emulsified asphalt for paving, construction, or maintenance of parking lots, driveways, streets and highways.

Stationary Source Permitting

The SDAPCD has New Source Review Rules, which include non-major and major stationary sources as well as portable emission units.

Health Risk Assessment Guidelines

The Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments (OEHHA Guidance Manual; OEHHA 2015) is considered the most current and comprehensive set of methodological guidelines in California for conducting HRAs. SDAPCD's Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessment (SDAPCD 2019) add to the OEHHA Guidance Manual by addressing the specific modeling and user default options for the risk evaluation incorporated into the Hot Spots Analysis and Reporting Program (HARP) developed by CARB, OEHHA, and the California Air Pollution Control Officers Association. Further, SDAPCD's Rule 1210 (Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction), which applies to stationary sources, establishes public notification thresholds for incremental cancer and non-cancer health impacts. As stated in the SDAPCD's Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments (SDAPCD 2019), the SDAPCD has established public health risk notification requirements

under Rule 1210, which include a maximum incremental cancer risk of 10 in a million or greater, cancer burden of equal to or greater than 1.0, and incremental chronic/acute hazards indices of 1.0 or greater (SDAPCD 2018a). This guidance establishes procedures for evaluating health risks.

City of San Diego Municipal Code

As a state agency, California State University (CSU)/ SDSU is not subject to local land use regulatory/planning documents, ordinances, regulations, policies, rules, fees, or exactions. However, CSU is willing to purchase the project site pursuant to the framework set forth in San Diego Municipal Code Section 22.0908 to implement the overriding purpose of the proposed project. In addition, CSU will evaluate the proposed project's consistency with adopted, applicable state and federal regulatory/planning documents; and, though not required by law, CSU also will consider the proposed project's consistency with adopted, applicable local regulatory/planning documents.

With that introduction, the San Diego Municipal Code addresses air quality and odor impacts at Chapter 14, Article 2, Division 7 paragraph 142.0710, "Air Contaminant Regulations," which states: "Air contaminants including smoke, charred paper, dust, soot, grime, carbon, noxious acids, toxic fumes, gases, odors, and particulate matter, or any emissions that endanger human health, cause damage to vegetation or property, or cause soiling shall not be permitted to emanate beyond the boundaries of the premises upon which the use emitting the contaminants is located."

City of San Diego General Plan

Table CE-1, Issues Related to Climate Change Addressed in the General Plan, which is located in the Conservation Element of the City of San Diego's (City's) General Plan (City of San Diego 2008), identifies multiple City policies that seek to improve local air quality. Concepts identified in Table CE-1 of the City's General Plan include, but are not limited to, its overall City of Villages Strategy; creating walkable communities that utilize transit, bicycling, and transportation demand management; the use of sustainable energy resources; and water resource and waste management.

Mission Valley Community Plan

The Mission Valley Community Plan is intended to be a blueprint for future development in Mission Valley, where the proposed project is located. The Draft Final Mission Valley Community Plan Update was released on May 31, 2019 (City of San Diego 2019a). The Mission Valley Community Plan Update contains Design Guidelines and Policies for Development to implement the City's Climate Action Plan, maximize transit ridership, and increase mobility options, among others.

4.2.3 Significance Criteria

California Environmental Quality Act Guidelines

The significance criteria used to evaluate the project impacts related to criteria air pollutant emissions are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to criteria air pollutant emissions would occur if the project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

An evaluation of the proposed project based on the significance thresholds discussed below is provided in subsequent sections.

San Diego County Air Pollution Control District Thresholds

As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of Air Quality Impact Assessments for permitted stationary sources (SDAPCD 2018b). The SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality (Table 4.2-5). While Rule 20.2 is specifically related to New Source Review for Non-Major Stationary Sources as part of the SDAPCD permitting process, and this project does not require such permits, the SDAPCD has not provided specific criteria for determining significance of mixed-use developments, such as the proposed project.

Table 4.2-5. SDAPCD Air Quality Significance Thresholds

Pollutant	Total Emissions (Pounds per Day)
Volatile Organic Compounds (VOC)	137 ^a
Oxides of Nitrogen (NO _x)	250
Carbon Monoxide (CO)	550
Oxides of Sulfur (SO _x)	250
Respirable Particulate Matter (PM ₁₀)	100
Fine Particulate Matter (PM _{2.5})	67

Sources: City of San Diego 2016; SDAPCD 2018b.

Note:

- ^a VOC threshold based on the significance thresholds recommended by the Monterey Bay Unified Air Pollution Control District for the North Central Coast Air Basin, which has similar federal and state attainment status as the SDAB for O₃.

In the absence of criteria specific to mixed-use developments, the SDAPCD thresholds represent screening-level thresholds that can be used to evaluate whether project-related emissions would cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact.

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person (SDAPCD 1976). A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

City of San Diego Significance Determination Thresholds

The City has adopted Significance Determination Thresholds to assist in determining whether, based on substantial evidence, a project may have a significant effect on the environment under CEQA (City of San Diego 2016). The

City's thresholds were adopted in 2016 and were consistent with the thresholds contained in Appendix G of CEQA Guidelines at that time, with the addition of the following threshold:

- Release substantial quantities of air contaminants beyond the boundaries of the premises upon which the stationary source emitting the contaminants is located.¹

These thresholds will be addressed through evaluation of the Appendix G criteria summarized above. It is noted that, as a state agency, CSU/SDSU is not subject to local land use regulatory/planning documents, ordinances, regulations, policies, rules, fees, or exactions. However, CSU is willing to purchase the project site pursuant to the framework set forth in Section 22.0908 to implement the overriding purpose of the proposed project. In addition, CSU will evaluate the proposed project's consistency with adopted, applicable state and federal regulatory/planning documents; and though not required by law, CSU also will consider the proposed project's consistency with adopted, applicable local regulatory/planning documents.

Project Approach to Significance

Relative to threshold 1, this analysis evaluates the proposed project for consistency with applicable plans related to emissions, including the RAQS. Relative to threshold 2, this analysis quantifies the project emissions during construction and operations and compares those results to the applicable SDAPCD thresholds. Relative to threshold 3, this analysis assesses the potential health risk impacts to sensitive receptors, including a construction-related HRA and CO hotspots analysis. The construction HRA evaluates the health risk impacts of construction-related activities as compared to the applicable public health risk notification requirements under Rule 1210 (SDAPCD 2018a). The CO hotspots analysis evaluated ambient air quality concentrations at receptors in the vicinity of impacted traffic intersections to the applicable state and federal AAQS. In addition, relative to threshold 3, this analysis evaluates potential siting concerns for the proposed project's residential buildings due to the proximity of the Kinder Morgan Mission Valley Terminal (MV Terminal) and proximity to nearby freeways (i.e., Interstate [I] 15 and I-8) and associated vehicle-generated DPM emissions. Lastly, relative to threshold 4, this analysis evaluates the potential for odor-generating activities from the proposed project, as well as the potential exposure to valley fever for sensitive receptors.

4.2.4 Impacts Analysis

Would the project conflict with or obstruct implementation of the applicable air quality plan?

As discussed in Section 4.2.2, the SDAPCD's air quality plans rely on information from CARB and SANDAG to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the cities and San Diego County as part of the development of their general plans. As such, projects that involve development that is consistent with the growth anticipated by the general plan(s) would be consistent with the growth projections of the SIP because associated emissions of criteria pollutants in a designated nonattainment area would be accounted for in these air quality plans. If a project involves development

¹ See San Diego Municipal Code, Chapter 14, Article 2, Division 7, — Off-Site Development Impact Regulations paragraph 142.0710 — Air Contaminant Regulations, which states: "Air contaminants including smoke, charred paper, dust, soot, grime, carbon, noxious acids, toxic fumes, gases, odors, and particulate matter, or any emissions that endanger human health, cause damage to vegetation or property, or cause soiling shall not be permitted to emanate beyond the boundaries of the premises upon which the use emitting the contaminants is located" (Added December 9, 1997 by O-18451 N.S.; effective January 1, 2000).

that is greater than anticipated in SANDAG’s growth projections, the proposed project would be in conflict with the RAQS and SIP, and could potentially result in a significant air quality impact.

At the individual level, the proposed project is within the growth projections developed by SANDAG for the Mission Valley area. However, at the cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects, would exceed the growth anticipated in the Mission Valley area by SANDAG projections. (For additional information on this point, please see Section 4.13, Population and Housing, of this EIR.) Therefore, the proposed project—in combination with other projects considered in the cumulative setting—could result in a significant and unavoidable impact associated with implementation of the SDAPCD’s regional air quality plans.

Recognizing this same discrepancy between anticipated Mission Valley development trends and SANDAG’s growth projections for the area, the City’s Final Program EIR (SCH No. 2017014066) for the Mission Valley Community Plan Update includes a mitigation measure, MM-AQ-1, which requires that, “Within six months of the certification of the Final Program EIR, the City shall provide a revised land use map for the CPU [Community Plan Update] area to SANDAG to ensure that any revisions to the population and employment projections used by the SDAPCD in updating the RAQS and the SIP will accurately reflect anticipated growth due to the proposed CPU” (City of San Diego 2019b). While this mitigation measure is not within the discretion of CSU, should the City implement MM-AQ-1, impacts as a result of the proposed project would be reduced to less than significant because the type and mix of land uses identified for the proposed project that is the subject of this technical report are within the development parameters of the City’s Final Program EIR. (See, e.g., Section 4.14, Population and Housing, specifically Table 4.14-8, of this EIR.)

Therefore, the proposed project’s EIR also should be accompanied by a similar mitigation commitment, as set forth in Section 4.2.6 below. Because CSU/SDSU cannot require SANDAG to update its growth projections and does not have jurisdictional control over the regional air quality plans prepared by SDAPCD, this impact is considered **potentially significant (Impact AQ-1)**.

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

As discussed above, the project region is a designated nonattainment area for O₃ and particulate matter (PM₁₀ and PM_{2.5}).

The project design includes a number of project design features (PDFs) that are intended to move the proposed project “beyond code.” Many of these PDFs are consistent with the City of San Diego Climate Action Plan and its implementing Climate Action Plan Consistency Checklist, as well as the City’s Draft Final Mission Valley Community Plan Update.

Project Design Features with Quantified Reductions

A subset of the PDFs has been quantitatively accounted for in this analysis. The two PDFs that have been quantified for purposes of this analysis are the Transportation Demand Management (TDM) Program and residential hearths.

Transportation Demand Management Program

The proposed project’s TDM Program incentivizes alternative transportation besides single-occupant commuter trips. Strategies contained in the TDM Program for the campus office, residential, and retail uses relate to:

- Land Use Diversity
- Neighborhood Site Enhancement

- Parking Policy and Pricing
- Commute Trip Reduction Services

The TDM Program’s strategies for non-stadium land uses are expected to reduce vehicle miles traveled by 14.41%. Details of the reductions are included in Fehr & Peer’s Transportation Impact Analysis (2019) for the proposed project, provided in Appendix 4.15-1 of this EIR.

Residential Hearths

The proposed project is incorporating a limited number of natural gas fireplaces, and no wood-burning fireplaces, within project residences. Of all residential units in the proposed project, up to 5% of the units may include a natural gas fireplace.

Project Design Features with Unquantified Reductions but Expected Benefits

Solar Photovoltaic Panels

The proposed project is incorporating solar photovoltaic (PV) panels on available roof space; these panels are estimated to have a total generation capacity equivalent to 10,819,478 kilowatt-hour (kWh) of electricity, or 14.9% of the proposed project’s total project electricity demand.

Electric Vehicle-Ready Parking and Electric Vehicle Chargers

The proposed project is equipping 3% of total residential parking spaces and 6% of total nonresidential parking spaces with appropriate electric supply equipment to allow for the future installation of electric vehicle (EV) chargers (i.e., “EV ready”). Of these EV ready spaces, 50% will be equipped with EV charging stations. Based on these parameters, in total, approximately 500 parking spaces on the project site will be designated as “EV ready,” and 252 of the “EV ready” spaces will be equipped with operable EV charging stations.

Other PDFs with air quality reduction co-benefits that have not been quantified and only are considered qualitatively include the following:

- The layout of the proposed project’s development areas has been designed to maximize the unique infill opportunity presented at this Mission Valley location. This includes benefits from the existing MTS Green Line transit station that runs through the proposed project, as well as the planned Purple Line transit station.
- The development locates buildings in close proximity one another, which would facilitate the use of common heating/cooling sources, where feasible, as project-level development proceeds. (The use of common heating/cooling sources will be evaluated as the building plans for individual development parcels are developed; relevant factors that will influence the use of such sources include the temporal proximity of development, type of use, and market forces.)
- Project development areas would maximize natural ventilation.
- The proposed project would include adaptive lighting controls, where appropriate and feasible, in order to maximize energy efficiency and minimize light pollution.
- The proposed project would achieve Leadership in Energy and Environmental Design (LEED) Version 4 at a Silver or better certification level, as well as a Neighborhood Development designation for sitewide design.

LEED certification is based on standards that encourage the development of energy-efficient and sustainable buildings.

- Events at the proposed project's multipurpose Stadium would benefit from the implementation of TDM Program strategies specifically developed for application to Stadium-related events. These strategies focus on the use of alternative modes of transportation, including transit, to reduce single-occupancy vehicle usage and parking demand on event days.

It also is noted that, in 2014, the CSU Board of Trustees adopted its Sustainability Policy (CSU 2014). To the extent applicable, project-related development will comply with the principles and goals set forth in the CSU Sustainability Policy.

Emissions Inventory

Construction

The emission calculations associated with construction activities are from off-road equipment engine use based on the equipment list and phase length, and on-road vehicle trips and phase length. Watering exposed areas two times per day is assumed to be consistent with SDAPCD Rule 55, which is discussed above in Section 4.2.2. Accordingly, a 55% reduction is applied to PM₁₀ and PM_{2.5} fugitive dust emissions. Construction also generates on-road vehicle criteria air pollutant emissions from personal vehicles for worker and vendor commuting, and trucks for soil and material hauling. The total amount of material that will not be used on site (i.e., the demolition material that will either be diverted to re-use facilities or to waste disposal facilities) requires hauling trips. Construction of the project is expected to generate 114,680 total hauling one-way trips during the grading and demolition phases.

Although not anticipated at this time, if required, implosion would be conducted through the detonation of explosive materials to implode the Stadium. This would be a one-time event that would occur on a single day, likely during the first month of demolition (January 2022). Exhaust emissions (NO_x, CO, and SO_x) from explosive material were calculated using AP-42 emission factors and the quantity of explosives required. Fugitive PM₁₀ and PM_{2.5} emissions were calculated using the building volume-based emission factors derived by Wheeler de Never (Wheeler 2007). Stadium building volume was estimated using Stadium geometry. The building dimensions were determined using Google Earth and additional online sources. The Stadium volume was calculated as the difference between total Stadium volume and the inner volume of open air.

The major construction phases included in this analysis are:

- Demolition: involves tearing down of buildings or structures.
- Grading: involves the cut and fill of land to ensure the proper base and slope for the construction foundation.
- Paving: involves the laying of concrete or asphalt such as in parking lots or roads.
- Building Construction: involves the construction of structures and buildings.
- Architectural Coating: involves the application of coatings to both the interior and exterior of buildings or structures.
- Off-site Improvements: involves the construction of off-site improvements.

Construction emissions were quantified using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. The construction schedule, off-road equipment list, and equipment specifications are based on project-specific estimates.

The unmitigated maximum daily criteria air pollutant emissions from construction activities for the proposed project are shown in Table 4.2-6.

Table 4.2-6. Unmitigated Maximum Daily Construction Emissions Compared to Threshold ¹

Year	VOC	NO _x	CO	SO _x	PM ₁₀ ²	PM _{2.5} ²
	<i>Pounds per day</i>					
2020	25	264	162	0.5	30	17
2021	34	364	245	0.6	38	22
2022	153	832	695	3.6	163	51
2023	6	57	40	0.1	18	10
2024	6	55	53	0.1	20	11
2025	8	70	71	0.2	13	8
2026	8	70	71	0.2	13	8
2027	5	44	52	0.1	4	2
2028	32	64	79	0.2	4	3
2029	32	60	72	0.1	4	3
2030	6	34	63	0.1	2	1
2031	6	34	63	0.1	2	1
2032	20	25	49	0.1	2	1
2033	20	16	29	0.1	2	1
2034	2	13	22	0.1	1	1
2035	2	11	22	0.1	1	0
2036	17	5	16	0.0	0	0
2037	17	3	7	0.0	0	0
<i>Maximum</i>	153	832	695	3.6	163	51
<i>SDAPCD Threshold^{3,4}</i>	137	250	550	250	100	67
Threshold Exceeded?	Yes	Yes	Yes	No	Yes	No

Notes:

- ¹ Emissions shown here are based on project-specific construction schedule, equipment list, construction equipment horsepower and load factors, amount of hauling material, and on-road vehicle trips. Emissions were estimated using CalEEMod.
- ² PM emissions are estimated as a sum of exhaust, tire wear, brake wear, and fugitive emissions. Watering of the site is assumed to take place twice daily per Rule 55. Fugitive PM is quantified from the mitigated CalEEMod fugitive PM emissions.
- ³ City of San Diego CEQA Thresholds, Table A-2 San Diego Air Pollution Control District Pollutant Thresholds for Stationary Sources. The VOC threshold is based on SCAQMD levels and the MBAPCD which has similar federal and state attainment status as San Diego.
- ⁴ SDAPCD 2018b. Rule 20.2. New Source Review Non-Major Stationary Sources. PM_{2.5} threshold based on SDAPCD Pollutant Thresholds for Stationary Sources Table 20.2-1, which is referenced in the City of San Diego CEQA Thresholds.

This analysis currently assumes that implosion would be used for SDCCU Stadium demolition. If implosion is not used to demolish the SDCCU Stadium, the maximum daily unmitigated and mitigated construction emissions are expected to be lower than those presented in Table 4.2-6. However, the significance findings would be similar to that presented above for construction with implosion.

As shown, the project emissions exceed the SDAPCD's significance thresholds for VOC, NO_x, CO, and PM₁₀. Thus, impacts would be **potentially significant (Impact AQ-2)**.

Operation

The proposed project operational emissions were modeled in CalEEMod for the operational buildout year (2037). Due to model limitations, the buildout year of 2037 was represented using the year 2035 in CalEEMod.

The area source emissions included in this analysis result from landscaping-related fuel combustion sources, such as lawn mowers, consumer products, hearths, and architectural coatings. Emissions from fireplaces are calculated assuming that 5% of dwelling units have natural gas fireplaces and that there are no wood-burning fireplaces or woodstoves, consistent with the project design. Emissions due to natural gas combustion in buildings for other sources are excluded from this section since they are included in the emissions associated with building energy use. Area coatings include a maximum VOC content of 150 grams per liter per SDAPCD Rule 67.0.1.

The proposed project (without PDFs) analysis assumes that the proposed project's residential and nonresidential land uses accord to the 2016 Title 24 Standards, as that code cycle became effective on January 1, 2017. Total residential and nonresidential building energy input for the proposed project (i.e., electricity and natural gas use) were obtained from the default values provided in CalEEMod.^{2,3} The energy usage for the Stadium was based on energy data from the existing Qualcomm Stadium. More specifically, the Qualcomm Stadium energy rates were normalized by attendance at the Stadium to develop the existing SDCCU Stadium and project Stadium energy use rates.

The criteria air pollutant emissions associated with on-road mobile sources are generated from residents, workers, customers, and delivery vehicles visiting the land use types in the proposed project. The mobile source emissions were calculated using trip rates and trip length information based on analyses conducted by Fehr & Peers' Transportation Impact Analysis in Appendix 4.15-1.

Emissions from the emergency generator are calculated assuming the generator is diesel powered and is operated 1 hour per week for maintenance and/or required emergency power.

The proposed project's operational emissions with PDFs are shown in Table 4.2-7.

**Table 4.2-7. Operational Emissions Compared to Thresholds with Project Design Features
Maximum Daily Unmitigated Emission Estimates**

Emission Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>Pounds per day</i>					
Area ^{1,2}	210	8.19	381	0.04	2.42	2.42
Energy ¹	3.0	26.8	19.0	0.16	2.08	2.08
Mobile ^{1,3}	86.1	382	1,168	5.35	639	172
Stationary	0.5	2.1	1.2	0.0	0.1	0.1
<i>Total Daily Emissions</i>	299	417	1,568	5.56	643	177
<i>SDAPCD Threshold^{3,4,5}</i>	137	250	550	250	100	67
Threshold Exceeded?	Yes	Yes	Yes	No	Yes	Yes

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter.

¹ Emissions estimated using CalEEMod.

² Includes limitation on number of natural gas residential hearths and provision of no wood-burning hearths.

³ Includes TDM-related mobile emissions reductions.

² A detailed explanation how the RASS data was processed for use in CalEEMod is available in CalEEMod User's Guide Appendix E.

³ A detailed explanation how the CEUS data was processed for use in CalEEMod is available in CalEEMod User's Guide Appendix E.

- ⁴ City of San Diego CEQA Thresholds, Table A-2 San Diego Air Pollution Control District Pollutant Thresholds for Stationary Sources. The VOC threshold is based on SCAQMD levels and the MBAPCD which has similar federal and state attainment status as San Diego.
- ⁵ SDAPCD 2018b. Rule 20.2. New Source Review Non-Major Stationary Sources. PM_{2.5} threshold based on SDAPCD Pollutant Thresholds for Stationary Sources Table 20.2-1, which is referenced in the City of San Diego CEQA Thresholds.

As shown, the project emissions for VOC, NO_x, CO, PM_{2.5}, and PM₁₀ are above the SDAPCD thresholds, and are below for SO_x. Thus, impacts would be **potentially significant (Impact AQ-3)**.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction-Related Health Risk Assessment

The construction-related HRA results were used to assess if the proposed project would expose sensitive receptors to substantial pollutant concentrations. The American Meteorological Society/EPA Regulatory Model Improvement Committee Model (AERMOD) (Version 18081) was used to calculate concentrations of ambient air pollutants. AERMOD has been approved for use in various regulatory applications by EPA, CARB, and SDAPCD. AERMOD uses mathematical equations to simulate the movement and dispersion of air contaminants in the atmosphere. Dispersion model averaging times are specified based on the averaging times of ambient air quality standards and the air quality significance thresholds established by the appropriate regulatory agencies. For the HRA, the annual averaging time was used to evaluate chronic (long-term) health effects. Construction emissions from diesel combustion were assumed to occur 12 hours per day, 5 days per week, and 260 days per year.

The project-specific HRA evaluates the off-road equipment associated with construction of the project. Sources that can be reasonably represented as emitting at a uniform rate over a two-dimensional surface are modeled as area sources. Areapoly sources, an area source type consisting of an irregularly shaped polygon, were used to represent off-road equipment. In addition to identifying the maximally exposed individual resident/worker, SDAPCD requires inclusion of the following nonresidential sensitive receptors in a health risk analysis: schools (grades Kindergarten through 12), day care centers, nursing homes, retirement homes, health clinics, and hospitals (SDAPCD 2019). Therefore, off-site sensitive receptor locations were also identified within a 2,000-meter radius of the modeled construction area. The exposure pathways evaluated in this HRA were selected in accordance with the OEHHA Guidance. The total exposure duration analyzed for residents and other sensitive receptors is 30 years, in accordance with OEHHA guidance default assumptions, and begins in the third trimester to accommodate the increased susceptibility of exposures in early life. These exposure assumptions, designed to be protective of children younger than age 16, are assumed to be adequately protective of residents older than 30 years of age, including the elderly. The unmitigated maximum cancer risk estimate associated with construction emissions was 53.1 in a million, which exceeds the SDAPCD notification requirement of 10 in a million. Refer to Appendix 4.2-1, Air Quality Technical Report for further details. Thus, impacts would be **potentially significant** for this issue (**Impact AQ-4**).

The unmitigated maximum chronic hazard index (HI) at the modeled receptors resulting from construction emissions was calculated to be 0.084, which is below the SDAPCD notification requirement of 1.0.

This analysis assumes that implosion would be used for SDCCU Stadium demolition. If implosion were not used during demolition, construction related health impacts are expected to be similar to those presented above and there would be no change to the significance findings stated above. Thus, impacts would be **less than significant** for this issue.

Carbon Monoxide Hotspots

Mobile-source impacts occur on two basic scales of motion. Regionally, project-related travel will add to regional trip generation and increase the vehicle miles traveled within the local airshed and the SDAB. Locally, proposed project traffic will be added to the City's roadway system. There is a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SDAB is steadily decreasing.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the proposed project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The proposed project's Transportation Impact Analysis evaluated the level of service (LOS) (i.e., increased congestion) impacts at intersections affected by the proposed project (see Appendix 4.15-1). The potential for CO hotspots was evaluated based on the results of the traffic report.

The City of San Diego's Significance Determination Thresholds was reviewed for guidance on CO hotspot screening, and was used to determine if the proposed project would require a site-specific hotspot analysis. The City recommends that a quantitative analysis of CO hotspots be performed if a proposed development causes a six- or four-lane roadway to deteriorate to LOS E or worse, causes a six-lane roadway to drop to LOS F, or if a proposed development is within 400 feet of a sensitive receptor and the LOS is D or worse (City of San Diego 2016).

The proposed project is located within 400 feet of a sensitive receptor, indicating any intersection operating at LOS D or worse should be considered in a screening analysis. Traffic scenarios for Future with Proposed Project (2037) and Existing with Proposed Project (2018) were analyzed for CO hotspots. Based on the Transportation Impact Analysis prepared for the proposed project, several intersections were determined to operate at LOS D or worse in either the existing or future year scenarios (see Appendix 4.15-1).

The three worst-case intersections for existing and future scenarios were chosen based on their LOS, traffic volumes, and delay as provided in the traffic report. These intersections include 11. Stadium Way and Friars Road; 14. Mission Village Drive/Street D and Promenade 1/Street 2; and 17. I-15 southbound ramps and Friars Road.

The simplified CALINE4 analysis was conducted for the three worst intersections in each the existing and future year. The maximum CO concentration predicted for the 1-hour averaging period at the evaluated intersections is 4.5 ppm, which is below the 1-hour CO CAAQS of 20 ppm and CO NAAQS of 35 ppm. The maximum predicted 8-hour CO concentration at the evaluated intersections is 3.2 ppm, which is below the 8-hour CO CAAQS and NAAQS of 9.0 ppm (City of San Diego 2016).

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. The results are shown in Table 4.2-8 and Table 4.2-9 for the existing and future project scenarios, respectively.

Table 4.2-8. Summary of CO Concentrations – Existing Plus Project Scenario

Total Roadway CO Concentrations – Existing	CO Concentration (ppm)											
	AM Peak Hour				PM Peak Hour				8-Hour			
<i>Intersections</i>	<i>Roadway Edge</i>	<i>25 Feet from Roadway Edge</i>	<i>50 Feet from Roadway Edge</i>	<i>100 Feet from Roadway Edge</i>	<i>Roadway Edge</i>	<i>25 Feet from Roadway Edge</i>	<i>50 Feet from Roadway Edge</i>	<i>100 Feet from Roadway Edge</i>	<i>Roadway Edge</i>	<i>25 Feet from Roadway Edge</i>	<i>50 Feet from Roadway Edge</i>	<i>100 Feet from Roadway Edge</i>
11. Stadium Way & Friars Rd.	3.7	3.3	3.2	3.0	4.3	3.7	3.5	3.2	3.1	2.7	2.5	2.4
14. Mission Village Dr./ Street D & Promenade 1/ Street 2	3.6	3.2	3.1	2.9	4.0	3.4	3.2	3.1	2.9	2.5	2.4	2.2
17 I-15 SB Ramps & Friars Rd.	4.0	3.5	3.3	3.1	4.5	3.9	3.6	3.3	3.2	2.8	2.6	2.4
<i>Maximum CO Concentration</i>	4.0	3.5	3.3	3.1	4.5	3.9	3.6	3.3	3.2	2.8	2.6	2.4
Threshold ¹	20.0								9.0			
Above Threshold?	No	No	No	No	No	No	No	No	No	No	No	No

Notes: CO = carbon monoxide; ppm = parts per million; SB = southbound; NB = northbound.

¹ CEQA Significance Determination Thresholds, CAAQS (City of San Diego 2016).

Table 4.2-9. Summary of CO Concentrations – Future Year Plus Project Scenario

Total Roadway CO Concentrations – Future	CO Concentration (ppm)											
	AM Peak Hour				PM Peak Hour				8-Hour			
Intersections	Roadway Edge	25 Feet from Roadway Edge	50 Feet from Roadway Edge	100 Feet from Roadway Edge	Roadway Edge	25 Feet from Roadway Edge	50 Feet from Roadway Edge	100 Feet from Roadway Edge	Roadway Edge	25 Feet from Roadway Edge	50 Feet from Roadway Edge	100 Feet from Roadway Edge
11. Stadium Way & Friars Rd.	3.2	3.0	2.9	2.8	3.5	3.2	3.1	2.9	2.5	2.3	2.2	2.1
14. Mission Village Dr./ Street D & Promenade 1/ Street 2	3.1	2.9	2.8	2.8	3.3	3.0	2.9	2.8	2.4	2.2	2.1	2.1
17 I-15 SB Ramps & Friars Rd.	3.4	3.1	3.0	2.9	3.6	3.3	3.1	3.0	2.6	2.4	2.3	2.2
Maximum CO Concentration	3.4	3.1	3.0	2.9	3.6	3.3	3.1	3.0	2.6	2.4	2.3	2.2
Threshold ¹	20.0								9.0			
Above Threshold?	No	No	No	No	No	No	No	No	No	No	No	No

Notes: CO = carbon monoxide; ppm = parts per million; SB = southbound; NB = northbound.

¹ CEQA Significance Determination Thresholds, CAAQS (City of San Diego 2016).

The three worst intersections were selected based on a criteria of LOS, traffic volume, and delay for both the existing and future year project scenarios. Neither the 1-hour nor 8-hour CAAQS would be exceeded at any of the worst-case evaluated intersections. Accordingly, the proposed project would not cause or contribute to violations of the CAAQS, and would not result in exposure of sensitive receptors to localized high concentrations of CO. As such, CO hotspots impacts resulting from the proposed project contribution to cumulative traffic-related air quality impacts would be **less than significant**, and no mitigation is required.

Kinder Morgan Valley Terminal Siting Assessment

This section evaluates potential siting concerns for the proposed project's residential buildings due to the proximity of the MV Terminal, which is a 66-acre facility located to the northeast of the project site (Kinder Morgan 2015). The MV Terminal has a storage capacity of approximately 680,000 barrels of refined petroleum products, denatured ethanol, gasoline additives, and red dye, with storage tanks ranging from in capacity from 8,000 to 100,000 barrels. The MV Terminal also has two inbound pipelines and one outbound pipeline, handles refined petroleum products, and blends and injects additives and other materials (Kinder Morgan 2015). Currently, the closest receptor to the MV Terminal is approximately 540 feet to the nearest tank and approximately 305 feet to the facility boundary. The proposed project includes potential new residential buildings located approximately 290 feet from the nearest tank and 225 feet from the facility boundary.

Although the proposed project is locating sensitive receptors (i.e., residences) in proximity to the MV Terminal, there is no guidance in the SDAPCD regulations or City of San Diego Municipal Code prohibiting the location of sensitive receptors near such facilities. Additionally, CARB has published a guidance document that provides information on siting sensitive receptors near certain land uses (CalEPA and CARB 2005). That document provides siting guidance for petroleum refineries, gasoline dispensing facilities, and rail yards, among others. However, the MV Terminal is not covered by any of the land uses in the guidance document, and thus there are no specific setback distances recommended in CARB's guidance.

A review of SDAPCD records also shows that the MV Terminal has had minimal compliance issues, with the only notice of violations generally related to minor fugitive leaks or permit renewal timing. Based on this review, there is no information to suggest that the MV Terminal would pose specific air quality issues to the proposed project's residents.

Additionally, local meteorological patterns show that the project site is generally located upwind from the MV Terminal. A wind rose for a recent 3-year period of meteorological data from a nearby station shows that prevailing winds typically blow to the east. Since the facility is located towards the northeast corner of the project site, emissions from the facility would typically be carried away from the proposed project. As such, impacts would be **less than significant** relative to the proximity of the MV Terminal.

Health Effects of Criteria Air Pollutants

The project's construction-related NO_x and PM₁₀ emissions, and operation-related VOC, NO_x, CO, PM_{2.5}, and PM₁₀ emissions are above SDACPD's significance thresholds. Significant project criteria air pollutant emissions could potentially lead to increased concentrations of pollutants in the atmosphere and could result in health effects due to the increased emissions. The following section describes the mechanism by which project-related emissions could increase the concentrations of criteria air pollutants in the atmosphere and qualitatively describes the potential health effects.

The ambient concentration of criteria pollutants is a result of complex atmospheric chemistry and emissions of pollutant precursors and direct emissions. NO_x and VOC are precursors to ozone, and NO_x, VOC, and SO_x are precursors to secondarily formed PM_{2.5}. Chemical and physical processes transform some of these precursors to the criteria pollutant concentrations in the atmosphere. The calculation of ozone and secondary PM_{2.5} concentrations resulting from precursors is dependent on the spatial location of the criteria air pollutant emissions and how the emissions are dispersed in the atmosphere. Source apportionment, or the practice of deriving information about pollution sources and the amount they contribute to ambient air pollution levels, is also influenced by the meteorological conditions of the project location.

There are several variables that determine whether emissions of air pollutants from the project move and disperse in the atmosphere in a manner in which concentrations of criteria pollutants would become elevated and result in health impacts. A specific mass of precursor emissions does not equate to an equivalent concentration of the resultant ozone or secondary particulate matter in that area. The resulting concentration of criteria pollutants is influenced by sunlight, other pollutants in the air, complex reactions, and transport. The dispersion is based on the meteorological conditions of the source (the project), local terrain (elevation profile), and the height and size of the source. The surrounding land use, wind direction and wind speed will influence the location where the project emissions disperse. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or particulate matter formed by emissions of precursors.

The resulting health effects are further based on a complex relationship of multiple variables and factors. The calculated health effects are dependent upon the concentrations of pollutants to which the receptors are exposed, the number and type of exposure pathways for a receptor, and the intake parameters for a receptor, which vary based upon age and sensitivity (i.e., presence of pre-existing conditions). Health effects would be more likely for individuals with greater susceptibility to exposures, and also dependent on the location of receptors relative to the project site impacts whether receptors are exposed to project-related pollutants.

The following is a summary of the health effects from ozone, PM_{2.5} and PM₁₀. Meteorology and terrain play major roles in ozone formation, and ideal conditions occur on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to ozone at levels typically observed in Southern California can result in health effects. When inhaled, PM_{2.5} and PM₁₀ can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM_{2.5} and PM₁₀ can increase the number and severity of asthma attacks and cause or aggravate bronchitis and other lung diseases. Whereas PM₁₀ tends to collect in the upper portion of the respiratory system, PM_{2.5} is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Health effects of PM_{2.5} include mortality (all causes), hospital admissions (respiratory, asthma, cardiovascular), emergency room visits (asthma), and acute myocardial infarction (non-fatal). For ozone, the endpoints are mortality, emergency room visits (respiratory) and hospital admissions (respiratory).

For this project, mass emissions for both construction (for NO_x, CO, and PM₁₀) and operation (for VOC, NO_x, CO, PM_{2.5}, and PM₁₀) exceed significance levels. Though the project's emissions are significant for these criteria air pollutants, it is anticipated that the health effects from the project will generally be low due to the relatively low level of emissions from this project compared to the total emissions in the San Diego Air Basin.

Freeway Siting Assessment

This section evaluates potential siting concerns for the proposed project's residential buildings due to the proximity of the nearby freeways. A freeway HRA was conducted to evaluate health impacts of DPM emissions from project-related vehicles traveling on the I-15 and I-8 freeways on on-site and off-site receptors. The analysis also evaluated cancer and non-cancer health impacts of DPM emissions from all vehicles traveling on the I-15 and I-8 freeways on sensitive land uses located on the project site. Refer to the Freeway Health Risk Assessment Technical Report for further details in Ramboll's Air Quality Technical Report (see Appendix 4.2-1).

AERMOD (Version 18081) was used to calculate concentrations of ambient air pollutants. EPA, CARB, and SDAPCD have approved AERMOD for use in various regulatory applications. The HRA evaluates portions of the northbound and southbound I-15, and eastbound and westbound I-8 freeways adjacent to the project area, within 0.25 miles of the project boundary. Line (area) sources were used in the air dispersion model to represent emissions from truck and non-truck vehicles travelling on these freeways. These source parameters were developed based on EPA's Hotspot Conformity Guidance for Hotspot Analysis and the EPA AERMOD user guide. SDAPCD requires inclusion of sensitive receptors in a health risk analysis and identifies the following as sensitive receptors: residences, schools (grades kindergarten through 12), day care centers, nursing homes, retirement homes, health clinics, and hospitals. Therefore, off-site sensitive receptor locations were identified within a 0.25- mile radius of the modeled freeway segments. In order to evaluate health impacts to off-site sensitive receptors, and consistent with SDAPCD's Supplemental HRA Guidelines, receptors within a 0.25- mile radius of the modeled I-8 and I-15 freeway segments were covered in a grid with 25-meter by 25-meter spacing receptors, except in areas within the right-of-way, which would be inaccessible to the public.

The chemicals of potential concern are associated with diesel exhaust, a complex mixture that includes hundreds of individual constituents identified by the State of California as known carcinogens. Under California regulatory guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mixture of chemicals that make up diesel exhaust as a whole. There is currently no acute non-cancer toxicity value available for DPM.

DPM is typically the main driver of cancer risk from freeways; furthermore, heavy-duty diesel trucks form the most significant source of DPM. As a result, DPM is the chemical of potential concern used in this analysis.

This HRA was performed to calculate cancer and non-cancer risks associated with the TAC (DPM) emissions from vehicles on freeways adjacent to the project site.

The exposure pathways evaluated in this HRA were selected in accordance with the OEHHA Guidance Manual. The inhalation pathway must be evaluated for all chemicals. The OEHHA Guidance Manual also requires the evaluation of non-inhalation exposure pathways, referred to as a multipathway analysis, for specific chemicals. However, the DPM exposure pathway is limited to inhalation.

The total exposure duration analyzed for residents and other sensitive receptors is 30 years, in accordance with the OEHHA Guidance Manual's default assumptions, and begins in the third trimester to accommodate the increased susceptibility of exposures in early life. These exposure assumptions, designed to be protective of children younger than age 16, are assumed to be adequately protective of residents older than 30 years of age, including the elderly.

The maximum cancer risk is 1.9 in a million from project-related vehicles traveling on sections of the I-15 and I-8 freeways; similarly, the maximum chronic HI is 0.0005. The cancer risk and chronic HI associated with DPM emissions from the modeled sections of the I-15 and I-8 freeways for the existing plus project scenario is 7.7 in a million and 0.004, respectively. The cancer and chronic HI associated with DPM emissions from the modeled sections of the I-15 and I-8 freeways for the future year plus project scenario is 9.3 in a million and 0.004, respectively. The maximum cancer risk and chronic HI locations are shown in Figures 4.2-1, 4.2-2, and 4.2-3, below.

The results of the analysis show that:

- The cancer and non-cancer health impacts of the DPM emissions from project-related vehicles traveling on the modeled sections of the I-15 and I-8 freeways are below the SDAPCD public health risk notification requirements, and
- The cancer and non-cancer health impacts of the DPM emissions from vehicles traveling on the modeled sections of the I-15 and I-8 freeways on residential and nonresidential receptors located on the project site, including those within 500 feet of the freeways, are below the SDAPCD public health risk notification requirements.

Thus, impacts to sensitive receptors are **less than significant**.

Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Odors

The proposed project would not substantially change the odors that occur from the existing conditions of the site and surrounding areas. Odors could be generated from vehicles and/or equipment exhaust emissions during construction

or operation of the proposed project. Such odors could result from unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. These types of odors are temporary and for the types of construction activities anticipated for PDFs, would generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors would be considered less than significant.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, the impact of odors is difficult to quantify. Examples of land uses and industrial operations that are commonly associated with odor complaints include agricultural uses, wastewater treatment plants, food processing facilities, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. In addition to the odor source, the distance between the sensitive receptor(s) and the odor source, as well as the local meteorological conditions, are considerations in the potential for a project to frequently expose the public to objectionable odors. The proposed project would not include any land use types that generate odors as described above; therefore, impacts related to odor caused by the proposed project would be **less than significant**.

Valley Fever

Valley fever (Coccidioidomycosis) is a fungal infection that is most prevalent in hot dry areas with alkaline soil, such as the southwestern United States. It is contracted via the inhalation of spores from a specific fungus known as *Coccidioides immitis*, which lie dormant in soil until disturbed. If the soil is stirred up by wind, vehicles, or earth-moving activities, the spores can become airborne along with the fugitive dust emitted. Thus, people who are commonly exposed to windblown dust and disturbed topsoil, such as construction workers and agricultural workers, have an increased risk of exposure to valley fever-causing spores. The majority of people who contract the infection exhibit mild cold-like symptoms or no symptoms at all. However, in some cases the infection can progress to flu-like symptoms and in rare cases, can cause severe disabling illness or death (CDC 2019).

According to the Centers for Disease Control, San Diego County is a suspected endemic area for valley fever, which is the lowest endemic level for the area (CDC 2019). Thus, valley fever is not considered to be common to San Diego. Per the San Diego County Health and Human Services Agency, the 10-year average (2008–2017) for Coccidioidomycosis cases in San Diego County is 4.5 cases per 100,000 people per year (Nelson 2018). For the 92108 zip code, where the project site is located, the incidence of Coccidioidomycosis is 3.9, which is less than the average County rate (Nelson 2018).⁴ Unfortunately, there are no commercially available tests to detect *Coccidioides* in soil (CDC 2019).

Even if the fungus is present at the site, construction activities may not result in increased incidence of valley fever. Propagation of *C. immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. *C. immitis* spores can be released when filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to *C. immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection.⁵

While the risk of releasing *C. immitis* spores during the proposed project's construction phase is reasonably anticipated to be low based on the location of the project site, it also should be noted that the applicant would

⁴ Per the County of San Diego Health & Human Services Agency, Coccidioidomycosis incidence counts for a single year and a single zip code are too small to work with; therefore, incidence counts reflect 10 years of aggregated data (2008–2017) (Nelson 2018).

⁵ The average of 115 cases is based on the following annual incidences reported: 148 in 2011, 139 in 2012, 93 in 2013, 88 in 2014, 112 in 2015, and 123 in 2016 (CDPH 2017).

comply with SDAPCD Rule 55, which establishes fugitive dust abatement measures, including watering disturbed areas on the project site to minimize adverse air quality impacts.

In summary, the proposed project would not result in a significant impact attributable to valley fever exposure based on its geographic location and compliance with applicable regulatory standards, which will serve to minimize the release of and exposure to fungal spores. Thus, impacts are **less than significant**.

Would the project result in a cumulative impact to air quality?

Based on the proposed project analyses described above and the region's nonattainment status for O₃, PM_{2.5}, and PM₁₀, the proposed project's construction-related VOC, NO_x and PM₁₀ emissions, and operation-related VOC, NO_x, CO, PM_{2.5}, and PM₁₀ emissions would be considered **cumulatively considerable (Impact AQ-5)**. (NO_x and VOC are precursors for O₃.) While the proposed project's construction and operational CO emissions exceed the SDAPCD's CO threshold, the region is in attainment for CO.

For informational disclosure purposes, a list of related projects is included in Chapter 3 of this EIR. These related projects are those that are existing and proposed projects that may result in cumulative impacts with the proposed project. Further analysis of these projects was not performed as the assumptions regarding their emissions are uncertain, and it would be speculative to otherwise quantify these project emissions.

4.2.5 Summary of Impacts Prior to Mitigation

- Impact AQ-1** The proposed project would conflict with or obstruct implementation of the applicable air quality plan.
- Impact AQ-2** Construction of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
- Impact AQ-3** Operation of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
- Impact AQ-4** Construction of the proposed project would result in a maximum cancer risk impact exceeding the SDAPCD notification requirement.
- Impact AQ-5** The proposed project would result in a cumulative impact to air quality.

4.2.6 Mitigation Measures

The following mitigation measures would be implemented to reduce all impacts described in Section 4.2.4.

- MM-AQ-1** **Construction Equipment Emissions Minimization:** The project shall comply with the following standards during the specified phases of construction activity:

Engine Requirements. At a minimum, all off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 3 emission standards for non-road diesel engines promulgated by the U.S. Environmental Protection Agency. During the site preparation and grading construction phases,

off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 3 with a diesel particulate filter emission standards. Where feasible, off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 emission standards.

In addition, during the site preparation and grading construction phase, off-road diesel-powered construction equipment that are not Tier 4 shall be outfitted with diesel particulate filter Best Available Control Technology (BACT) devices certified by the California Air Resources Board (CARB), provided those devices are commercially available and: (1) achieve the standards of the California Division of Occupational Safety and Health (Cal/OSHA), (2) are consistent with the construction equipment warranty requirements, (3) are compatible with equipment specifications of the construction equipment manufacturer, and (4) do not otherwise interfere with the proper functioning of the construction equipment. Any BACT devices used shall achieve emissions reductions equal to or greater than a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by CARB regulations, provided that the devices are commercially available and satisfy the four requirements enumerated above.

Idling Requirements. All diesel engines, whether for on-road or off-road equipment, shall not be left idling for more than 5 minutes, at any location, except as provided in exceptions to the applicable regulations adopted by CARB regarding idling for such equipment. The construction contractor(s) shall post legible and visible signs in English and Spanish, in designated queuing areas and at the construction site, to remind equipment operators of the 5-minute idling limit.

Maintenance Instructions. The construction contractor(s) shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment, and shall require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications.

Dust Control Plan. Prior to the commencement of construction, a dust control plan shall be prepared to minimize dust from construction-related sources, such as windblown storage piles, off-site tracking of dust, debris loading, and truck hauling of debris. This plan shall include the following requirements:

- Watering of exposed construction areas shall occur three times per day;
- All haul trucks transporting soil, sand, or other loose material off site shall be covered;
- All vehicle speeds on unpaved roads shall be limited to 15 mph; and
- A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond to such complaints and take corrective action, as needed, within 48 hours. The San Diego Air Pollution Control District's phone number shall also be visible to ensure compliance with applicable regulations.

Implosion Execution Plan. A blasting execution plan shall be prepared prior to any implosion event associated with the demolition of the existing Stadium. The plan shall evaluate the feasibility of staged implosion to minimize dust generation and exposure, and shall require that implosion be scheduled during periods of low/no wind speeds. Additionally, an ambient air quality monitoring program shall be implemented as part of the plan, and proximate to the Stadium, over the course of any implosion event to measure actual particulate matter concentrations. Finally, a public notification program shall be instituted, as part of the plan, prior to any implosion event. The public

notification program shall include recommendations as to how to minimize exposure to implosion-related airborne dust.

MM-AQ-2 Regional Air Quality Plans: Within 6 months of the certification of the Final Environmental Impact Report, California State University/San Diego State University shall provide the San Diego Association of Governments (SANDAG) with population and employment projections for the project site, which should be used by: (1) SANDAG to update its regional growth projections and (2) the San Diego Air Pollution Control District to update the emission estimates and forecasts presented in its regional air quality plans. Use of the approved site-specific population and employment projections would allow regional planning data to more accurately reflect anticipated growth in the Mission Valley area.

4.2.7 Level of Significance After Mitigation

At the cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects, would exceed the growth anticipated in the Mission Valley area by SANDAG projections. Therefore, the proposed project—in combination with other projects considered in the cumulative setting—could result in a significant and unavoidable impact associated with implementation of the SDAPCD's regional air quality plans (**Impact AQ-1**). However, even with implementation of mitigation measure MM-AQ-2, which is included in Section 4.2.6, because CSU/SDSU cannot require SANDAG to update its growth projections and does not have jurisdictional control over the regional air quality plans prepared by SDAPCD, this impact is considered **significant and unavoidable**, even with implementation of the mitigation.

The unmitigated maximum daily criteria air pollutant emissions from construction activities for the proposed project would exceed the SDAPCD's significance thresholds for VOC, NO_x, CO, and PM₁₀ (**Impact AQ-2**). In order to reduce the proposed project's VOC, NO_x, CO, and PM₁₀ emissions, the construction equipment fleet requirements described in Section 4.2.6 would be implemented. With implementation of the mitigation, the maximum daily NO_x, CO, and PM₁₀ emissions during construction would remain greater than the SDAPCD's significance thresholds; see Table 4.2-10.

Table 4.2-10. Mitigated Maximum Daily Construction Emissions Compared to Thresholds^{1, 2, 3}

	VOC	NO _x	CO	SO _x	PM ₁₀ ⁴	PM _{2.5} ⁴
Year	<i>Pounds per day</i>					
2020	13	210	173	0.5	26	15
2021	16	256	276	0.6	34	20
2022	112	637	871	3.6	155	48
2023	2	40	49	0.1	16	8
2024	6	55	53	0.1	17	10
2025	8	70	71	0.2	12	7
2026	8	70	71	0.2	12	7
2027	5	44	52	0.1	4	2
2028	32	64	79	0.2	4	3
2029	32	60	72	0.1	4	3
2030	6	34	63	0.1	2	1
2031	6	34	63	0.1	2	1
2032	20	25	49	0.1	2	1

Table 4.2-10. Mitigated Maximum Daily Construction Emissions Compared to Thresholds^{1, 2, 3}

Year	VOC	NO _x	CO	SO _x	PM ₁₀ ⁴	PM _{2.5} ⁴
	Pounds per day					
2033	20	16	29	.1	2	1
2034	2	13	22	0.1	1	1
2035	2	11	22	0.1	1	0
2036	17	5	16	0.0	0	0
2037	17	3	7	0.0	0	0
Maximum	112	637	871	3.6	155	48
SDAPCD Threshold ^{5,6}	137	250	550	250	100	67
Threshold Exceeded?	No	Yes	Yes	No	Yes	No

Notes:

- ¹ Emissions shown here are based on project-specific construction schedule, equipment list, on-site construction equipment horsepower and load factors, amount of hauling material, and on-road vehicle trips. Emissions were estimated using CalEEMod.
- ² The maximum daily PM₁₀ and PM_{2.5} emissions presented in this table are conservative as they do not include reductions due to the use of diesel particulate filters on grading and site preparation equipment.
- ³ The results in this table were adjusted to reflect MM-AQ-1 based on the results as calculated by CalEEMod. These adjustments reflect the anticipated improvement of MM-AQ-1 compared to default OFFROAD emission factors.
- ⁴ PM emissions are estimated as a sum of exhaust, tire wear, brake wear, and fugitive emissions. Watering of the site is assumed to take place twice daily per Rule 55. Fugitive PM is quantified from the mitigated CalEEMod fugitive PM emissions.
- ⁵ City of San Diego CEQA Thresholds, Table A-2 San Diego Air Pollution Control District Pollutant Thresholds for Stationary Sources. The VOC threshold is based on SCAQMD levels and the Monterey Bay Air Pollution Control District which has similar federal and state attainment status as San Diego.
- ⁶ SDAPCD 2018b. Rule 20.2. New Source Review Non-Major Stationary Sources. PM_{2.5} threshold based on SDAPCD Pollutant Thresholds for Stationary Sources Table 20.2-1, which is referenced in the City of San Diego CEQA Thresholds.

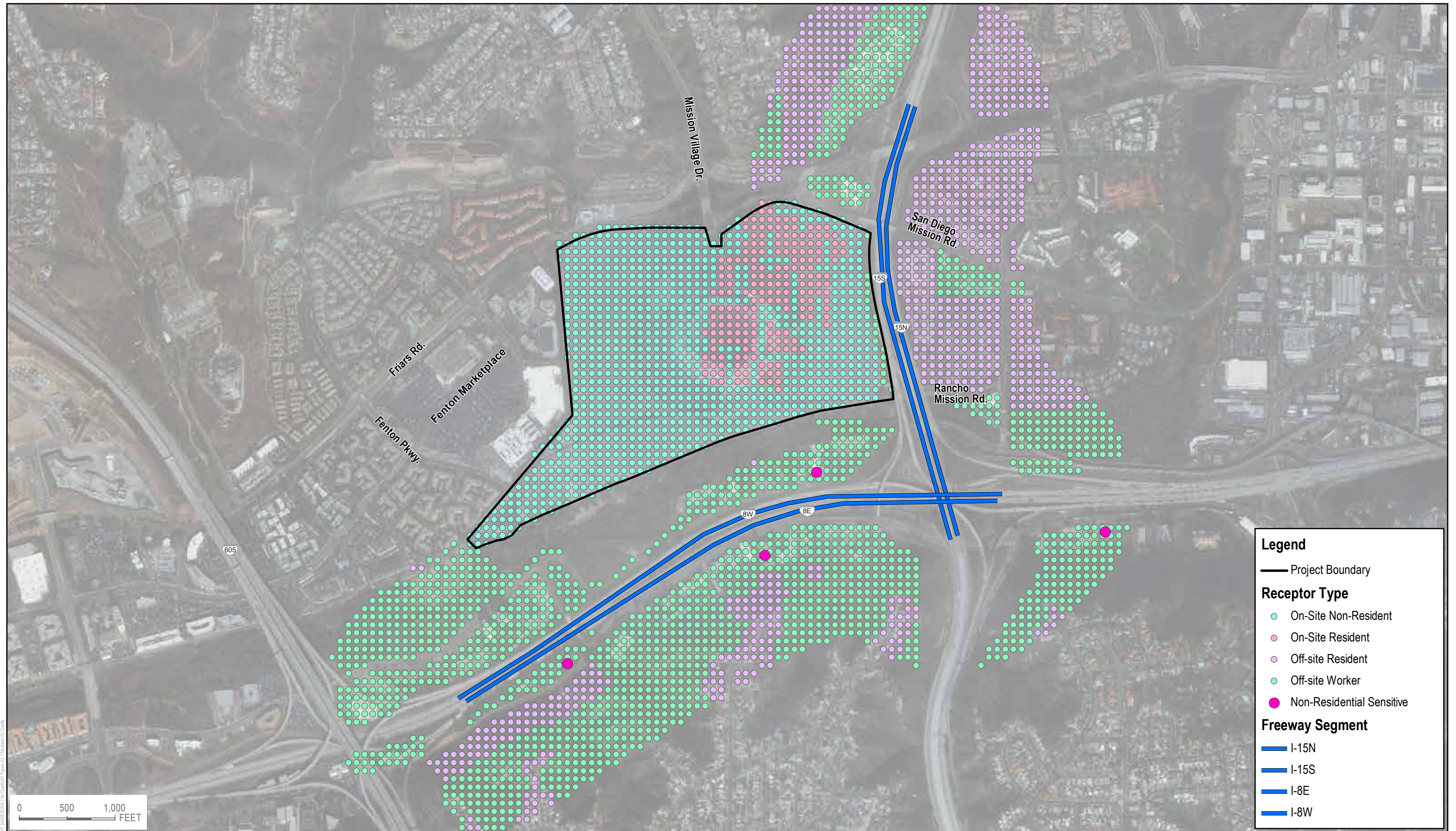
Implementation of mitigation measure MM-AQ-1 by reducing the proposed project's VOC emissions from construction activities for the proposed project would reduce VOC, NO_x, CO, and PM₁₀ emissions; however, maximum daily NO_x, CO, and PM₁₀ emissions during construction would remain greater than the SDAPCD's significance thresholds. Therefore, maximum daily criteria air pollutant emissions during construction would be **remain significant and unavoidable**.

The project's operational emissions for VOC, NO_x, CO, PM_{2.5}, and PM₁₀ are above the SDAPCD thresholds, and are below for SO_x (**Impact AQ-3**). The proposed project has implemented PDFs as described above, and no additional feasible mitigation is available. (As illustrated by Table 4.2-7, project emissions are largely attributable to mobile sources. The project already has multiple attributes that serve to reduce emissions from mobile sources to the extent feasible, such as its general location in an infill setting with on-site transit opportunities, the development of a comprehensive TDM Program, and the provision of infrastructure to facilitate EV use.) Therefore, the proposed project's impact is considered **significant and unavoidable** based on comparison of project operational emissions to the SDAPCD thresholds.

In order to reduce the proposed project's construction cancer risk, the construction equipment fleet requirements described in Section 4.2.6 of this analysis would be implemented. With the implementation of mitigation measure MM-AQ-1, the maximum cancer risk estimate reduced to a value of 28.1 in a million, which is greater than the SDAPCD notification requirement of 10 in a million. Thus, impacts would be **significant and unavoidable** for this issue (**Impact AQ-4**).

With implementation of the construction mitigation measure, the mitigated maximum chronic HI is reduced further to 0.046. Based on these results, the proposed project's impact will remain **less than significant**.

Based on the proposed project analyses described above and the region's nonattainment status for O₃, PM_{2.5}, and PM₁₀, the proposed project's construction-related NO_x, CO, and PM₁₀ emissions after implementation of mitigation measure MM-AQ-1, and operation-related VOC, NO_x, CO, PM_{2.5}, and PM₁₀ emissions would be considered **cumulatively considerable (Impact AQ-5)**. (NO_x and VOC are precursors for O₃.) While the proposed project's operational CO emissions exceed the SDAPCD's CO threshold, the region is in attainment for CO.



SOURCE: RAMBOL 6/4/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.2-1
Modeled Receptors

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SOURCE: RAMBOL 6/13/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.2-2
Existing Plus Project Risk

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SOURCE: RAMBOL 6/13/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.2-3
Horizon Plus Project Risk

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4.3 Biological Resources

This section describes the existing biological resources conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed San Diego State University (SDSU) Mission Valley Campus Master Plan (proposed project).

Methods for Analysis

Information contained in this section is based on the Biological Resources Technical Report for the proposed project that was prepared by Dudek in July 2019. This report is included as part of this EIR as Appendix 4.3-1. Please refer to this appendix for the methodology used to perform biological surveys and analysis.

Summary of NOP Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. Approximately 150 letters were received during this comment period. Comments received related to biological resources raised concerns about potential project impacts to the San Diego River, watershed, sage scrub and riparian plant communities, and wildlife corridors, among others. Other comments focused on bird-strike hazards posed by project structures and potential mitigation strategies. In addition, some comments requested details regarding compatibility between recreational access and biological resources associated with the San Diego River. Further, some comments expressed concerns regarding impacts to the City of San Diego (City) Stadium Wetland Mitigation Site, and edge effects to the riparian buffer of the San Diego River and Multi-Habitat Planning Areas were also raised as a concern. Please see Appendix A, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.3.1 Existing Conditions

The project site includes four existing uses: (1) a multipurpose Stadium (San Diego County Credit Union [SDCCU] Stadium) for football and other events, (2) an associated surface parking lot with approximately 18,870 parking spaces, (3) the existing San Diego Metropolitan (MTS) Stadium Trolley Station, accessible via the MTS Trolley Green Line traversing the project site, and (4) Murphy Canyon Creek. Land uses adjacent to the project site consist of the San Diego River, commercial development, and Interstate (I) 8 to the south; Friars Road, steep hillsides, and residential development to the north; retail/commercial development within Fenton Marketplace to the west; I-15, and retail/residential development to the east.

The elevation ranges from approximately 35 feet above mean sea level (amsl) to 300 feet amsl. The project site is composed of developed areas, disturbed habitat, and native habitat. The majority of the project site is relatively flat within the existing large parking area surrounding the Stadium structure. Along the southern boundary of the project site there is a small berm beyond the parking lot, which descends into the lower floodplain of the San Diego River. In the western portion of the project site, there is a flat training field, and beyond that is a storm drain outlet channel that conveys water down into the San Diego River floodplain. Native upland habitat occurs west of the storm drain outlet channel and has a flat grade until sloping down toward the San Diego River floodplain.

There are off-site improvement areas, including a road expansion in the northwest corner of Friars Road and the Stadium and one sewer connection within the San Diego River. The other off-site improvements are confined to existing urban/developed areas.

According to the Natural Resources Conservation Service (USDA 2019a), 10 soil types are found within the project site and off-site areas, which include predominantly made land, but also riverwash, terrace escarpments, Olivenhain cobbly loam (9% to 30% slopes), gravel pits, Olivenhain cobbly loam (2% to 9% slopes), Tujunga sand (0% to 5% slopes), Huerhuero–Urban land complex (2% to 9% slopes), Olivenhain–Urban land complex (2% to 9% slopes), and Salinas clay loam (2% to 9% slopes).

The Olivenhain series is a well-drained soil with slow or medium runoff and very slow permeability (USDA 2019a). These soils are found on gently sloping to strongly sloping hillsides and on marine terraces. Olivenhain soils are generally very cobbly (USDA 2019a). The Tujunga Series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources; these soils occur on alluvial fans or floodplains as well as within urban areas (USDA 2019a). The Huerhuero series, which is now included within the Antioch series, drains moderately well to somewhat poorly, and occurs on nearly level to strongly sloping alluvial fans and terraces at elevations less than 1,100 feet amsl (USDA 2019a).

4.3.1.1 Vegetation Communities

Dudek mapped nine vegetation communities/land covers on the project site. Dudek biologists also mapped vegetation communities/land covers within a 100-foot buffer surrounding the site. The project site supports small amounts of native vegetation communities. These include Baccharis-dominated Diegan coastal sage scrub, Diegan coastal sage scrub, southern willow scrub, southern cottonwood–willow riparian forest, and southern riparian forest. The site also supports four non-native vegetation communities or land cover types—urban/developed, disturbed habitat, disturbed wetland, and unvegetated channel. By far the largest land cover is urban/developed, which composes 165.77 acres and 96.30% of the project site. The vegetation communities and land cover types listed above are described in the following text; their acreages are presented in Table 4.3-1; and their spatial distributions are presented on Figure 4.3-1, Biological Resources – Project Site; Figure 4.3-2, Biological Resources – Fenton Parkway Extension; and Figure 4.3-3, Biological Resources – Off-Site Sewer and Storm Drain Connections.

Table 4.3-1. Vegetation Communities/Land Cover Types on the Project Site and Off-Site Areas

Habitat Types/Vegetation Communities	Oberbauer Code	Project Site (acres)	% of Project Site	Off-Site Areas (acres)
<i>Non-Native Vegetation Community/Land Cover Types</i>				
Disturbed habitat (DH)	11000	0.85	0.50%	0.84
Disturbed wetland (DH)	11200	0.89	0.52	
Urban/developed (DEV)	12000	165.77	96.30%	2.68
Non-vegetated channel or floodway (NVC)	64200	0.75	0.43%	—
<i>Subtotal</i>	—	168.26	97.75%	3.51
<i>Native Vegetation Communities</i>				
Baccharis-dominated Diegan coastal sage scrub (BD-CSS)	32350	0.97	0.56%	—
Diegan coastal sage scrub (CSS)	32500	0.12	0.07%	0.04
Southern willow scrub (SWS)	63320	0.08	0.05%	—
Southern cottonwood–willow riparian forest (SCWRF)	61330	2.59	1.51%	0.04
Southern riparian forest (SRF)	61300	0.10	0.06%	
<i>Subtotal</i>	—	3.87	2.25%	0.08
Total*	—	172.13	100%	3.60

Note:

* Acreages may not sum due to rounding.

Diegan Coastal Sage Scrub: Baccharis-Dominated (32530)

Diegan coastal sage scrub is the most widespread coastal sage scrub in coastal Southern California, extending from Los Angeles into Baja California (Oberbauer et al. 2008). The community mostly consists of drought-deciduous species such as California sagebrush (i.e., coastal sagebrush; *Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). Diegan coastal sage scrub: Baccharis-dominated is similar to Diegan coastal sage scrub except that it is dominated by Baccharis species, including desertbroom (*Baccharis sarothroides*) and/or coyote brush (*B. pilularis*) (Oberbauer et al. 2008). This community typically occurs on disturbed sites or those with nutrient-poor soils, and is often found within other forms of Diegan coastal sage scrub and on upper terraces of river valleys. This community is distributed along coastal and foothill areas in San Diego County.

Diegan coastal sage scrub and all its variants generally are recognized as sensitive plant communities by local, state, and federal resource agencies. It supports a diversity of sensitive plants and animals, and it is estimated that it has been reduced by 75% to 80% of its historical coverage throughout Southern California.

Diegan coastal sage scrub: Baccharis-dominated vegetation located within the southwestern portion of the project site totals 0.97 acres, and is dominated by coyote brush, desertbroom, with Menzies's golden bush (*Isocoma menziesii*) and California brittle bush (*Encelia californica*) (Figures 4.3-1 and 4.3-2).

Diegan Coastal Sage Scrub (32500)

According to Holland (1986), Diegan coastal sage scrub is composed of a variety of soft, low shrubs, characteristically dominated by drought-deciduous species such as California sagebrush, California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonade berry (*Rhus integrifolia*) and laurel sumac. It typically develops on xeric (dry) slopes.

Diegan coastal sage scrub and all its variants generally are recognized as sensitive plant communities by local, state, and federal resource agencies. It supports a diversity of sensitive plants and animals, and it is estimated that it has been reduced by 75% to 80% of its historical coverage throughout Southern California.

On site, the Diegan coastal sage scrub vegetation occurs along the berm at the southern edge of the project site. It is a restored coastal sage scrub area associated with off-site restoration work. The Diegan coastal sage scrub totals approximately 0.12 acres and is dominated by California brittle bush with California sagebrush, Menzies's golden bush, and black sage. This land cover is present within the off-site improvement area as well (Figures 4.3-1 through 4.3-3).

Southern Willow Scrub (63320)

Southern willow scrub is a dense, broad-leafed, winter-deciduous riparian thicket dominated by several willow species (*Salix* spp.), sometimes with scattered emergent Fremont cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*). This community was formerly extensive along the major rivers of coastal Southern California, but is now much reduced (Oberbauer et al. 2008).

There is a very small patch of southern willow scrub, totaling 0.08 acres, mapped next to the Recycling Buyback Center southwest of the Stadium. It is created by a storm drain that outlets runoff from the adjacent commercial areas. A review of historical aerials show the storm drain was constructed in uplands and drains surface runoff from upland areas; therefore, it is not regulated by resource agencies. This small patch of vegetation is dominated by black willows (*Salix gooddingii*), with arroyo willow (*S. lasiolepis*), smilgrass (*Stipa miliacea* var. *miliacea*), curly

dock (*Rumex crispus*), Washington fan palm seedlings (*Washingtonia robusta*), fountain grass (*Pennisetum setaceum*), annual yellow sweetclover (*Melilotus indicus*), and petty spurge (*Euphorbia peplus*).

Southern Cottonwood–Willow Riparian Forest (61330)

Southern cottonwood–willow riparian forest generally consists of tall, open, broadleaved forests that are winter-deciduous. This community is typically dominated by cottonwood (*Populus fremontii*, *P. trichocarpa*) with several tree willows (*Salix* spp.), as well as shrubby willows dominating the understory. Dominant species require moist, bare mineral soils for germination and establishment, and are located on sub-irrigated or frequently overflowed lands along rivers and streams (Oberbauer et al. 2008).

There is 2.59 acres of southern cottonwood–willow riparian forest located in the southwestern portion of the project site associated with a storm drain outlet channel that discharges into the San Diego River (Figure 4.3-2). This land cover is present within the off-site improvement areas as well (Figure 4.3-3) and in Murphy Canyon Creek along the eastern side of the project site (Figure 4.3-1). Dominant species in this area are Fremont cottonwood and arroyo willow, with an understory that is sparse but includes pampas grass (*Cortaderia selloana*).

Southern Riparian Forest (61300)

Southern riparian forest is typically dominated by California sycamore and cottonwoods. This community occurs along streams and rivers (Oberbauer et al. 2008).

There are 0.10 acres of southern riparian forest along Murphy Canyon Creek in the eastern side of the project site (Figure 4.3-1). On site, the southern riparian forest is dominated by an overstory of California sycamore with a grassy, disturbed understory.

Disturbed Habitat (11000)

Disturbed habitat is a land cover type characterized by a predominance of non-native species, often introduced and established through human action. Oberbauer et al. (2008) describes disturbed land as areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association but continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species (i.e., weeds).

Within the project site there is 0.85 acres of disturbed habitat, which includes ornamental plantings along parking lot barriers and boundaries. This land cover is present within the off-site improvement areas as well (Figure 4.3-1).

Disturbed Wetland (11200)

Disturbed wetland is characterized by areas that are either permanently or periodically inundated by water and have been significantly modified by human activity. Disturbed wetlands are often underlain by artificial structures, such as concrete lining, barricades, rip-rap, piers, or gates. Disturbed wetland is often unvegetated, but may contain scattered native or non-native vegetation (Oberbauer et al. 2008).

There is 0.89 acres of disturbed wetland within Murphy Canyon Creek along the eastern side of the project site (Figure 4.3-1). This portion of Murphy Canyon Creek has been channelized and is concrete-lined.

Urban/Developed (12000)

Urban/developed land refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials (Oberbauer et al. 2008).

Within the project site, urban/developed land dominates the overall land cover, totaling 165.77 acres (96% of the site), and includes paved roads, the large Stadium parking lot, training field, and existing semi-permanent Stadium structure. Urban/developed land is mapped within the off-site areas as well (Figure 4.3-1).

Non-Vegetated Channel or Floodway (64200)

According to Oberbauer et al. (2008), non-vegetated channel is the sandy, gravelly, or rocky fringe of waterways or flood channels that is unvegetated on a relatively permanent basis. Vegetation may be present but is usually less than 10% total cover and grows on the outer edge of the channel.

There is 0.75 acres of non-vegetated channel associated with a storm drain outlet located in the southwestern portion of the project site.

4.3.1.2 Flora

A total of 131 species of native or naturalized plants—66 native (50%) and 65 non-native (50%)—was recorded on the project site (see Appendix 4.3-1).

4.3.1.3 Fauna

The project site supports habitat for common upland and riparian species. Scrub and ornamental habitats within the project site provide foraging and nesting habitat for migratory and resident bird species and other wildlife species. Due to the urbanization in the surrounding area, the fauna composition represents many urban-adapted species.

A total of 84 wildlife species was recorded during the 2019 focused surveys (Appendix 4.3-1).

4.3.1.4 Sensitive Plant Species

Endangered, rare, or threatened plant species, as defined in the California Environmental Quality Act (CEQA) Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status plant species” in this report and include (1) endangered or threatened plant species recognized in the context of the California Endangered Species Act (CESA) and the federal Endangered Species Act (FESA) (CDFW 2018a), and (2) plant species with a California Rare Plant Rank (CRPR) of 1 through 3 (CNPS 2019). This report also includes CRPR 4 plant species.

Special-status plant surveys were conducted within the project site to determine the presence or absence of plant species that are considered endangered, rare, or threatened under CEQA Guidelines Section 15380 (14 CCR 15000 et seq.). A list of potentially occurring plants was generated as part of the literature review. Each species’ potential to occur on site was evaluated based on the elevation, habitat, and soils present on site; Dudek’s knowledge of biological resources in the area; and the regional distribution of each species. A number of potentially

occurring plant species are conspicuous (e.g., large, woody shrubs) and readily observed if present within an open and largely disturbed site.

Surveys conducted in 2019 recorded three special-status plants—San Diego sagewort (*Artemisia palmeri*; CRPR 4.2), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2), and San Diego marsh-elder (*Iva hayesiana*; CRPR 2B.2)—within the San Diego River portion of the study area. Only San Diego sagewort is mapped in the project site, where a few individuals occur along the riparian/berm edge. No other special-status plants were observed or have a moderate to high potential to occur within the study area during the surveys. The surveys were conducted on April 12, 2019, and July 29, 2019, which coincides with the bloom periods for the target species; therefore, they would have been detected if they occurred on site.

Special-status plant species known to occur in the surrounding region that are not expected to occur on site are presented in Appendix 4.3-1.

Critical Habitat

There is no critical habitat designated by the U.S. Fish and Wildlife Service (USFWS) mapped for plant species within the project site or off-site areas. However, there is USFWS-designated critical habitat for one species located within 5 miles of the project site: spreading navarretia (*Navarretia fossalis*; federally threatened, CRPR 1B.1) (USFWS 2019).

4.3.1.5 Sensitive Wildlife Species

Endangered, rare, or threatened wildlife species, as defined in CEQA Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status wildlife species” and, as used in this report, include (1) endangered or threatened wildlife species recognized in the context of CESA and FESA (CDFW 2018b); (2) California Species of Special Concern (SSC) and Watch List (WL) species, as designated by the California Department of Fish and Wildlife (CDFW) (CDFW 2018c); (3) mammals and birds that are fully protected species, as described in the California Fish and Game Code, Sections 4700 and 3511; and (4) Birds of Conservation Concern, as designated by the USFWS (USFWS 2008).

Special-status wildlife species that were observed on site or have a moderate potential to occur are described in this section. Special-status wildlife species that are known to occur in the surrounding region but that were absent or have low potential to occur on site are presented in Appendix 4.3-1. For each species listed, Dudek determined whether the species had the potential to occur on site based on information gathered during the literature review and site visits, including the location of the project site, vegetation communities or land covers present, current site conditions, and past and present land use.

Critical Habitat

There is no USFWS-designated critical habitat for wildlife species mapped within the project site or off-site areas. However, there is USFWS-designated critical habitat for two species located within 5 miles of the project site: San Diego fairy shrimp (*Branchinecta sandiegonensis*; federally endangered (FE)) and least Bell’s vireo (*Vireo bellii pusillus*; FE, state endangered (SE)) (USFWS 2019).

Species Observed or with Potential to Occur On Site

Special-Status Amphibians and Reptiles

There is potential for Southern California legless lizard (*Anniella stebbinsi*; SSC), orange-throated whiptail (*Aspidoscelis hyperythra*; WL), Coronado skink (*Plestiodon skiltonianus interparietalis*; WL), and western spadefoot (*Spea hammondi*; SSC) to occur within the riparian habitat associated with the channel in the southwestern portion of the project site and/or Murphy Canyon Creek. While the southern willow scrub area is approximately 500 feet away from suitable habitat, this area provides moderately suitable habitat for these species. However, these species were not observed during surveys for the project.

Special-Status Birds

Least Bell's vireo was observed in the San Diego River during the 2019 focused surveys. It was also detected in the riparian area that extends south of Fenton Parkway during a site visit on July 2, 2019, and was previously documented near the same location during focused surveys in 2017 for the Stadium Wetland Mitigation project (Dudek 2017). Figures 4.3-1 and 4.3-2 include the 2017 and 2019 observations. Least Bell's vireo was not detected in the southern willow scrub located near the Recycling Buyback Center and given its marginal suitability, this area is not considered suitable habitat for least Bell's vireo. Similarly, no least Bell's vireo were recorded in Murphy Canyon Creek during the 2019 focused surveys and there are no records in the USFWS Critical Habitat and Occurrence Data, the CDFW California Natural Diversity Database, or eBird (USFWS 2019; CDFW 2019; Cornell Lab of Ornithology 2019). Murphy Canyon Creek is a narrow channel between the Stadium parking lot and I-15, with intermittent riparian vegetation. Given the lack of records and the marginal habitat, it is not considered suitable habitat for least Bell's vireo.

Willow flycatcher (*Empidonax traillii*) consists of five subspecies, three of which are native to Southern California. All three are listed as endangered under CESA, but only *E. t. extimus* (FE, SE), more commonly known as the southwestern willow flycatcher, is also federally listed. Only the southwestern willow flycatcher is known to breed and reside in San Diego County. The other two willow flycatcher subspecies, while occasionally observed in San Diego County, are considered migrants. Surveys for southwestern willow flycatcher were negative. There is one record of southwestern willow flycatcher in the San Diego River downstream of El Capitan Reservoir (approximately 20 miles from the project site) from June 22, 2009; one record in Chocolate Canyon just south of El Capitan Reservoir on July 8, 2010; and two pairs nesting at the north end of El Capitan Reservoir in 2001 (USFWS 2019; CDFW 2019). There are no other records of the southwestern willow flycatcher subspecies in the San Diego River (CDFW 2019; USFWS 2019; Cornell Lab of Ornithology 2019). There are willow flycatcher (*E. traillii*) records in eBird (Cornell Lab of Ornithology 2019) in the San Diego River. However, none of the records is during the "non-migrant" period (i.e., about June 15 to July 20); willow flycatchers detected only outside of this period are likely migrants (Sogge et al. 2010). Given the lack of possible breeding individuals (i.e., southwestern willow flycatchers) recorded since 2009 and the lack of any willow flycatchers detected during the 2019 focused protocol surveys, it is unlikely that southwestern willow flycatcher occurs within the study area. However, there is suitable habitat in the San Diego River for this species and thus it has the potential to occur on site in the future.

Cooper's hawk (*Accipiter cooperii*; WL), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; WL), yellow-breasted chat (*Icteria virens*; SSC), and yellow warbler (*Setophaga petechia*; Bird of Conservation Concern, SSC) were detected within the study area (Figures 4.3-1 and 4.3-2).

Surveys for coastal California gnatcatcher (*Polioptila californica californica*; federally threatened; SSC) were negative. Given the small patch of Baccharis-dominated Diegan coastal sage scrub and the narrow Diegan coastal sage scrub along the berm between the river and the Stadium parking lot, the habitat is considered marginal for coastal California gnatcatcher. This species is not expected to nest on site.

Special-Status Mammals

There is potential for Mexican long-tongued bat (*Choeronycteris mexicana*; SSC) and western red bat (*Lasiurus blossevillii*; SSC) to forage on site and roost in the riparian habitat associated with the channel in the southwestern portion of the project site. Nevertheless, neither bat species was observed on site. In fact, no special-status mammals have been observed on site.

4.3.1.6 Wetlands/Jurisdictional Resources

The project site was surveyed to determine the presence of an ordinary high water mark along two potential drainage channels, Murphy Canyon Creek, and a portion of the San Diego River directly south of the project site (“off-site”) (Table 4.3-2).

Table 4.3-2. Jurisdictional Aquatic Resources within the Project Site and Off-Site Areas

Jurisdictional Aquatic Resource	Project Site (acres)	Off-Site Areas (acres)
ACOE/RWQCB/CDFW Jurisdictional		
Non-wetland waters – ephemeral/riparian area	0.58	—
Non-wetland water – ephemeral	0.74	—
Wetland	0.53	0.01
<i>Subtotal</i>	<i>1.85</i>	<i>0.01</i>
CDFW-only Jurisdictional		
Riparian area	2.58	0.03
Total*	4.43	0.04

Notes: ACOE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

* Acreages may not sum due to rounding.

There are no National Hydrographic Database blue-line stream channels within the project site, but there is one blue-line stream channel associated with the San Diego River just south of the on-site storm drain outlet channel. This drainage is regulated by the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and CDFW. It supports hydrophytic vegetation and hydrology, but not hydric soils. Thus, it does not qualify as a wetland, but does support surrounding riparian habitat regulated by CDFW. The wetland determination data forms are included in Appendix 4.3-1. Vegetation present along the drainage was predominantly cottonwood and arroyo willow but included pampas grass among other sparse herbaceous vegetation. The drainage observed on site had a defined bed and bank, evidence of an ordinary high water mark, and a channel bed 12 feet wide and approximately 300 feet long; thus, it was determined to be a jurisdictional water. Flows within this drainage are directed south and connect with the San Diego River just outside the project boundary.

There is another feature located near the Recycling Buyback Center that conveys runoff from the surrounding developments into a defined channel with evidence of an ordinary high water mark, and a channel bed approximately 5 feet wide and 117 feet long. The runoff is then directed into a culvert where it flows beneath the

Stadium parking lot and outlets into the San Diego River. This feature is regulated by ACOE, RWQCB, and CDFW and the surrounding riparian vegetation is regulated by CDFW.

Murphy Canyon Creek is a narrow, incised channel located along the eastern boundary of the site. The channel bottom is approximately 20 feet wide; the upstream portion is concrete-lined and becomes earthen-lined just south of San Diego Mission Road until it terminates in the San Diego River. The channel is a non-wetland waters of the United States and state. The adjacent steep slopes are composed of native and non-native riparian habitat regulated by CDFW only.

A temporary impact is planned in the off-site portion of the San Diego River in southern cottonwood–willow riparian forest, of which a portion is a wetland waters of the United States and along the slope it is a riparian vegetation regulated by CDFW only.

4.3.1.7 Habitat Connectivity and Wildlife Corridors

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of wildlife from high-density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife corridors are considered sensitive by resource and conservation agencies.

Canyonlands in San Diego are rapidly disappearing and are largely the only habitat corridors that still remain within urbanized areas of San Diego. There are no canyonlands within or adjacent to the project site. The largest open space areas within the vicinity of the project site are the San Diego River, located directly adjacent to the southern boundary of the project site; Murphy Canyon, located 1.2 miles northeast of the project site; Marine Corps Air Station Miramar, located 5.2 miles north of the project site; and Mission Trails Regional Park, located 5.6 miles northeast of the project site.

The project site vicinity includes existing urban development to the west; existing urban development and I-15 to the east; the San Diego River and I-8 to the south; and steep hillsides and residential development to the north. Much of the project site is located within the existing development footprint of the SDCCU Stadium. Due to the nearby urban areas, highways, and existing Stadium, wildlife are not expected to use the project site as a wildlife corridor; however, there may be movement of urban-adapted wildlife species through the existing area when it is not being used by people.

There are three features—Murphy Canyon Creek along the eastern boundary of the project site; the San Diego River, which runs east to west along the southern boundary of the project site; and the storm drain outlet channel in the western portion of the project site—that likely support wildlife movement. The storm drain outlet channel is not considered a linkage within the area as it does not connect two parcels of native habitat, but is instead a small cul-de-sac feature for species that may use the San Diego River. Murphy Canyon Creek, however, does support a linkage function from Murphy Canyon to the San Diego River and would be considered suitable for smaller wildlife species, particularly birds and reptiles, to move in a north–south direction. The San Diego River serves as habitat for both migratory birds and year-round birds, as well as providing foraging habitat and movement for avian and terrestrial species both up and downstream.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

FESA of 1973 (16 USC 1531 et seq.), as amended, is administered by USFWS, the National Oceanic and Atmospheric Administration, and the National Marine Fisheries Service. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under the provisions of Section 9(a)(1)(B) of FESA, it is unlawful to “take” any listed species. “Take” is defined in Section 3(19) of FESA as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans (HCPs) on private property without any other federal agency involvement. Upon development of an HCP, USFWS can issue incidental take permits for listed species.

FESA provides for designation of Critical Habitat, defined in Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features “essential to the conservation of the species” are found and “which may require special management considerations or protection.” Critical Habitat may also include areas outside the current geographical area occupied by the species that are nonetheless “essential for the conservation of the species.”

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, “take” is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA to only prohibit intentional take. Unintentional or accidental take is not prohibited (DOI 2017). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Clean Water Act, Section 404

Pursuant to Section 404 of the Clean Water Act, the discharge of dredged and/or fill material into “waters of the United States” is regulated by ACOE. The term “wetlands” (a subset of waters) is defined in 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark,” which is defined in 33 CFR 328.3(e).

Section 320.4(b)(2) of the ACOE General Regulatory Policies (33 CFR 320–330) list criteria for consideration when evaluating wetland functions and values. These include wildlife habitat (spawning, nesting, rearing, and resting), food chain productivity, water quality, groundwater recharge, and areas for the protection from storm and floodwaters.

State

California Endangered Species Act

CESA (California Fish and Game Code, Section 2050 et seq.) prohibits the take of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in the State of California. CESA is regulated by CDFW. Under CESA Section 86, “take” is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA Section 2053 stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy.”

CESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species by stating:

No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001).

California Fish and Game Code, Sections 3503, 3511, and 4700

According to Sections 3511 and 4700 of the California Fish and Game Code, which regulate birds and mammals, respectively, a fully protected species may not be taken or possessed without a permit from the Fish and Game Commission, and “incidental take of these species is not authorized.

According to Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Finally, Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

For the purposes of these state regulations, CDFW currently defines an active nest as one that is under construction or in use, and includes existing nests that are being modified. For example, if a hawk is adding to or maintaining an existing stick nest in a transmission tower, then it would be considered to be active and would be covered under these California Fish and Game Code sections.

California Fish and Game Code, Section 1602

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. A

Streambed Alteration Agreement is required for impacts to jurisdictional wetlands in accordance with Section 1602 of the California Fish and Game Code.

Porter–Cologne Water Quality Control Act

The intent of the Porter–Cologne Water Quality Control Act (Porter–Cologne Act) is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter–Cologne Act include isolated waters that are no longer regulated by ACOE. Developments with impacts to jurisdictional waters must demonstrate compliance with the goals of the Porter–Cologne Act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a Clean Water Act Section 401 certification.

Natural Community Conservation Plan

Section 2835 of the California Fish and Game Code allows CDFW to authorize incidental take in a natural community conservation plan (NCCP). Take may be authorized for identified species whose conservation and management is provided for in the NCCP, whether or not the species is listed as threatened or endangered under FESA or CESA, provided that the NCCP complies with the conditions established in Section 2081 of the California Fish and Game Code. The NCCP provides the framework for the San Diego Multiple Species Conservation Program (MSCP) Plans.

Regional

Multiple Species Conservation Program

The MSCP is a comprehensive, regional long-term habitat conservation program designed to provide the local regulatory agency—in this case, the City of San Diego—with the ability to authorize take of certain “covered” species pursuant to CESA and FESA. The MSCP addresses habitat and species conservation within approximately 900 square miles in the southwestern portion of San Diego County (County of San Diego 1998), including areas within the City of San Diego. It serves as an approved HCP under Section 10 of FESA and as an approved NCCP pursuant to the state Natural Communities Conservation Planning Act (County of San Diego 1998).

The MSCP establishes a preserve system designed to conserve large blocks of interconnected habitat having high biological value, which are delineated as the Multi-Habitat Planning Area (MHPA). The City MHPA is an area within which a “hard line” preserve will be established in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997).

The MSCP identifies 85 plants and animals to be “covered” under the plan (“Covered Species”). Many of these Covered Species are subject to one or more protective designations under state and/or federal law and some are endemic to San Diego. The MSCP seeks to provide adequate habitat in the preserve to maintain ecosystem functions and persistence of extant populations of the 85 Covered Species, while also allowing participating landowners take of Covered Species on lands located outside of the preserve. The purpose of the MSCP is to address species conservation on a regional level and thereby avoid project-by-project biological mitigation, which tends to fragment habitat.

Within the City, the MSCP is implemented through the *City of San Diego MSCP Subarea Plan* (Subarea Plan) (City of San Diego 1997), as described below. The project site is located within the City's MSCP Subarea Plan area.

SDSU was not involved with the preparation of the MSCP in the mid-1990s. SDSU is not signatory to the San Diego MSCP and is therefore not a "permittee" under this HCP. SDSU also would not benefit from the take coverage provided by the Implementing Agreement. Because SDSU is not a permittee of this HCP and because SDSU does not need to obtain any entitlements that would constitute a discretionary action by the City, adherence to the restrictions typically placed on land within the MHPA as per the City's Biological Resource Guidelines does not apply to SDSU or SDSU-owned land. SDSU also is not subject to the City's land use policies.

Local

City of San Diego Multiple Species Conservation Program Subarea Plan

The City Subarea Plan (1997) encompasses 206,124 acres within the MSCP Subarea Plan area. The site is located within the Urban area of the Subarea Plan. Urban habitat areas within the MHPA include existing designated open space such as Mission Bay, Tecolote Canyon, Marian Bear Memorial Park, Rose Canyon, San Diego River, the southern slopes along Mission Valley, Carroll and Rattlesnake Canyons, Florida Canyon, Chollas Creek, and a variety of smaller canyon systems. The eastern area of the Subarea Plan includes East Elliott and Mission Trails Regional Park.

The MSCP Subarea Plan is characterized by urban land uses, with approximately three-quarters of the Subarea Plan area either built out or retained as open space/park system. The City MHPA is an area within which a hard line preserve will be developed by the City in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997). The MHPA is considered an urban preserve that is constrained by existing or approved development, and is composed of habitat linkages connecting several large core areas of habitat (City of San Diego 1997, Figure 1-3, Multi-Habitat Planning Area, and Figure 1-4, Core Areas and Habitat Linkages). The criteria used to define core and linkage areas involves maintaining ecosystem function and processes, including large animal movement. Each core area is connected to other core areas or to habitat areas outside of the MSCP either through common boundaries or through linkages. Core areas have multiple connections to help ensure that the balance in the ecosystem will be maintained (City of San Diego 1997). Critical habitat linkages between core areas are conserved in a functional manner with a minimum of 75% of the habitat within identified linkages conserved (City of San Diego 1997).

As discussed previously, SDSU was not involved with the preparation of the Subarea Plan and is therefore not a permittee under this HCP. Because SDSU is not a permittee of this HCP and because SDSU does not need to obtain any entitlements that would constitute a discretionary action by the City, the restrictions typically placed on land within the MHPA per the City's Biological Resource Guidelines do not apply to SDSU or SDSU-owned land. SDSU also is not subject to the City's land use policies.

City of San Diego Biology Guidelines

The City's Development Services Department developed the Biology Guidelines presented in the Land Development Manual "to aid in the implementation and interpretation of the Environmentally Sensitive Lands Regulations (ESL), San Diego Land Development Code (LDC), Chapter 14, Division 1, Section 143.0101 et seq, and the Open Space Residential (OR-1-2) Zone, Chapter 13, Division 2, Section 131.0201 et seq." (City of San

Diego 2012). The guidelines also provide standards for the determination of impact and mitigation under CEQA. The State of California, as the lead agency, is not subject to the City's guidelines; however, this section includes the same level of detail and analysis that is expected for a report that is within the City's jurisdiction.

4.3.3 Significance Criteria

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to biological resources would occur if the project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
7. Result in a cumulative impact to biological resources.

4.3.4 Impacts Analysis

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Direct Impacts

Least Bell's Vireo

Least Bell's vireo is a federally and state-listed endangered species. Least Bell's vireo was recorded in the southern cottonwood–willow riparian forest habitat in the southwestern portion of the project site during a site visit on July 2, 2019, and in the San Diego River during the focused 2019 surveys. Least Bell's vireo was also observed during focused surveys in 2017 (Dudek 2017), which includes an observation within the project site (Figure 4.3-4, Impacts to Biological Resources – Project Site, and Figure 4.3-5, Impacts to Biological Resources – Fenton Parkway Extension).

The project would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern cottonwood–willow riparian forest associated with the storm-drain-fed intermittent channel, which has potential to support the special-status least Bell's vireo. By impacting a portion of the potential southern cottonwood–willow riparian

forest that is adjacent to the trolley tracks as part of the River Park and Shared Parks and Open Space design or the Fenton Parkway roadway extension, the proposed project would adversely affect suitable habitat for this species. Given the presence of least Bell's vireo on site, this impact is considered **potentially significant** absent mitigation (**Impact BIO-1**). Impacts to a federally and state-listed species requires take authorization from USFWS and CDFW.

The small patch of southern willow scrub on site (0.08 acres) is isolated and surrounded by development and human activity; therefore, it is not considered suitable for least Bell's vireo. Similarly, no least Bell's vireo were recorded in Murphy Canyon Creek during the 2019 focused surveys and there are no USFWS, CNDDDB, or eBird records (USFWS 2019; CDFW 2019; Cornell Lab of Ornithology 2019). Murphy Canyon Creek is a narrow channel between the Stadium parking lot and I-15, with intermittent riparian vegetation. Given the lack of records and the marginal habitat, it is not considered suitable habitat for least Bell's vireo. Further, no impacts to the southern willow scrub or Murphy Canyon Creek would occur.

Willow Flycatcher, Including Southwestern Willow Flycatcher

Willow flycatcher (*E. traillii*) consists of five subspecies, three of which—*E. t. brewsteri*, *E. t. adastus*, and *E. t. extimus*—are native to Southern California. All three are listed as endangered under CESA, but only *E. t. extimus*, more commonly known as the southwestern willow flycatcher, is also federally listed. In addition, only the southwestern willow flycatcher is known to breed and reside in San Diego County. The other two willow flycatcher subspecies, while occasionally observed in San Diego County, are considered migrants.

Southwestern willow flycatcher was not observed during focused protocol surveys in 2019. Surveys conducted in the San Diego River as part of the Stadium Wetland Mitigation project in 2017 were also negative for all willow flycatcher subspecies (Dudek 2017). There is one record of southwestern willow flycatcher in the San Diego River downstream of El Capitan Reservoir (approximately 20 miles from the project site) from June 22, 2009; one record in Chocolate Canyon just south of El Capitan Reservoir on July 8, 2010; and two pairs nesting at the north end of El Capitan Reservoir in 2001 (USFWS 2019; CDFW 2019). There are no other records of the southwestern willow flycatcher in the San Diego River (CDFW 2019; USFWS 2019; Cornell Lab of Ornithology 2019; Unitt 2004). There are willow flycatcher (*E. traillii*) records in eBird (Cornell Lab of Ornithology 2019) in the San Diego River. However, none of the records is during the “non-migrant” period (i.e., about June 15 to July 20); willow flycatchers detected only outside of this period are likely migrants (Sogge et al. 2010). Given the lack of possible breeding individuals (i.e., southwestern willow flycatchers) recorded since 2009 and the lack of any willow flycatchers detected during the 2019 focused protocol surveys, it is unlikely that southwestern willow flycatcher occurs within the study area. However, there is suitable habitat in the San Diego River for this species and thus it has the potential to occur on site in the future.

The impacts associated with project implementation would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern cottonwood–willow riparian forest associated with the storm-drain-fed intermittent channel, which has potential to support this species. If southwestern willow flycatcher were to occur on site in the future, impacts to individuals of the species and/or occupied habitat would be considered **potentially significant** absent mitigation (**Impact BIO-2**).

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed threatened species and a CDFW SSC. Focused surveys were conducted in 2019 to determine presence or absence within the Baccharis-dominated Diegan coastal sage scrub and/or Diegan coastal sage scrub on site. No coastal California gnatcatcher were observed.

The impacts associated with project implementation would result in permanent impacts (0.05 acres) and temporary impacts (0.21 acres) to Baccharis-dominated Diegan coastal sage scrub and Diegan coastal sage scrub. No coastal California gnatcatcher were detected during focused surveys to date; the habitat is marginal and patchy, and not expected to support this species. Therefore, **no direct impacts** to this species would occur.

Other Special-Status Birds

Other special-status birds were detected within the study area during the focused riparian bird surveys, including Cooper's hawk, Southern California rufous-crowned sparrow, yellow-breasted chat, and yellow warbler.

While most of these birds have been observed in the San Diego River portion of the study area, the project would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern cottonwood–willow riparian forest associated with the storm-drain-fed intermittent channel, which has potential to support these special-status species. Impacts to this habitat would be considered **potentially significant** absent mitigation (**Impact BIO-3**). No impacts to the southern willow scrub or Murphy Canyon Creek would occur.

Special-Status Amphibians and Reptiles

The Southern California legless lizard, orange-throated whiptail, Coronado skink, and western spadefoot have moderate potential to occur in the riparian vegetation in the southwestern portion of the site and/or Murphy Canyon Creek, as well as the small area of southern willow scrub near the Recycling Buyback Center. These species are not federally or state listed as threatened or endangered, but are CDFW SSC. The species were not observed during Dudek's survey of the project site.

The impacts associated with the proposed project would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern willow scrub and southern cottonwood–willow riparian forest and the associated storm-drain-fed intermittent channel, which has potential to support these special-status reptile and amphibian species. Impacts to this potentially occupied habitat would be considered **potentially significant** absent mitigation (**Impact BIO-4**). No impacts to the southern willow scrub habitat or Murphy Canyon Creek would occur.

Special-Status Mammals

The Mexican long-tongued bat and western red bat have potential to forage over the project site. These species are not federally or state listed as threatened or endangered, but are CDFW SSC. While minor impacts to potentially suitable foraging habitat would be associated with the proposed project, impacts to foraging habitat would not have a substantially adverse effect on these species and would be considered **less than significant**. The riparian trees provide suitable roosting habitat for some bat species, including Mexican long-tongued bat and western red bat. Maternity roosts are protected under the California Fish and Game Code and can be considered a nursery site. Impacts to maternity roosts would be considered **potentially significant** absent mitigation (**Impact BIO-5**). No impacts to the southern willow scrub habitat or Murphy Canyon Creek would occur.

Birds Protected Under the Migratory Bird Treaty Act and Fish and Game Code

The MBTA prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA to only prohibit intentional take. Unintentional or accidental take is not prohibited (DOI 2017). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds,

requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Construction activities are anticipated to occur during the bird nesting season (typically February 1 through September 15) in order to achieve the schedule required by San Diego Municipal Code (SDMC) Section 22.0908(i), which provides that “River Park improvements shall be made at no cost to the City General Fund and completed not later than seven years from the date of execution of the sales agreement,” and Section 22.0908(j), which provides that the “construction of the Joint Use Stadium shall be completed not later than seven years from the date of execution of the sales agreement.” The proposed project is anticipated to begin construction in February 2020 and would be phased over approximately 17 years through buildout. There are numerous birds that could nest within or adjacent to the project site. Therefore, impacts to migratory birds or destruction of active migratory bird nests and/or eggs would be considered a **potentially significant** impact because they are protected under the MBTA and California Fish and Game Code (**Impact BIO-6**).

Special-Status Plants

Three special-status plants were observed within the study area: San Diego sagewort, southwestern spiny rush, and San Diego marsh-elder. Southwestern spiny rush and San Diego marsh-elder are located outside of the proposed impact area; therefore, no direct impacts to these species would occur. One San Diego sagewort is mapped within the developed footprint. Impacts to one San Diego sagewort would be **less than significant** because it is a fairly common plant with a low sensitivity status (CRPR 4).

Indirect Impacts

Short-Term Indirect Impacts to Special-Status Plants

Project construction could cause short-term or temporary indirect impacts to San Diego marsh-elder, which occurs adjacent to the site. Such impacts include those related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Short-term indirect impacts associated with project implementation that could affect the special-status plants if they occur adjacent to the project site are described in detail in the following paragraphs.

Generation of Fugitive Dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the limits of grading. Hydrologic alterations include changes in flow rates and patterns in drainages and dewatering, which may affect adjacent and downstream (off-site) aquatic, wetland, and riparian vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into adjacent vegetation communities. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that

may disperse seed. Because San Diego marsh-elder occurs within riparian areas, this species can be affected by changes in hydrology, such as those described above.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status plants. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants, such as San Diego marsh-elder.

Short-term indirect impacts to special-status plants associated with project implementation would be **potentially significant** absent mitigation (**Impact BIO-7**).

Long-Term Indirect Impacts to Special-Status Plants

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed development to San Diego marsh-elder located adjacent to the project site after construction. Permanent indirect impacts associated with project implementation that could affect special-status plants include habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive plant species, increased human activity, and alteration of the natural fire regime. Each of these potential indirect impacts is discussed in the following paragraphs.

Chemical Pollutants. The effects of chemical pollutants on San Diego marsh-elder are described above. During landscaping activities, herbicides may be used to prevent certain types of vegetation from reoccurring around structures. However, weed control treatments shall include only legally permitted chemical, manual, and mechanical methods. Additionally, the herbicides used during landscaping activities will be contained within the project impact footprint.

Altered Hydrology. Water would be used for landscaping purposes that could alter the on-site hydrologic regime. Further, as explained above, topographic alterations may result in changes in flow rates and patterns in drainages and dewatering, which may affect adjacent and downstream (off-site) aquatic, wetland, and riparian vegetation communities. These hydrologic alterations may affect San Diego marsh-elder, particularly since they occur in riparian areas. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants (*Linepithema humile*), which can compete with native ant species that could be seed dispersers or plant pollinators.

However, the proposed River Park and Shared Parks and Open Space along the border with the San Diego River and Murphy Canyon Creek will provide a natural buffer between the development and river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. Accordingly, the proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with Municipal Separate Storm Sewer System (MS4) requirements. This will improve the current runoff conditions, which convey surface runoff from the Stadium parking lot into the outfall structures without basins to filter sediment and pollutants. Long-term indirect impacts to the San Diego River associated with altered hydrology are expected to improve as a result of the proposed project. Accordingly, the water, and associated runoff, used during landscaping activities will be retained and treated within the project site, and long-term indirect impacts to San Diego marsh-elder associated with altered hydrology are not expected.

Non-Native, Invasive Plant Species. Invasive plant species that thrive in edge habitats are well documented in Southern California and throughout the United States. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, exotic plant competition for light, water, and nutrients and the formation of thatches that block sunlight from reaching smaller native plants.

The project site already contains invasive species (e.g., pampas grass). Exotic plant species may establish adjacent to the project site, and alter habitats and displace native species over time, leading to extirpation of native plant species and unique vegetation communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within vegetation communities and special-status plant populations.

Increased Human Activity. Increased human activity could result in the potential for trampling of vegetation outside of the impact footprint, as well as soil compaction, and could affect the viability of plant communities. Trampling can alter the ecosystem, creating gaps in vegetation and allowing exotic, non-native plant species to become established, leading to soil erosion. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion.

An increased human population increases the risk for damage to vegetation communities, special-status plants, and wildlife corridors.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire in the adjacent habitat, including, but not limited to, fire associated with potential barbecues in the River Park and Shared Parks and Open Space and the introduction of new construction.

Long-term indirect impacts to San Diego marsh-elder associated with project implementation are considered **potentially significant** absent mitigation (**Impact BIO-8**).

Short-Term Indirect Impacts to Special-Status Wildlife Species

Short-term, construction-related, or temporary indirect impacts to special-status wildlife species that were observed or have moderate potential to occur (see Appendix 4.3-1) would primarily result from construction activities associated with project implementation. Potential temporary indirect impacts could occur as a result of generation of fugitive dust, noise, lighting, chemical pollutants, increased human activity, and non-native animal species.

Generation of Fugitive Dust. Dust and applications for fugitive dust control can impact vegetation surrounding the limits of grading, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species.

Noise. Construction-related noise from equipment used during construction. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, cited in Lovich and Ennen 2011). The existing measured noise levels within the San Diego River south of the project, and near the riparian vegetation adjacent to Fenton Parkway ranged from 59 to 64 A-weighted decibels (dBA) equivalent noise level (L_{eq}). (Appendix 4.12-1). These levels are generally higher than the 60 dBA L_{eq} threshold typically used for analyzing impacts to special-status species, like least Bell's vireo. During construction, the noise levels at a distance of 475 feet from the riparian area in the southwest corner (near noise monitoring location ST7) is 71 dBA L_{eq} . Noise levels at a distance of 200 feet from the San Diego River south of the project (near noise monitoring locations ST6, STR1, and STR2) is approximately 79 dBA L_{eq} (Appendix 4.12-1).

Lighting. Nighttime lighting will occur during portions of the construction phasing. The nighttime construction will be associated with utility improvements located in existing disturbed and developed areas associated with the

construction of the new Stadium located approximately 2,000 feet from the San Diego River and light would be shielded away from the river; therefore, lighting is not expected to be an impact to adjacent native habitat.

Chemical Pollutants. Accidental spills of hazardous chemicals could contaminate nearby surface waters and groundwater and indirectly impact wildlife species through poisoning or altering suitable habitat.

Increased Human Activity. Construction activities adjacent to the San Diego River and Murphy Canyon Creek can deter wildlife from using already constrained habitat areas near the project site.

Non-Native Animal Species. Trash from construction-related activities could attract invasive predators (e.g., ravens [*Corvus corvax*], coyotes [*Canis latrans*], rats [*Rattus* spp.], Virginia opossums [*Didelphis virginiana*], raccoons [*Procyon lotor*], American crows [*Corvus brachyrhynchos*], and gulls [*Larus* spp.]) that could impact the wildlife species in the project site or surrounding areas.

Short-term indirect impacts to special-status wildlife species associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-9**).

Long-Term Indirect Impacts to Special-Status Wildlife Species

Potential long-term or permanent indirect impacts associated with project implementation to special-status wildlife species that have moderate potential to occur (see Appendix 4.3-1) include non-native, invasive plant and animal species; noise; lighting; increased human activity; alteration of the natural fire regime; and altered hydrology.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are well-documented in Southern California and throughout the United States. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, the fact that exotic plants compete for light, water, and nutrients, and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for special-status wildlife species. In addition, trash can attract invasive predators, such as ravens and coyotes, that could impact the wildlife species on the project site. Least Bell's vireo, which have been documented in the San Diego River, are susceptible to nest parasitism from brown-headed cowbirds (*Molothrus ater*).

Noise. Operation-related noise can have the same type of impacts to wildlife described above under the short-term indirect impacts. As described above, the existing measured noise levels within the San Diego River south of the project and near the riparian vegetation adjacent to Fenton Parkway ranged from 59 to 64 dBA L_{eq} (Appendix 4.12-1). These levels are higher than the 60 dBA L_{eq} threshold typically used for analyzing impacts to special-status species, like least Bell's vireo. The predicted operational noise levels range from 60 to 65 dBA L_{eq} within the San Diego River south of the project and near the riparian vegetation adjacent to Fenton Parkway (Appendix 4.12-1). These noise changes (up to 1 dBA L_{eq}) are not enough to result in long-term impacts to special-status species.

Lighting. Lighting would be installed around the exterior of the new Stadium. The design goal is to limit light spill illumination to surrounding areas to 0.5 foot-candles, approximately 200 feet from the Stadium's perimeter. In addition, all lighting sources would be directed downwards or otherwise shielded so as to keep light and glare confined within the project boundary. This will help minimize light intrusion into sensitive habitat areas occupied by least Bell's vireo as well as southwestern willow flycatcher, should this species pass through the project site in the future.

Outside lighting would be installed around the commercial and residential buildings, parking areas, and interior roads; however, these structures would be located away from the San Diego River and Murphy Canyon Creek.

Within the River Park and Shared Parks and Open Space, several lighted sports fields and courts are proposed. These sports fields include soccer and baseball fields, as well as basketball and tennis courts. These fields and courts would be set back a minimum of 100 feet from the San Diego River. With lighting design and shielding devices internal to the luminaire, there should be no light spillage into the River Corridor Area, and lighting should be directed away from sensitive areas to ensure consistency with the MSCP's Land Use Adjacency Guidelines. For security purposes, trails within the River Park and Shared Parks and Open Space would have nighttime lighting. Similar to the sports fields, lighting would be shielded, with directional LEDs so there would be very little light spill. The trail closest to the river is generally 100 feet from the river and at the closest point is approximately 86 feet from the river. The installation of the River Park and Shared Parks and Open Space will provide a natural buffer between the Stadium, commercial and residential buildings, and the San Diego River and Murphy Canyon Creek. Lighting will be directed away from the San Diego River and Murphy Canyon Creek.

Increased Human Activity. The proposed project includes the replacement of the SDCCU Stadium and additional development of a campus village and research park with office, retail, parks/recreation, hospitality, and residential uses. A River Park and Shared Parks and Open Space is planned along the southern project border with the San Diego River. While the current use is an existing Stadium that receives regular use by people, the proposed project would result in an increased population within the Mission Valley Community Plan area of approximately 8,510 residents and approximately 8,000 permanent employees (Appendix 4.13-1). Increased human activity could result in the potential for trampling of vegetation and soil compaction outside of the impact footprint, and could affect the viability and function of suitable habitat for wildlife species. An increased human population increases the risk for damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas near the proposed project footprint, particularly if people go into the San Diego River or Murphy Canyon Creek.

Alteration of the Natural Fire Regime. The proposed project would potentially increase the risk of fire in the adjacent habitat, including, but not limited to, fire associated with human error. However, the current Stadium allows tailgate barbeques that could result in accidental fires in adjacent habitat. The River Park and Shared Parks and Open Space would not allow open fires or barbeques, thus reducing the potential for fires in adjacent habitat areas.

Altered Hydrology. Water would be used for landscaping purposes that may alter the on-site hydrologic regime. Further, as explained above, topographic alterations may result in changes in flow rates and patterns in drainages and dewatering, which may affect adjacent and downstream (off-site) aquatic, wetland, and riparian vegetation communities. These hydrologic alterations may affect special-status wildlife species. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators. Changes in plant composition could affect the native vegetation communities and wildlife habitat.

However, the proposed River Park and Shared Parks and Open Space along the border with the San Diego River and Murphy Canyon Creek will provide a natural buffer between the development and river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. Accordingly, the proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. This will improve the current runoff conditions, which convey surface runoff from the Stadium parking lot into the outfall structures without basins to filter sediment and pollutants. Long-term indirect impacts associated with altered hydrology are expected to improve as a result of the proposed project.

Accordingly, the water, and associated runoff, used during landscaping activities will be contained within the project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

Long-term indirect impacts to special-status wildlife species associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-10**).

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Direct Impacts

Sensitive Natural Communities

As described in Section 4.3.1, the project site was surveyed for vegetation communities. The results of the surveys are provided in Table 4.3-1. A total of five native vegetation communities were mapped on the project site, including Baccharis-dominated Diegan coastal sage scrub, Diegan coastal sage scrub, southern willow scrub, southern cottonwood-willow riparian forest, and southern riparian forest; and four non-native vegetation communities or land cover types—urban/developed, disturbed habitat and ornamental plantings, disturbed wetland, and unvegetated channel. Anticipated temporary and permanent impacts to these communities/land covers are shown in Tables 4.3-3 and 4.3-4 and shown on Figure 4.3-4, Figure 4.3-5, and Figure 4.3-6, Impacts to Biological Resources – Off-Site Sewer and Storm Drain Connections.

Table 4.3-3. Temporary On-Site and Off-Site Impacts to Vegetation Communities/Land Cover Types

Habitat Types/Vegetation Communities	Existing On-Site Acres	On-Site Impacts (acres)	Off-Site Impacts (acres)	Total Impacts (acres)
<i>Native Vegetation Communities</i>				
Baccharis-dominated Diegan coastal sage scrub	0.97	0.06	—	0.06
Diegan coastal sage scrub (restored)	0.12	0.11	0.04	0.15
Southern willow scrub	0.08	—	—	—
Southern cottonwood-willow riparian forest	2.59	0.11	0.04	0.15
Southern riparian forest	0.10			
<i>Subtotal</i>	<i>3.87</i>	<i>0.28</i>	<i>0.08</i>	<i>0.36</i>
<i>Non-Native Vegetation Community/Land Cover Types</i>				
Disturbed habitat	0.85	0.10	—	0.10
Disturbed wetland	0.89			
Urban/developed	165.77	0.51	—	0.51
Non-vegetated channel or floodway	0.75	—	—	—
<i>Subtotal</i>	<i>168.26</i>	<i>0.61</i>	<i>—</i>	<i>0.61</i>
Total*	172.13	0.89	0.08	0.97

Note:

* May not total due to rounding.

**Table 4.3-4. Permanent On-Site and Off-Site Impacts to Vegetation Communities/
Land Cover Types**

Habitat Types/Vegetation Communities	Existing On-Site Acres	On-Site Impacts (acres)	Off-Site Impacts (acres)	Total Impacts (acres)
<i>Native Vegetation Communities</i>				
Baccharis-dominated Diegan coastal sage scrub	0.97	0.04	—	0.03
Diegan coastal sage scrub (restored)	0.12	0.01	—	0.01
Southern willow scrub	0.08	—	—	—
Southern cottonwood–willow riparian forest	2.59	0.35	—	0.35
Southern riparian forest	0.10			
<i>Subtotal</i>	<i>3.87</i>	<i>0.40</i>	<i>0</i>	<i>0.40</i>
<i>Non-Native Vegetation Community/Land Cover Types</i>				
Disturbed habitat	0.85	0.04	0.84	0.88
Disturbed wetland	0.89			
Urban/developed	165.77	163.76	2.67	166.43
Non-vegetated channel or floodway	0.75	—	—	—
<i>Subtotal</i>	<i>168.26</i>	<i>163.80</i>	<i>3.51</i>	<i>167.31</i>
Total*	172.13	164.20	3.51	167.71

Note:

* May not total due to rounding.

Temporary impacts to 0.06 acres of Baccharis-dominated Diegan coastal sage scrub, 0.15 acres of restored Diegan coastal sage scrub, 0.10 acres of disturbed habitat, and 0.51 acres of urban/developed land would occur. Temporary impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub would be considered **potentially significant** absent mitigation (**Impact BIO-11**).

Southern cottonwood–willow riparian forest is regulated as riparian habitat by the California Fish and Game Code Section 1600. There are also temporary impacts associated with sewer improvements in the San Diego River (Figure 4.3-6), which would result in temporary impacts to 0.15 acres of southern cottonwood–willow riparian forest. Temporary impacts to these sensitive natural communities would be considered **potentially significant** absent mitigation (**Impact BIO-11**).

Project implementation would result in permanent impacts to Baccharis-dominated Diegan coastal sage scrub (0.04 acres), 0.01 acres of restored Diegan coastal sage scrub, 0.88 acres of disturbed habitat, and 166.43 acres of urban/developed land. Permanent impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub would be considered **potentially significant** absent mitigation (**Impact BIO-12**). Project implementation would also permanently impact 0.35 acres of southern cottonwood–willow riparian forest. Permanent impacts to this sensitive natural community would be considered **potentially significant** absent mitigation (**Impact BIO-12**).

Jurisdictional Waters

Impacts to jurisdictional features are summarized in Tables 4.3-5 and 4.3-6. Temporary impacts total approximately 0.15 acres, which includes impacts to 0.01 acres of wetlands. Temporary impacts to jurisdictional features would

be considered **potentially significant** absent mitigation (**Impact BIO-13**). Permanent impacts total approximately 0.07 acres to non-wetlands waters/CDFW riparian area and 0.28 acres of CDFW riparian area. Permanent impacts to jurisdictional features would be considered **potentially significant** absent mitigation (**Impact BIO-14**).

Table 4.3-5. Temporary On-Site and Off-Site Impacts to Jurisdictional Aquatic Resources

Habitat Types/Vegetation Communities	Existing Project Site (acres)	On-Site Impacts (acres)	Off-Site Impacts (acres)	Total Impacts (acres)
ACOE/RWQCB/CDFW Jurisdictional				
Non-wetland waters – ephemeral/riparian area	0.12	0.03	—	0.03
Non-wetland water – ephemeral	0.15	—	—	—
Wetland	0.53	—	0.01	0.01
<i>Subtotal</i>	<i>0.80</i>	<i>0.03</i>	<i>0.01</i>	<i>0.04</i>
CDFW-Only Jurisdictional				
Riparian area	1.20	0.08	0.03	0.11
Total*	1.99	0.11	0.04	0.15

Note:

* May not total due to rounding.

Table 4.3-6. Permanent Impacts to Jurisdictional Aquatic Resources

Jurisdictional Aquatic Resource	Existing Project Site (acres)	Permanent On-Site Impacts (acres)
ACOE/RWQCB/CDFW Jurisdictional		
Non-wetland waters – ephemeral/riparian area	0.12	0.07
Non-wetland water – ephemeral	0.15	—
Wetland	0.53	—
<i>Subtotal</i>	<i>0.78</i>	<i>0.07</i>
CDFW-Only Jurisdictional		
Riparian area	1.20	0.28
Total*	1.99	0.35

Note:

* May not total due to rounding.

The above impacts to jurisdictional resources would occur as a result of implementation of wet utilities located or proposed for location along the southern edge of the project site and the extension of Fenton Parkway onto the project site. An alternative roadway extension design, the feasibility of which has yet to be determined, which would entail construction of a majority of the road bed on a cantilevered structure, is in preparation. This alternative design would impact similar jurisdictional resources; however, these permanent and temporary impacts would be smaller in quantity due to the use of pier structures or other minimally impactful structural components.

Indirect Impacts

Sensitive Natural Communities (Short-Term and Long-Term)

The project could have short-term and long-term indirect impacts on sensitive natural communities. These would be the same as those described for special-status plants. Such impacts would be considered **potentially significant** absent mitigation (**Impacts BIO-7 and BIO-8**).

Jurisdictional Waters (Short-Term)

Potential short-term or temporary indirect impacts to jurisdictional waters and wetlands adjacent to or downstream from the project site would primarily result from construction activities, and would include impacts related to or resulting from changes in hydrology resulting from construction, including sedimentation and erosion, and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts associated with project implementation that could affect jurisdictional waters and wetlands of the San Diego River and/or Murphy Canyon Creek that occur adjacent to or downstream from the project site are described in detail in the following paragraphs.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area directly toward the San Diego River.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect jurisdictional waters. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

Short-term indirect impacts to jurisdictional waters associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-15**).

Jurisdictional Waters (Long-Term)

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to jurisdictional waters and wetlands of the San Diego River and/or Murphy Canyon Creek after construction, including impacts related to operation and maintenance. Operation and maintenance activities will occur within the project site. Permanent indirect impacts associated with project implementation that could affect jurisdictional waters and wetlands include habitat fragmentation, introduction of chemical pollutants, altered hydrology, non-native invasive plant and animal species, increased human activity, and alteration of the natural fire regime. Each of these potential indirect impacts is discussed in the following paragraphs.

Chemical Pollutants. The effects of chemical pollutants on jurisdictional waters and wetlands are described above.

Altered Hydrology. Water used for landscaping purposes may alter the on-site hydrologic regime. These hydrologic alterations may affect jurisdictional waters and wetlands. However, the water, and associated runoff, used during landscaping activities will be contained within the project impact footprint. The proposed River Park and Shared Parks and Open Space along the border with the San Diego River and Murphy Canyon Creek will provide a natural buffer between the development and river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. Accordingly, the proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. This will improve the current runoff conditions, which convey surface runoff from the Stadium parking lot into the outfall structures

without basins to filter sediment and pollutants. Long-term indirect impacts associated with altered hydrology are expected to improve as a result of the proposed project.

Non-Native, Invasive Plant and Animal Species. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within jurisdictional waters and wetlands.

Increased Human Activity. An increased human population increases the risk for damage to jurisdictional waters and wetlands.

Long-term indirect impacts to jurisdictional waters associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-16**).

Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The project would have no permanent impacts on federally protected wetlands; however, the project would result in temporary impacts to 0.01 acres of wetland waters of the United States (see Table 4.3-5). These impacts are associated with improvements to the sewer connection on the northern side of the San Diego River. Short-term temporary impacts to federally protected wetlands would be considered **potentially significant** absent mitigation (**see Impact BIO-13**).

The project also would have temporary impacts to 0.15 acres of CDFW riparian area and permanent impacts to approximately 0.35 acres of CDFW riparian area. These impacts would be considered **potentially significant** absent mitigation (**see Impacts BIO-13 and BIO-14**).

Short-term and long-term indirect impacts to state and federal wetlands would be considered **potentially significant** absent mitigation (**see Impacts BIO-15 and BIO-16**).

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Direct Impacts

The project site is approximately 96% developed with the existing SDCCU Stadium, parking lot, and roads. Wildlife may use the small riparian area in the southwest corner for local movement between urban areas and the San Diego River, as well as Murphy Canyon Creek. More urban-adapted wildlife species may use the entire site to move through, particularly when the Stadium is not in use. However, none of the project site is considered a wildlife corridor. Therefore, the proposed project would not have a substantially adverse effect on wildlife movement and impacts would **not be considered significant**.

Special-Status Bat Roosts

The impacts to the riparian forest could impact roosting bats (including maternity roosts). While specific surveys for bats were not conducted and bats were not observed during various biological resource surveys conducted on or adjacent to the project site, the riparian trees provide suitable roosting habitat for some bats species, including Mexican long-tongued bat and western red bat. Maternity roosts are protected under the California Fish and Game

Code and can be considered a nursery site. Impacts to maternity roosts would be considered **potentially significant** absent mitigation (**Impact BIO-5**).

Migratory Birds

The San Diego River floodplain includes riparian vegetation that provides habitat for a variety of resident and migratory birds. Murphy Canyon Creek is a narrower channel, but provides foraging and nesting habitat for birds. The proposed project includes buildings ranging from 3 to 24 stories in height. While most buildings would be less than eight stories, or approximately 90 feet, the height of as many as five buildings within the proposed project would be permitted up to approximately 230 feet.

The proposed project would entail construction of multiple buildings, including several buildings taller than the existing Stadium. New buildings, and in particular reflective windows on these buildings, present a potential collision impact for birds flying through the area. The factors involved in potentially fatal bird strikes with buildings include migrant birds striking a lighted building at night at the elevation at which they are migrating; daytime migrant birds striking windows of a tall structure, most likely due to the reflection of the sky or nearby vegetation in the windows; and migrant or resident birds striking windows at lower elevations that reflect the surrounding vegetation, which they interpret to be vegetation in front of them. Birds migrating over terrestrial locations appear to migrate at higher altitudes, but do not frequently exceed 1,500 feet (Cooper and Ritchie 1995).

Daytime collisions or strikes occur at both tall buildings and low structures, including residential homes. The daytime strikes at tall buildings can occur from daytime migrating birds or local resident birds striking reflective glass because birds cannot interpret that the images observed in glass are reflections; therefore, they fly into windows that they think are trees or sky.

Collisions with lower-height buildings or homes appear to be associated with birds using feeders, or resident and migrant birds colliding with windows that reflect the surrounding landscape (Klem 1990). These collisions are most common at ground level and at heights above 10 feet (Klem 1989). Reflection of vegetation within windows provides a cue to birds that they can pass through the area. Gelb and Delacretaz (2009) stated that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. This study indicates that this optical illusion is highly likely to have caused many of the subject bird strikes. The primary condition of concern with daytime collisions is caused by landscaping or other bird attractants that are located 30 feet or more from reflective glass surfaces (Klem et al. 2004). As the distance of the vegetation or other bird attractant exceeds 30 feet from the windows, birds are able to attain enough speed in flight to result in a fatal strike if they hit the window (Klem 1990). Bird strikes to windows on buildings increase with increasing amounts of vegetation and glass, especially reflective glass opposite the vegetation (Gelb and Delacretaz 2006; Klem et al. 2009; Borden et al. 2010). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation. Where reflective glass faces forested patches, there is a significant increase in bird strikes that can lead to several hundred collisions per year even for buildings that are not within an especially well-documented migration corridor (O'Connell 2001). Such bird strikes include migrant birds as well as resident bird species, and occur during both daytime and nighttime periods.

Bird strikes associated with the construction of multiple new buildings, including several buildings that are taller than the existing Stadium, would be considered **potentially significant** absent mitigation (**Impact BIO-17**).

Indirect Impacts

Short-Term

The project site itself is not considered important for wildlife movement; however, the San Diego River just south of the project site is an important habitat area for wildlife, particularly birds. Murphy Canyon Creek provides additional habitat for wildlife, particularly birds, traveling to and from the river, especially because of the level of urban development and the opportunities for north-south movement across the San Diego River. Short-term indirect impacts to the San Diego River and Murphy Canyon Creek could result from increased human activity, lighting, and noise.

Increased Human Activity. Project construction would take place during the daytime and possibly at night. Daytime construction activities would not affect wildlife species such as mammals that are most active in the evenings and at nighttime; however, these could be affected if nighttime construction occurs near natural habitat areas. Wildlife species such as birds, rabbits, and lizards are active in the daytime. The nighttime construction would likely be limited to utility improvements. Because the project site is developed and is therefore subject to varying amounts of human activity, wildlife is expected to continue to use the adjacent habitat. Additionally, the construction activities will not occur within the San Diego River (with the exception of small temporary work around existing outfall structures).

Lighting. Nighttime lighting will occur during portions of the construction phasing. The nighttime construction will be associated with utility improvements located in existing disturbed and developed areas; therefore, lighting is not expected to be an impact to adjacent native habitat.

Noise. Construction-related noise could occur from equipment used during vegetation clearing. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, as cited in Lovich and Ennen 2011). The existing measured noise levels within the San Diego River south of the project site and near the riparian vegetation adjacent to Fenton Parkway ranged from 59 to 64 dBA L_{eq} (Appendix 4.12-1). These levels are higher than the 60 dBA L_{eq} threshold typically used for analyzing impacts to special-status species, like least Bell's vireo. During construction, the noise levels at a distance of 475 feet from the riparian area in the southwest corner (near noise monitoring location ST7) is 71 dBA L_{eq} . Noise levels at a distance of 200 feet from the San Diego River south of the project site (near noise monitoring locations ST6, STR1, and STR2) is approximately 79 dBA L_{eq} (Appendix 4.12-1).

Short-term indirect impacts to wildlife movement would be considered **potentially significant** absent mitigation (Impact BIO-18).

Long-Term

Long-term indirect impacts include noise, lighting, and increased human activity.

Noise. At any one location, the hourly average sound level associated with recreational noise is difficult to predict due to many variables, including the type of recreational activity, the number of participants and spectators, the location of people, and the amount and level of conversation and cheering. To determine the approximate noise levels that would be generated at ballfields and other recreational activities, and to predict potential noise impacts, noise measurements were conducted by Dudek staff at several existing recreational parks, including

Stagecoach Park in Carlsbad, Cardiff Sports Park in Encinitas, and Vista National Little League in Vista. The proposed project may have similar ballfields as these facilities within the River Park and Shared Parks and Open Space areas. The results of these measurements indicate that ballfield activities (including use of a public address system) generate a 1-hour average noise level of approximately 55–65 dBA at a distance of 50 feet from the stands and/or spectator areas.

Similarly, the River Park and Shared Parks and Open Space would generate a 1-hour average noise level of approximately 55–65 dBA at a distance of 50 feet from the stands and/or spectator areas. The River Park and Shared Parks and Open Space would have the potential to exceed the daytime 1-hour 60 dBA L_{eq} limit if the loudest noise sources are placed within approximately 100 feet of sensitive habitat. However, the proposed ballfields would be located at least 100 feet from the park and would serve to reduce noise spillover.

Regarding electronic amplification, such systems may be used in conjunction with active sport activities such as softball, soccer, and other court sports. Public events may also occur that required amplified noise. Activities that would include amplified noise or other temporary noise-generating equipment would be required to obtain an event permit from the City of San Diego. If a permit is not obtained, Section 59.5.0502(b)(2) of the SDMC prohibits any park or recreation center user from operating a radio, television, stereo or any similar electronic or mechanical device capable of producing or emitting sound at a volume where the sound is audible at a distance greater than 50 feet from the point of emission. Activities that require permitted amplified noise would be limited to normal park operation hours. Additionally, amplified noise would not be a continuous source of noise. Activities would occur on various dates and times, and at varied locations. Permitted uses would still be subject to hourly exterior noise level limits. University Police and the City of San Diego Police Department enforce the nuisance noise ordinance of the SDMC. Therefore, nuisance noise and permitted amplified noise from events at the River Park and Shared Parks and Open Space would result in a **less-than-significant** impact.

Scheduled maintenance by maintenance crews would occur at the site. Maintenance activities would include the use of gasoline-powered mowers, trimmers, blowers, and edgers, resulting in intermittent short-term temporary noise increases. Maintenance activities are permitted uses and would be subject to the 1-hour L_{eq} noise limits of 60 dBA (or ambient noise levels if higher than 60 dBA). Additionally, maintenance equipment would not be operating at any one location for more than a few minutes, and all equipment would not be operating simultaneously. Due to the limited amount of time equipment would be operating in one location, operation of landscape equipment would generally not exceed the hourly noise level limit at a particular receptor. Therefore, landscape maintenance would result in a **less-than-significant** impact.

Lighting. Lighting would be installed around the exterior of the new Stadium. The design goal is to limit light spill illumination to surrounding areas to 0.5 foot-candles, approximately 200 feet from the Stadium's perimeter. In addition, all lighting sources would be directed downward or otherwise shielded so as to keep light and glare confined within the project boundary.

Outside lighting would be installed around the commercial and residential buildings, parking areas, and interior roads; however, these structures would be located away from the San Diego River and Murphy Canyon Creek.

Within the River Park and Shared Parks and Open Space, several lighted sports fields and courts are proposed. These sports fields include soccer and baseball fields, as well as basketball and tennis courts. These fields and courts would be set back a minimum of 100 feet from the San Diego River. With lighting design and shielding devices internal to the luminaire, there should be no light spillage into the River Corridor Area, and lighting should be directed away from sensitive areas to ensure compliance with the MSCP's Land Use Adjacency Guidelines and

to be in accordance with the Land Development Code, Section 142.0740 (Outdoor Lighting Regulations). For security purposes, trails within the River Park and Shared Parks and Open Space would have nighttime lighting. Similar to the sports fields, lighting would be shielded, with directional LEDs so there would be very little light spill. The trail closest to the river is generally 100 feet from the river and at the closest point is approximately 86 feet from the river. The installation of the River Park and Shared Parks and Open Space will provide a natural buffer between the Stadium, commercial and residential buildings, and the San Diego River and Murphy Canyon Creek. Lighting will be directed away from the San Diego River and Murphy Canyon Creek.

Increased Human Activity. As described above, the project site is an existing developed area, but the proposed project would result in an increased population over time. Increased human activity could result in increased noise, potentially affecting the San Diego River and Murphy Canyon Creek and wildlife species that use these areas. An increased human population increases the risk for damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas near the proposed project footprint. The River Park and Shared Parks and Open Space would provide a natural buffer along the San Diego River and Murphy Canyon Creek.

Long-term indirect impacts to wildlife movement would be considered **potentially significant** absent mitigation (Impact BIO-19).

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The lead agency, the California State University, which is the State of California acting in its higher education capacity, is a state agency; therefore, it is not subject to the policies and ordinances set forth by local agencies such as the City or County of San Diego, which might maintain a local tree preservation policy or ordinance. Therefore, **no impact** would occur.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Direct Impacts

The proposed project would not result in direct impacts to the MHPA, which covers the San Diego River. The project would impact least Bell's vireo and may potentially impact southwestern willow flycatcher should this species use habitat in the San Diego River corridor in the future; both of these are covered species in the City's MSCP Subarea Plan. Because SDSU would fully mitigate for impacts to both of these covered species by creating additional habitat, the proposed project would not have the effect of eliminating key habitat areas for these covered species; therefore, the project would not hinder the City's ability to reach their goals and objectives for conservation of these covered species. Additionally, SDSU is not a signatory to the San Diego MSCP and thus is not a permittee under this HCP. As such, SDSU is not subject to the MSCP and need not comply with its provisions. Because SDSU is not subject to the policies and ordinances set forth by the MSCP, **no impact** to the City of San Diego or other local agencies' abilities to implement the MSCP would occur.

Indirect Impacts

Land Use Considerations

SDSU reviewed Chapter 1.4, Land Use Considerations, 1.4.2, General Planning and Design Guidelines, of the City of San Diego's MSCP Subarea Plan (City of San Diego 1997) to determine whether construction of the proposed project adjacent to an area designated as MHPA, which is intended to support an element of the eventual MSCP preserve, would affect the City's ability to comply with the provisions of their Subarea Plan. This guideline outlines the City's policies related to lighting, barriers, chemical pollutants, and mining or extraction; the proposed project's potential impacts relating to these areas are outlined below. No direct impacts to the MHPA would occur.

Lighting. No lighting is proposed along the MHPA boundaries (i.e., San Diego River and Murphy Canyon Creek). Lighting would be installed around the exterior of the Stadium. The design goal is to limit light spill illumination to surrounding areas to 0.5 foot-candles, approximately 200 feet from the Stadium's perimeter. In addition, all lighting sources would be directed downward or otherwise shielded so as to keep light and glare confined within the project boundary. Further, outside lighting would be installed around the commercial and residential buildings, parking areas, and interior roads; however, these structures would be located away from the San Diego River and Murphy Canyon Creek. The installation of the River Park and Shared Parks and Open Space will provide a natural buffer between the Stadium, commercial and residential buildings, and the San Diego River and Murphy Canyon Creek. The sports fields would be lighted when in use; however, lighting would be directed away from the San Diego River. Lighting required along the trails in the River Park and Shared Parks and Open Space would be shielded from the river and Murphy Canyon Creek. With the exception of the closest trail point at 86 feet away, lighting in the River Park and Shared Parks and Open Space would be a minimum of 100 feet from the San Diego River and MHPA, and would be directed downward and/or shielded.

Barriers. Visual barriers are proposed between the River Park and Shared Parks and Open Space and the San Diego River and Murphy Canyon Creek. For example, signs and landscaping would be installed to deter people from entering these areas. In addition, there are existing berms on the southern and western edge of the project site, which would be maintained and would further discourage intrusion into the San Diego River and Murphy Canyon Creek. Lastly, Murphy Canyon Road would be extended north along Murphy Canyon Creek from the southeast corner of the project site, where Rancho Mission Road currently enters the project site, to the northwest portion of site before turning west and would serve as a barrier to people crossing into Murphy Canyon Creek. Therefore, the proposed project would avoid conflicts with the Subarea Plan's lighting and barriers adjacency guidelines.

Chemical Pollutants. SDSU would store and use all hazardous materials, chemicals, and substances (i.e., janitorial supplies) consistent with their use and storage recommendations; all such materials and substances would be stored within the building or appropriate enclosures consistent with Occupational Safety and Health Administration and SDSU Environmental Health and Safety protocols. No storage of these chemicals and substances would occur within the MHPA; therefore, the proposed project would not be inconsistent with the Subarea Plan's guidelines regarding hazardous substance storage in sensitive habitat areas.

Mining or Extraction. The proposed project would not involve any type of mining or extraction activity, so no inconsistency with the Subarea Plan's mining and extraction policies would occur. While occurring outside of the MHPA, the installation of the River Park and Shared Parks and Open Space would provide a natural buffer between the development and the river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. The proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. This would improve the current runoff

conditions, which convey surface runoff from the Stadium parking lot into the outfall structures without basins to filter sediment and pollutants. Long-term indirect impacts associated with altered hydrology are expected to improve as a result of the proposed project.

Land Use Adjacency Guidelines

SDSU also reviewed Section 1.4.3, Land Use Adjacency Guidelines, of Chapter 1.4, Land Use Considerations of the City's Subarea Plan. Similar to the guidelines above, Section 1.4.3 outlines the City's policies related to eight land development considerations: drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading/land development. Although SDSU is not subject to these guidelines, an analysis of consistency with each provision is provided to ensure that the proposed project does not hinder the City's ability to meet the requirements of its Subarea Plan.

Drainage. The proposed project's drainage system would improve compared to existing conditions. The San Diego River serves as a natural outlet for stormwater runoff from the project site. The proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. Therefore, the proposed project would not be inconsistent with the City's drainage guidelines in Section 1.4.3 of the Subarea Plan.

Toxics. Any on-site landscaped areas would be treated with standard fertilizers as per SDSU's typical landscaping protocols and schedules. Any runoff from these areas would be directed to the on-site drainage/filtration system, which would treat all runoff before it is directed to the existing storm drain system. Therefore, the proposed project would not be inconsistent with the City's provision for use/filtration of landscape fertilizers and chemicals.

Lighting. As indicated above, lighting will be installed around the perimeter of the Stadium, commercial and residential buildings, and interior roads and in the sports fields. The exterior Stadium lighting will illuminate up to 200 feet from the Stadium's perimeter. The San Diego River and Murphy Canyon Creek are located approximately 1,500 feet and 2,000 feet, respectively, from the new Stadium location, which is farther from the river compared to the existing Stadium. The sports fields would be lighted when in use; however, lighting would be directed away from the San Diego River. Lighting required along the trails in the River Park and Shared Parks and Open Space would be shielded from the river and Murphy Canyon Creek. With the exception of the closest trail point, at 86 feet away, lighting in the River Park and Shared Parks and Open Space would be a minimum of 100 feet from the San Diego River and MHPA, and would be directed downward and/or shielded. These avoidance and minimization measures would serve to reduce potential impacts to least Bell's vireo and southwestern willow flycatcher (should this species use habitat in the San Diego River corridor in the future), both of which are covered species under the MSCP Subarea Plan.

Noise. The City requires that uses adjacent to the MHPA be designed to minimize noise impacts. The MHPA is located in the San Diego River, south of the project site. The Stadium and commercial and residential buildings are located farther north from the San Diego River. The River Park and Shared Parks and Open Space is proposed along the border of the San Diego River to provide a buffer between the Stadium, commercial and residential areas, and the river. Recreational sports fields are located a minimum of 100 feet from the MHPA in order to minimize indirect impacts such as noise. Further, during construction, pre-construction surveys (see Section 4.3.6, Mitigation Measures), would be conducted to determine the presence of sensitive wildlife. Construction would follow the guidelines outlined in these mitigation measures to minimize impacts to sensitive wildlife that may be in the riparian areas to a level below significance.

Barriers. The proposed construction site would be fenced to prevent wildlife intrusion into work areas and to prevent human intrusion into adjacent areas. Visual barriers are proposed between the River Park and Shared Parks and Open Space and the San Diego River and Murphy Canyon Creek. For example, signs and landscaping would be installed to deter people from entering these areas. In addition, existing berms on the southern and western edge of the project site would be maintained and would further discourage intrusion into the San Diego River and Murphy Canyon Creek. Lastly, Murphy Canyon Road would be extended north along Murphy Canyon Creek from the southeast corner of the project site, where Rancho Mission Road currently enters the project site, to the northwest portion of site before turning west, serving as a barrier to people crossing into Murphy Canyon Creek.

Invasive Species. The proposed project would result in a passive, naturally landscaped area within the River Park and Shared Parks and Open Space to serve as a buffer to the river. All landscaping would consist of native plant species where possible and would not include any plants included on the most recent version of the California Invasive Plant Council California Invasive Plant Inventory for the project region. Therefore, the proposed project would be consistent with the Subarea Plan's objectives for invasive species avoidance.

Brush Management. The River Park and Shared Parks and Open Space would be provided as a buffer between the developed areas and the MHPA and would be maintained. No specific brush management is required since the project site is located on existing urban/developed areas. Therefore, the proposed project would be consistent with this provision of the City's Subarea Plan.

Grading/Land Development. All grading and land development work that is necessary for the proposed project would be contained within the project impact footprint as described above in the impact evaluation for biological resources. Therefore, the proposed project would be consistent with this provision of the City's Subarea Plan.

Because SDSU is not subject to the policies and ordinances set forth by the MSCP, and the proposed project demonstrates consistency with the Land Use Considerations and Land Use Adjacency Guidelines, **no impact** to the City of San Diego or other local agencies' abilities to implement the MSCP would occur.

Would the project result in a cumulative impact to biological resources?

Sensitive Wildlife and Plant Resources

Cumulative projects associated with the development of the "Purple Line" by Metropolitan Transit System and any planned improvements to California Department of Transportation (Caltrans) owned/operated transportation infrastructure such as I-8, I-15, etc. may result in direct and indirect impacts to sensitive wildlife and plant resources and their habitats in and around Mission Valley. However, any impacts from these projects would need to be fully mitigated to avoid cumulative impacts. Any impacts to sensitive wildlife and plant resources and their habitat would be regulated by USFWS and/or CDFW, which require full mitigation to offset such impacts. Any impacts to these resources as a result of San Diego County Water Authority projects would be offset by the regional conservation planning framework outlined in their NCCP/HCP (adopted in 2011). All of the Water Authority's capital improvement projects and operations and maintenance activities must be consistent with their NCCP/HCP which, like the San Diego MSCP, provides a coordinated approach to avoiding and mitigating for impacts to sensitive plant and wildlife species and their habitats.

With the exception of projects proposed by state agencies such as Caltrans, special districts, or other regional agencies such as the San Diego County Water Authority or Metropolitan Transit System, all remaining cumulatively considerable projects listed in Table 3-1, Cumulative Projects, are reviewed and approved by the City of San Diego.

During the City's entitlement review process, all projects are designed to be consistent with the City's regional HCP, which ensures that cumulative impacts to plant, wildlife, and habitat resources, including listed species such as least Bell's vireo and southwestern willow flycatcher, as a result of development are minimized. As outlined above, approximately 20 years ago, the San Diego MSCP was established as a regional HCP to help facilitate planned regional development while at the same time establishing a regional preserve system for the long-term benefit of the region's diverse plant and wildlife resources. In 1998, the City of San Diego adopted their MSCP Subarea Plan, which covers the Mission Valley Community Plan Area, including the Stadium site. The City's Subarea Plan implements the regional MSCP and through the City's development review process, all projects, including all of those listed in Table 3-1, must be consistent with and contribute to the establishment of this regional preserve system. The City enforces development siting restrictions, limits direct impacts to designated preserve areas, ensures compliance with adjacency and buffering techniques to reduce indirect impacts, and provides for the long-term management of the established preserves. Because all projects must comply with the City's MSCP Subarea Plan, cumulative impacts to biological resources from other projects listed in Table 3-1 have been avoided.

As stated above, the proposed project is located in the San Diego MSCP and within the City's Subarea Plan Area. Although SDSU is a state agency and is not subject to the provisions of the MSCP or City's Subarea Plan, direct avoidance of potential sensitive habitat resources as well as avoidance and minimization measures and project design features that would reduce the potential for indirect impacts are consistent with the MSCP and the City's Subarea Plan. Due to this consistency with these regional planning tools, the project would not result in cumulative impacts to plant and wildlife resources.

Sensitive Wetland and Riparian Resources

As described previously under "Jurisdictional Waters," the proposed project would impact jurisdictional wetlands and waters of the United States, and therefore would be required to comply with wetlands mitigation requirements pursuant to Sections 401 and 404 of the federal Clean Water Act and Section 1600 of the California Fish and Game Code. These regulations are all designed to ensure the "no net loss" of wetlands and riparian resources. As outlined in **mitigation measure (MM) BIO-13**, these impacts would be mitigated at a ratio of approximately 1:1 for creation and 2:1 for revegetation and enhancement, and would result in no net loss of habitat. Similarly, cumulative projects such as those listed in Table 3-1 may impact wetlands and waters of the United States in and around the Mission Valley area and within the greater San Diego River watershed. That said, all of these resources are protected under Sections 401 and 404 of the federal Clean Water Act and Section 1600 of the California Fish and Game Code. Any project or agency that must impact these resources would need to fully mitigate for impacts to these resources at similar ratios as the proposed project. Accordingly, there would be no net loss of wetland resources from cumulatively considerable projects, and such cumulative impacts would be less than significant.

In summary, the proposed project is primarily an infill project with very limited impacts to sensitive wildlife and plant resources and their habitat as well as wetland and riparian resources. All of the project's impacts would be fully mitigated pursuant to state and federal wetland regulations and would be consistent with the mitigation and avoidance and minimization measures specified in the City's Subarea Plan. When combined with existing and probable future projects within the cumulative study area, the proposed project **would not contribute to cumulatively considerable impacts** to sensitive biological resources.

4.3.5 Summary of Impacts Prior to Mitigation

- Impact BIO-1** The project would have a substantial adverse effect on least Bell's vireo.
- Impact BIO-2** The project would have a substantial adverse effect on southwestern willow flycatcher.
- Impact BIO-3** The project would have a substantial adverse effect on other special-status birds.
- Impact BIO-4** The project would have a substantial adverse effect on special-status amphibians and reptiles.
- Impact BIO-5** The project would result in significant impacts to maternity bat roosts from the removal of suitable riparian trees on site.
- Impact BIO-6** The project would have a substantial adverse effect on migratory birds.
- Impact BIO-7** The project would result in significant short-term indirect impacts to special-status plants and sensitive natural communities.
- Impact BIO-8** The project would result in significant long-term indirect impacts to special-status plants and sensitive natural communities.
- Impact BIO-9** The project would result in significant short-term indirect impacts to special-status wildlife species.
- Impact BIO-10** The project would result in significant long-term indirect impacts to special-status wildlife species.
- Impact BIO-11** The project would result in temporary direct impacts to southern cottonwood–willow riparian forest, Baccharis-dominated Diegan coastal sage scrub, and restored Diegan coastal sage scrub.
- Impact BIO-12** The project would result in permanent direct impacts to sensitive vegetation communities and land covers.
- Impact BIO-13** The project would result in temporary direct impacts to federally and state-regulated wetlands/riparian areas.
- Impact BIO-14** The project would result in permanent direct impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters.
- Impact BIO-15** The project would result in significant short-term indirect impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters.
- Impact BIO-16** The project would result in significant long-term indirect impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters.
- Impact BIO-17** The project would result in significant impacts to migratory birds from bird strikes with the proposed buildings on site.
- Impact BIO-18** The project would result in short-term indirect impacts to native habitat that supports wildlife movement, including the San Diego River and Murphy Canyon Creek.

Impact BIO-19 The project would result in long-term indirect impacts to native habitat that supports wildlife movement, including the San Diego River and Murphy Canyon Creek.

4.3.6 Mitigation Measures

The following mitigation measures would reduce the potential for direct and indirect impacts on special-status plant and wildlife species, sensitive natural communities, jurisdictional waters, and wildlife corridors by ensuring that special-status resources would be avoided to the extent possible and compensatory mitigation provided to address unavoidable significant impacts.

MM-BIO-1 TAKE AUTHORIZATION. Based on observations of least Bell's vireo (*Vireo bellii pusillus*), riparian habitat on site is considered occupied. Southwestern willow flycatcher (*Empidonax traillii extimus*) is not currently occupying the proposed impact areas; however, there is suitable habitat within the San Diego River. Habitat impacts will be mitigated at a 3:1 mitigation ratio (see **MM-BIO-2**) or as determined through the consultation process. Take authorization may be obtained through the federal Section 7 Consultation or Section 10 and state 2080.1 incidental take permit requirements. California State University/San Diego State University or its designee shall comply with any and all conditions, including pre-construction surveys, that the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) may require for take of these species pursuant to the federal Endangered Species Act and/or California Endangered Species Act. If required as a permit condition, pre-construction surveys will be conducted in accordance with USFWS protocols unless the USFWS authorizes a deviation from those protocols.

MM-BIO-2 HABITAT MITIGATION: Temporary and permanent impacts to southern willow scrub and southern cottonwood–willow riparian forest will be mitigated at a 3:1 mitigation ratio, as determined during the permitting process (see **MM-BIO-13**). Additionally, temporary and permanent impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub shall be mitigated at a minimum of 1.5:1 mitigation ratio. Conservation of habitat shall be by on-site preservation, off-site creation and/or enhancement, and/or by purchase of appropriate credits at an approved mitigation bank in San Diego County. If required, any invasive removal shall be completed using hand equipment and removal will be completed outside of the nesting bird season. If invasive removal cannot be completed outside of the nesting bird season, pre-work surveys shall be conducted per the nesting bird survey noted in **MM-BIO-3**.

The mitigation habitat shall include appropriate habitat for special-status amphibians, reptiles, mammals, and birds with potential to occur on site.

MM-BIO-3 NESTING BIRD SURVEY: Construction activity that occurs during the breeding season (typically February 1 through September 15) shall require a one-time biological survey for nesting bird species to be conducted within the proposed impact area and a 500-foot buffer within 72 hours prior to construction. This survey is necessary to assure avoidance of impacts to nesting raptors (e.g., Cooper's hawk [*Accipiter cooperii*] and red-tailed hawk [*Buteo jamaicensis*]) and/or birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code, Sections 3503 and 3513. If any active nests are detected, the area shall be flagged and mapped on the construction plans. If occupied nests are found, then limits of construction (e.g., 250 to 500 feet) to avoid occupied nests shall be established by the project biologist in the field with flagging,

fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The project biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to avoid inadvertent impacts to these nests. The project biologist may adjust the 250-foot or 500-foot setback at his or her discretion depending on the species and the location of the nest (e.g., if the nest is well protected in an area buffered by dense vegetation). Once the nest is no longer occupied for the season, construction may proceed in the setback areas.

If construction activities, particularly clearing/grubbing, grading, and other intensive activities, stop for more than 3 days, an additional nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer.

MM-BIO-4 **TEMPORARY INSTALLATION OF FENCING:** To prevent inadvertent disturbance to areas outside the limits of grading for each phase, the contractor shall install temporary fencing along the limits of grading.

MM-BIO-5 **CONSTRUCTION MONITORING AND REPORTING:** To prevent inadvertent disturbance to areas outside the limits of grading for each phase, all grading of native habitat shall be monitored by a biologist. The biological monitor shall be contracted to perform biological monitoring during all clearing and grubbing activities.

The project biologist also shall perform the following duties:

- a. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing and grubbing to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
- b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas and of minimizing harm to or harassment of wildlife prior to clearing and grubbing.
- c. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing and grubbing.
- d. Supervise and monitor vegetation clearing and grubbing weekly to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved and to document that protective fencing is intact.
- e. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing activities.
- f. Periodically monitor the construction site to verify that the project is implementing the following stormwater pollution prevention plan best management practices: dust control, silt fencing, removal of construction debris and a clean work area, covered trash receptacles that are animal-proof and weather-proof, prohibition of pets on the construction site, and a speed limit of 15 miles per hour during the daylight and 10 miles per hour during hours of darkness.
- g. Periodically monitor the construction site after grading is completed and during the construction phase to see that artificial security light fixtures are directed away from open space and are shielded, and to document that no unauthorized impacts have occurred.

- h. Keep monitoring notes for the duration of the proposed project for submittal in a final report to substantiate the biological supervision of the vegetation clearing and grading activities and the protection of the biological resources.
- i. Prepare a monitoring report after the construction activities are completed, which describes the biological monitoring activities, including a monitoring log; photos of the site before, during, and after the grading and clearing activities; and a list of special-status species observed.

MM-BIO-6 AIR QUALITY STANDARDS: The following guidelines shall be adhered to:

- 1. No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.
- 2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:
 - a. Be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation: track-out grates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks: using secured tarps or cargo covering, watering, or treating of transported material; and
 - b. Be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only coarse particulate matter (PM₁₀)-efficient street sweepers certified to meet the most current South Coast Air Quality Management District Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

MM-BIO-7 SIGNAGE AND BARRIERS: To prevent long-term inadvertent disturbance to sensitive vegetation and species adjacent to the project site, signage and visual barriers shall be installed along the River Park and Shared Parks and Open Space interface with the San Diego River and Murphy Canyon Creek. The signage shall state that these areas are native habitat areas, and no trespassing is allowed. Barriers shall be installed where appropriate to deter access into the river and creek.

MM-BIO-8 INVASIVE SPECIES PROHIBITION: The final landscape plans shall be reviewed by the project biologist to confirm they comply with the following: (1) no invasive plant species as included on the most recent version of the California Invasive Plant Council California Invasive Plant Inventory for the project region shall be included and (2) the plant palette shall be composed of species that do not require high irrigation rates. The project biologist shall periodically check landscape products for compliance with this requirement.

MM-BIO-9 NOISE: Pre-construction surveys shall be conducted for any work between February 1 and September 15. Prior to start of construction activities, a qualified biologist shall conduct a pre-construction survey for the least Bell's vireo (*Vireo bellii pusillus*) and, if needed, southwestern willow flycatcher (*Empidonax traillii extimus*) to document presence/absence and the extent of occupied habitat. The pre-construction survey area for these species shall encompass all suitable habitats within the impact area, as well as suitable habitat within a 300-foot buffer of the construction activities. If active nests for any of these species are detected, on-site noise reduction

techniques shall be implemented to ensure that construction noise levels do not exceed 60 A-weighted decibels (dBA) hourly equivalent noise level (or the existing ambient noise level if already above 60 dBA during the breeding season) at the nest location.

MM-BIO-10 **INDIRECT EDGE EFFECTS:** The proposed project shall be designed so that any sports or recreational fields and courts shall be set back a minimum of 100 feet from the floodway of the San Diego River to reduce noise and lighting impacts.

MM-BIO-11 **LIGHTING PLAN:** Lighting shall be designed to minimize light pollution within native habitat areas, while enhancing safety, security, and functionality. All artificial outdoor light fixtures shall be installed so they are directed away from the San Diego River and Murphy Canyon Creek. The lighting in the River Park and Shared Parks and Open Space shall be designed so there is no light spillage into the River Corridor Area. Lighting should be directed away from sensitive areas to ensure compliance with the Multiple Species Conservation Program's Land Use Adjacency Guidelines and to be in accordance with the Land Development Code Section 142.0740 (Outdoor Lighting Regulations). Light fixtures shall be installed in conformance with the County Light Pollution Code, the Building Code, the Electrical Code, and any other related state and federal regulations such as California Title 24.

MM-BIO-12 **RESTORE TEMPORARY IMPACTS:** Temporary impacts to Diegan coastal sage scrub and southern cottonwood–willow riparian forest (federally and state-regulated wetlands) shall be restored to their original condition. California State University/San Diego State University or its designee shall prepare a conceptual restoration plan outlining the restoration of these communities and implement the restoration plan, including monitoring and maintenance for a period of at least 3 years to ensure 80% coverage.

MM-BIO-13 **WETLAND MITIGATION/FEDERAL AND STATE AGENCY PERMITS.** The overall ratio of wetland/riparian habitat mitigation shall be 3:1. Impacts shall be mitigated at a 1:1 impact-to-creation ratio by either the creation, or purchase of credits for the creation, of jurisdictional habitat of similar functions and values. An additional 2:1 enhancement-to-impact ratio shall be required to meet the overall 3:1 impact-to-mitigation ratio for impacts to wetlands/riparian habitat. Impacts to unvegetated and ephemeral stream channels shall occur at a 1:1 or 2:1 mitigation ratio, with a 1:1 impact-to-creation ratio. Additional mitigation for unvegetated channels will occur through preservation. Mitigation may occur as on-site creation, off-site enhancement and restoration (e.g., at the San Diego State University-owned Adobe Falls property), and/or purchase of credits at an approved mitigation bank.

If mitigation is proposed outside of an approved mitigation bank, a conceptual wetlands mitigation and monitoring plan shall be prepared and implemented. The conceptual wetlands mitigation and monitoring plan shall, at a minimum, prescribe site preparation, planting, irrigation, and a 5-year maintenance and monitoring program with qualitative and quantitative evaluation of the revegetation effort and specific criteria to determine successful revegetation.

Prior to impacts occurring to U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdictional aquatic resources, California State University/San Diego State University or its designee shall obtain the

following permits: ACOE 404 permit, RWQCB 401 Water Quality Certification, and CDFW 1600 Streambed Alteration Agreement.

MM-BIO-14 BAT SURVEYS AND ROOST AVOIDANCE OR EXCLUSION. Prior to construction activities, a bat biologist shall survey the existing buildings to confirm they contain no active maternity roosts. If a maternity roost is present, the following measures shall be implemented to reduce the potential impact to special-status bat species to a less-than-significant level:

1. **Maternity Roosting Season Avoidance.** All proposed project-related activities, including bat roost exclusion, shall occur outside the general bat maternity roosting season of March through August. Roost exclusion must only occur during the time when bats are most active (early spring or fall) to increase the potential to exclude all bats from trees and/or buildings and minimize the potential for a significant impact to occur by avoiding the maternity roosting season.
2. **Replacement Roost Installation.** One month prior to the exclusion of bats from the buildings, the consultant will procure and install two bat boxes from a reputable vendor, such as Bat Conservation and Management, to allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed within close proximity to the trees and/or buildings and in an area that is within close proximity to suitable foraging habitat. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours) to allow the bat boxes to reach an optimum internal temperature (approximately 90 °F) to mimic the existing bat roost. The bat boxes will be suitable to house crevice-roosting bat species, and large enough to contain a minimum of 50 bats (e.g., Four Chamber Premium Bat House or Bat Bunker Plus). The bat boxes shall be installed on the side of the adjacent structure that will be preserved by the proposed project, or installed on a 20-foot-tall steel pole.
3. **Roost Exclusion.** Approximately 1 month after bat boxes have been installed, exclusion of the existing roost within the trees and/or buildings will occur. The primary exit points for roosting bats will be identified, and all secondary ingress/egress locations on the trees and/or buildings will be covered with a tarp or wood planks to prevent bats from leaving from other locations. The primary exit point will remain uncovered to allow exclusion devices to be installed. Exclusion devices will consist of a screen (poly netting, window screen, or fiberglass screening) with mesh 1/6 of an inch or smaller, installed at the top and sealed along the sides of the window frame, covering the entire window and passing 2 feet below the bottom of the window. The exclusion devices will be installed at night to increase the potential that bats have already left the roost and are less likely to return. Exclusion devices will be left in place for a 1-week period to ensure that any remaining bats in the buildings are excluded. A passive acoustic monitoring detector will also be deployed during the exclusion period in order to verify excluded species and monitor if bat activity has decreased during the exclusion period. Periodic monitoring during the exclusion period should also be conducted to observe if any bats are still emerging from the trees and/or buildings, and an active monitoring survey conducted on the final night of exclusion to ensure that no bats are emerging from the trees and/or buildings and determine that exclusion has been successful. Any continued presence of roosting bats will require an adjustment to the exclusion devices and schedule.

MM-BIO-15 GLARE REDUCTION. Measures proposed to reduce the impact of bird strikes to windows at the proposed project's buildings include the following methods:

1. Create visual markers on the building glass surfaces. These markers function to indicate to birds that the surface is solid, thus preventing strikes to the object (City of Toronto 2007; Ocampo-Peñuela et al. 2016). Application to the lower portion of the buildings are most important and should match the average height of the surrounding landscaping or vegetation. These visual markers may include but are not limited to (City of Toronto 2007):
 - a) Patterned, fritted glass
 - b) Film that illustrates products or provides advertising
 - c) Patterns provided by decals
 - d) Fenestration patterns that are provided structurally or by application of decals or etching of the glass
 - e) Decorative grilles or louvers
 - f) Artwork
2. Avoid use of reflective glass or application of reflective coatings on any window surface.

CEQA requires that the effect of implementation of mitigation measures be evaluated and disclosed in the CEQA document. Implementation of **MM-BIO-2**, Habitat Mitigation, consists of creation of new riparian habitat at a 1:1 ratio and enhancement of wetland habitat at a 2:2 ratio, as well as mitigation for impacts to Baccharis-dominated Diegan coastal sage scrub and Diegan coastal sage scrub at a 1.5:1 ratio. SDSU is currently evaluating wetland creation opportunities on site, at the SDSU-owned Adobe Falls parcel approximately 3 miles east of the proposed project site, within Murphy Canyon Creek or through purchase of credits at the San Luis Rey Mitigation Bank. Enhancement opportunities are being considered at these locations as well. Should wetland creation or enhancement occur in these on-site or nearby drainages, potential impacts that are similar to the impacts of the proposed project would occur. These impacts may entail recontouring of the site to facilitate appropriate drainage, vegetation removal, and installation of stabilization structures to ensure long-term stability of the stream system. Implementation of mitigation measures including nesting bird surveys, such as described in **MM-BIO-3**; installation of construction fencing to avoid inadvertent activity in adjacent areas, such as described in **MM-BIO-4**; and avoidance of work during the bird breeding season would all serve to reduce potential impacts of mitigation measure implementation.

4.3.7 Level of Significance After Mitigation

Implementation of the above mitigation measures would reduce potential impacts to biological resources to **less-than-significant** levels.

Impacts BIO-1 and BIO-2: Least Bell's Vireo and Southwestern Willow Flycatcher

The direct impacts to suitable habitat for least Bell's vireo and southwestern willow flycatcher would be reduced to **less than significant** through implementation of **MM-BIO-1**, which requires habitat mitigation and take authorization from USFWS and/or CDFW, and **MM-BIO-2**, which requires habitat mitigation at a 3:1 mitigation ratio.

Impact BIO-3: Other Special-Status Birds

The direct impacts to suitable habitat for Cooper's hawk, Southern California rufous-crowned sparrow, yellow-breasted chat, and yellow warbler will be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation at a 3:1 mitigation ratio for impacts to southern cottonwood–willow riparian forest and 1.5:1 mitigation ratio for impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub.

Impact BIO-4: Special-Status Amphibians and Reptiles

The direct impacts to suitable habitat for southern California legless lizard, orange-throated whiptail, Coronado skink, and western spadefoot would be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation at a 3:1 mitigation ratio for impacts to southern cottonwood–willow riparian forest and 1.5:1 mitigation ratio for impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub.

Impact BIO-5: Bat Roosts

Potentially significant impacts to maternity bat roosts, if present, could occur from the removal of suitable riparian trees on site. These impacts will be reduced to **less than significant** through implementation of **MM-BIO-14**, which requires bat surveys, maternity roost season avoidance, installation of replacement roost(s), and roost exclusion to ensure that there are no direct impacts to a maternity roost.

Impact BIO-6: Migratory Birds

The significant direct impacts to nesting birds protected under the MBTA would be reduced to **less than significant** through implementation of **MM-BIO-3**, which requires nesting bird surveys when construction activities occur during the bird nesting season and avoidance buffers if active nests are found.

Impact BIO-7: Plants and Sensitive Natural Communities – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to special-status plants and sensitive natural communities would be reduced to **less than significant** through implementation of **MM-BIO-4**, **MM-BIO-5**, and **MM-BIO-6**, which require temporary installation of construction fencing to delineate the limits of grading, biological monitoring, a monitoring report, and implementation of air quality standards.

Impact BIO-8: Plants and Sensitive Natural Communities – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to special-status plants and sensitive natural communities would be reduced to **less than significant** through implementation of **MM-BIO-7**, which requires signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, and **MM-BIO-8**, which imposes restrictions on landscape planting adjacent to the MHPA.

Impact BIO-9: Wildlife – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to special-status wildlife species would be reduced to **less than significant** through implementation of **MM-BIO-4** and **MM-BIO-5**, which require temporary installation of construction fencing to delineate the limits of grading biological monitoring and a monitoring report, and **MM-BIO-**

9, which requires noise monitoring for least Bell's vireo, southwestern willow flycatcher, and/or coastal California gnatcatcher if present within 300 feet of the impact areas.

Impact BIO-10: Wildlife – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to special-status wildlife species will be reduced to **less than significant** through implementation of **MM-BIO-7**, **MM-BIO-8**, **MM-BIO-10**, and **MM-BIO-11**, which require signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, restrictions on landscape planting, compliance with buffer setbacks, and a lighting plan.

Impact BIO-11: Sensitive Natural Communities – Temporary Direct Impacts

The proposed project's temporary direct impacts to southern cottonwood–willow riparian forest, Baccharis-dominated Diegan coastal sage scrub, and restored Diegan coastal sage scrub will be reduced to **less than significant** through implementation of **MM-BIO-12**, which requires restoration of these impacts to pre-project conditions.

Impact BIO-12: Sensitive Natural Communities – Permanent Direct Impacts

Permanent direct impacts to sensitive vegetation communities and land covers will be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation.

Impact BIO-13: Jurisdictional Waters – Temporary Direct Impacts

The proposed temporary impacts to federally and state-regulated wetlands/riparian areas will be reduced to **less than significant** through implementation of **MM-BIO-12**, which requires restoration of these impacts to pre-project conditions, and **MM-BIO-13**, which requires state and federal permits.

Impact BIO-14: Jurisdictional Waters – Permanent Direct Impacts

Permanent direct impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters will be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation, and **MM-BIO-13**, which requires state and federal permits.

Impact BIO-15: Jurisdictional Waters – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to jurisdictional waters will be reduced to **less than significant** through implementation of **MM-BIO-4**, **MM-BIO-5**, and **MM-BIO-6**, which require temporary installation of construction fencing to delineate the limits of grading, biological monitoring, a monitoring report, and implementation of air quality standards.

Impact BIO-16: Jurisdictional Waters – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to sensitive vegetation communities will be reduced to **less than significant** through implementation of **MM-BIO-7**, which requires signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, and **MM-BIO-8**, which imposes restrictions on landscape planting adjacent to the MHPA.

Impact BIO-17: Migratory Birds

There are potentially significant impacts from bird strikes with the proposed buildings on site. These impacts will be reduced to **less than significant** through implementation of **MM-BIO-15**, which requires non-reflective coating on all windows as well as other methods to reduce bird strikes.

Impact BIO-18: Wildlife Movement – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to the native habitat which supports wildlife movement, including the San Diego River and Murphy Canyon Creek, will be reduced to **less than significant** through implementation of **MM-BIO-4** and **MM-BIO-5**, which require temporary installation of construction fencing to delineate the limits of grading biological monitoring and a monitoring report.

Impact BIO-19: Wildlife Movement – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to the native habitat which supports wildlife movement including the San Diego River and Murphy Canyon Creek, will be reduced to **less than significant** through implementation of **MM-BIO-7**, **MM-BIO-8**, **MM-BIO-10**, and **MM-BIO-11**, which require signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, restrictions on landscape planting, compliance with buffer setbacks, and a lighting plan.

SDSU Mission Valley Campus Project Site Boundary

Vegetation Communities/Land Covers

- BD-CSS, Baccharis-dominated Coastal Sage Scrub
- CSS, Coastal Sage Scrub
- DEV, Developed
- DH, Disturbed Habitat
- DW, Disturbed Wetlands
- SCWRF, Southern Cottonwood Willow Riparian Forest
- SRF, Southern Riparian Forest
- SWS, Southern Willow Scrub
- UVC, Unvegetated Channel

Jurisdictional Delineation

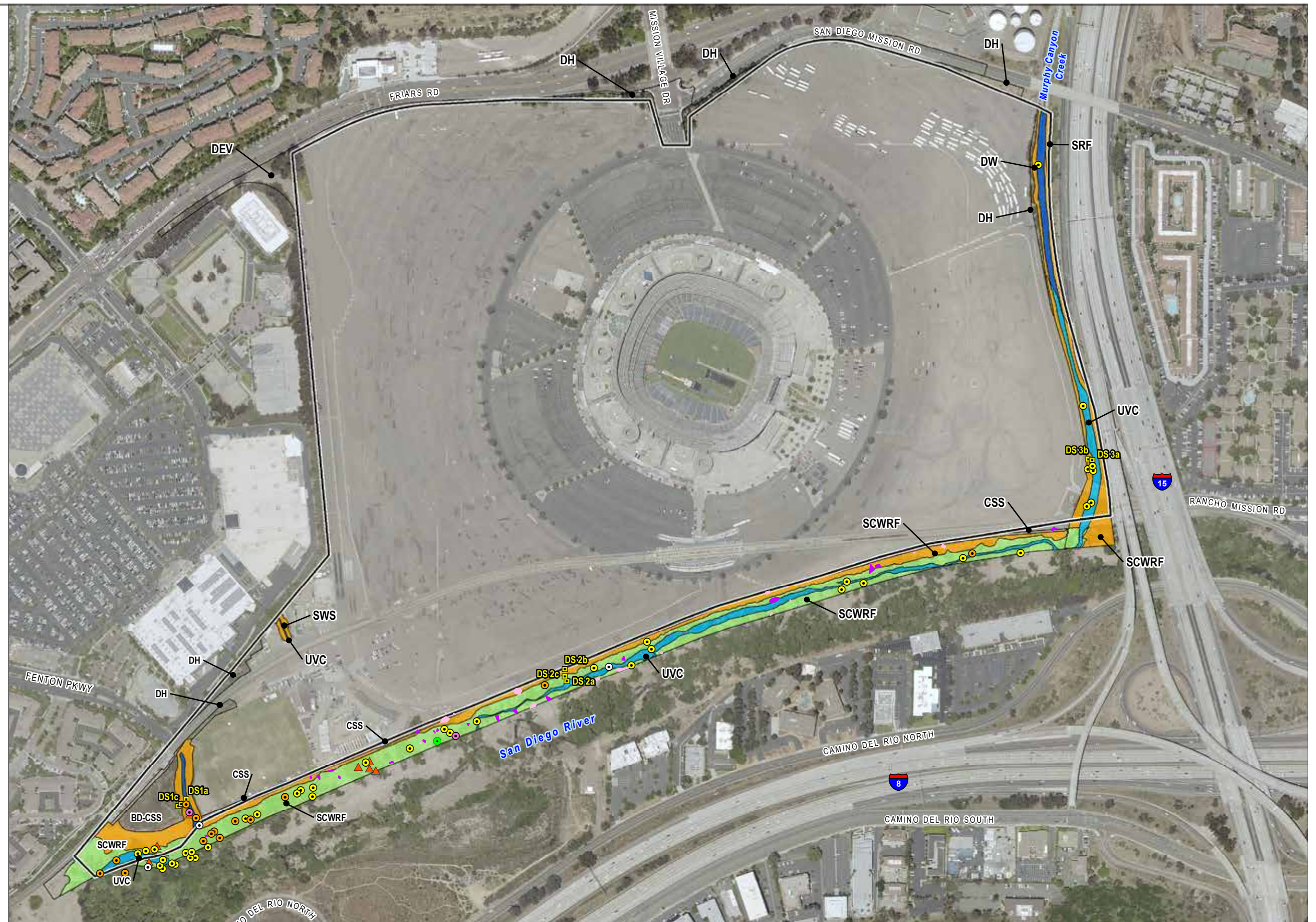
- ACOE/RWQCB/CDFW Non-Wetland Waters/Streambed
- ACOE/RWQCB Non-Wetland Waters/CDFW Riparian Areas
- ACOE/RWQCB/CDFW Wetlands
- CDFW only Riparian Areas
- Data Station

Special-Status Wildlife

- Cooper's hawk
- least Bell's vireo
- yellow warbler
- yellow-breasted chat
- Osprey
- Least Bell's vireo (2017 Surveys)

Special-Status Plants

- Artemisia palmeri*, San Diego sagewort
- Iva hayesiana*, San Diego marsh-elder
- Juncus acutus* ssp. *leopoldii*, Leopold's rush



SOURCE: AERIAL SANGIS 2017

SDSU Mission Valley Campus Master Plan EIR

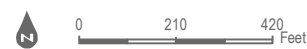
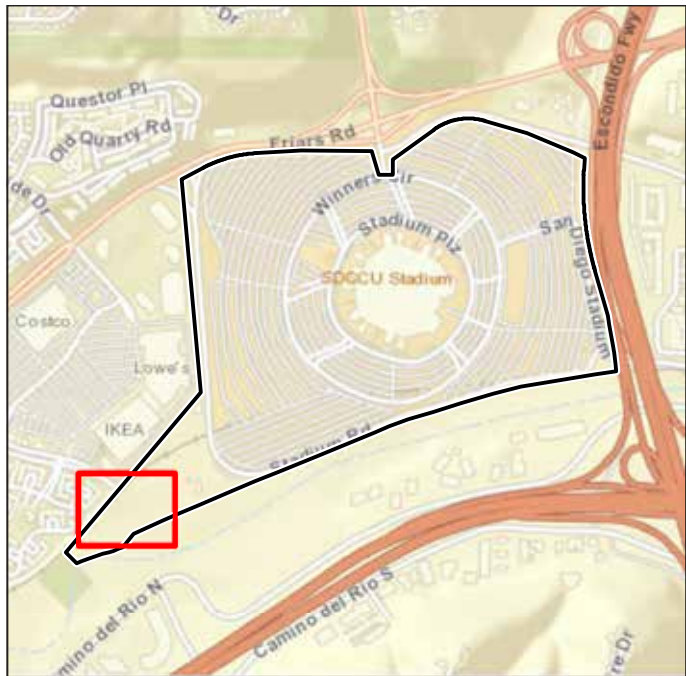


Figure 4.3-1
Biological Resources - Project Site

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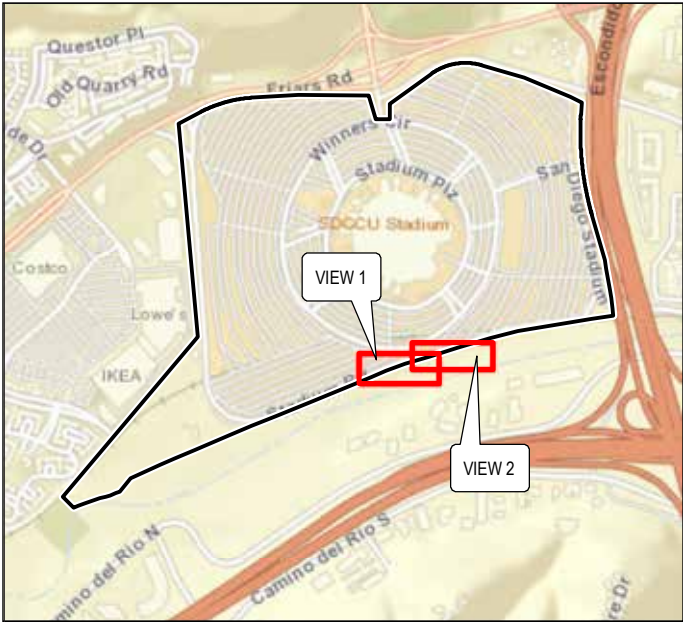


- SDSU Mission Valley Campus Project Site Boundary
- Vegetation Communities/Land Covers**
 - BD-CSS, Baccharis-dominated Coastal Sage Scrub
 - CSS, Coastal Sage Scrub
 - DEV, Developed
 - DH, Disturbed Habitat
 - SCWRF, Southern Cottonwood Willow Riparian Forest
- Jurisdiction Delineation**
 - ACOE /RWQCB Non-Wetland Waters/CDFW Riparian Areas
 - ACOE /RWQCB/CDFW Wetlands
 - CDFW only Riparian
 - Data Station
- Special-Status Wildlife**
 - Cooper's hawk
 - least Bell's vireo
 - yellow warbler
 - yellow-breasted chat
 - Least Bell's vireo (2017 Surveys)
- Special-Status Plants**
 - Iva hayesiana, San Diego marsh-elder

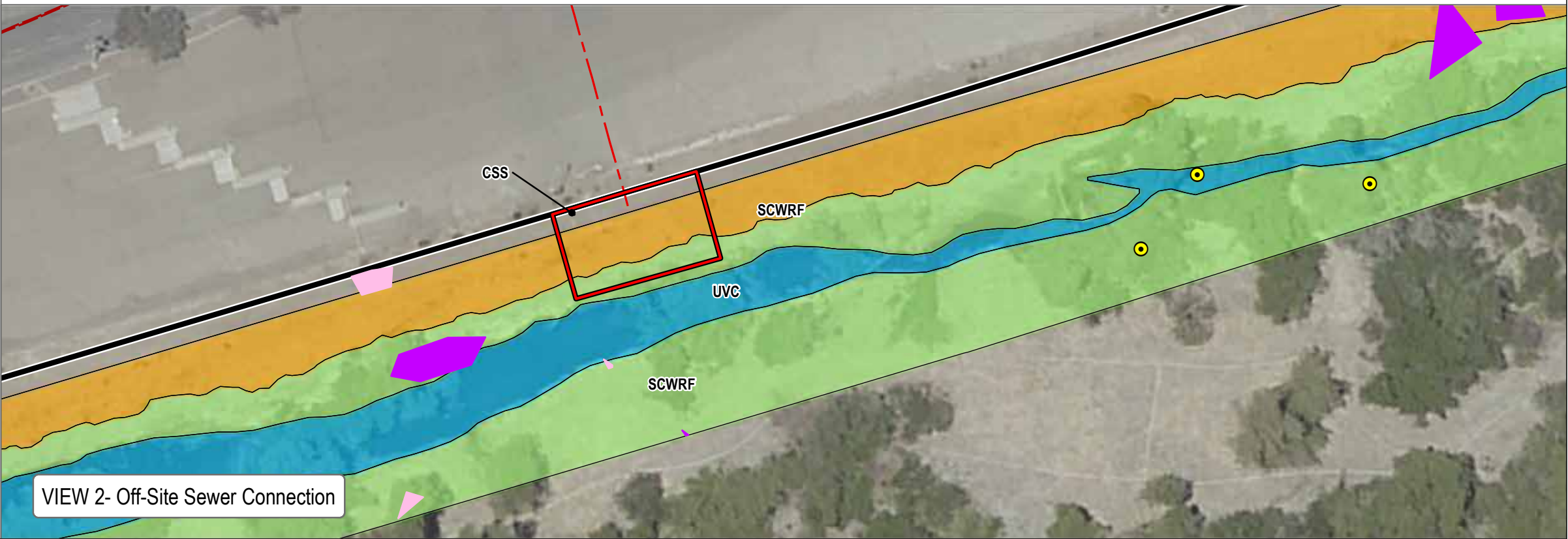
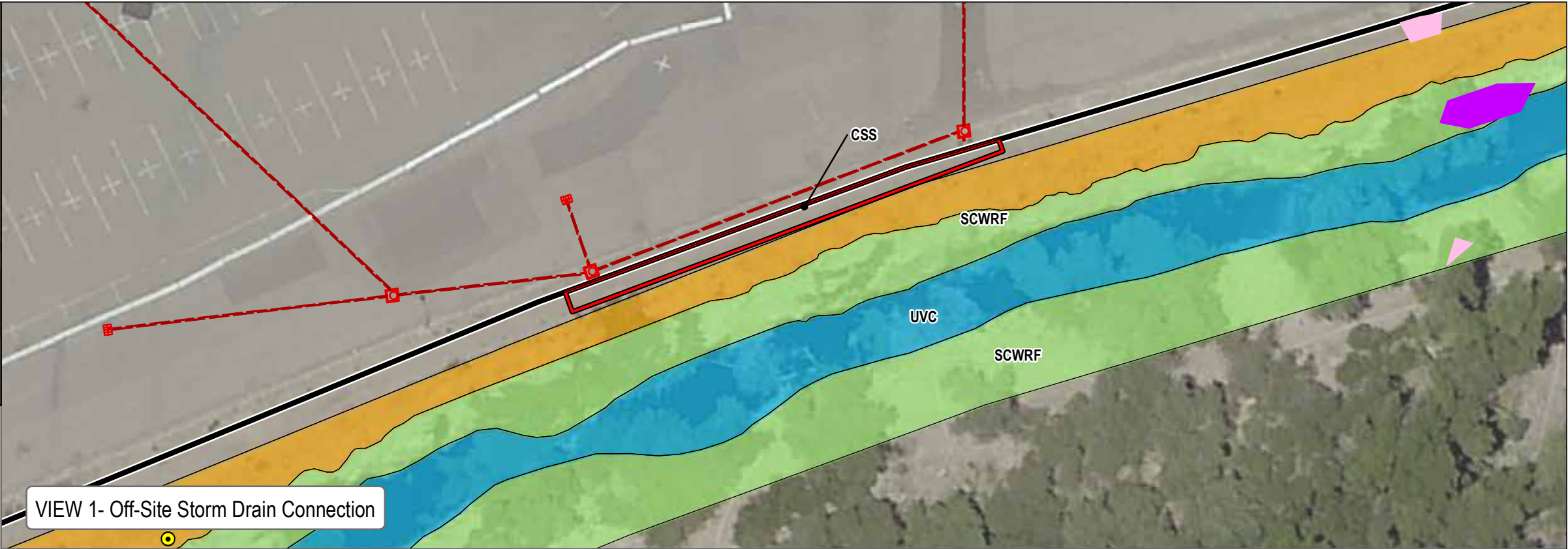


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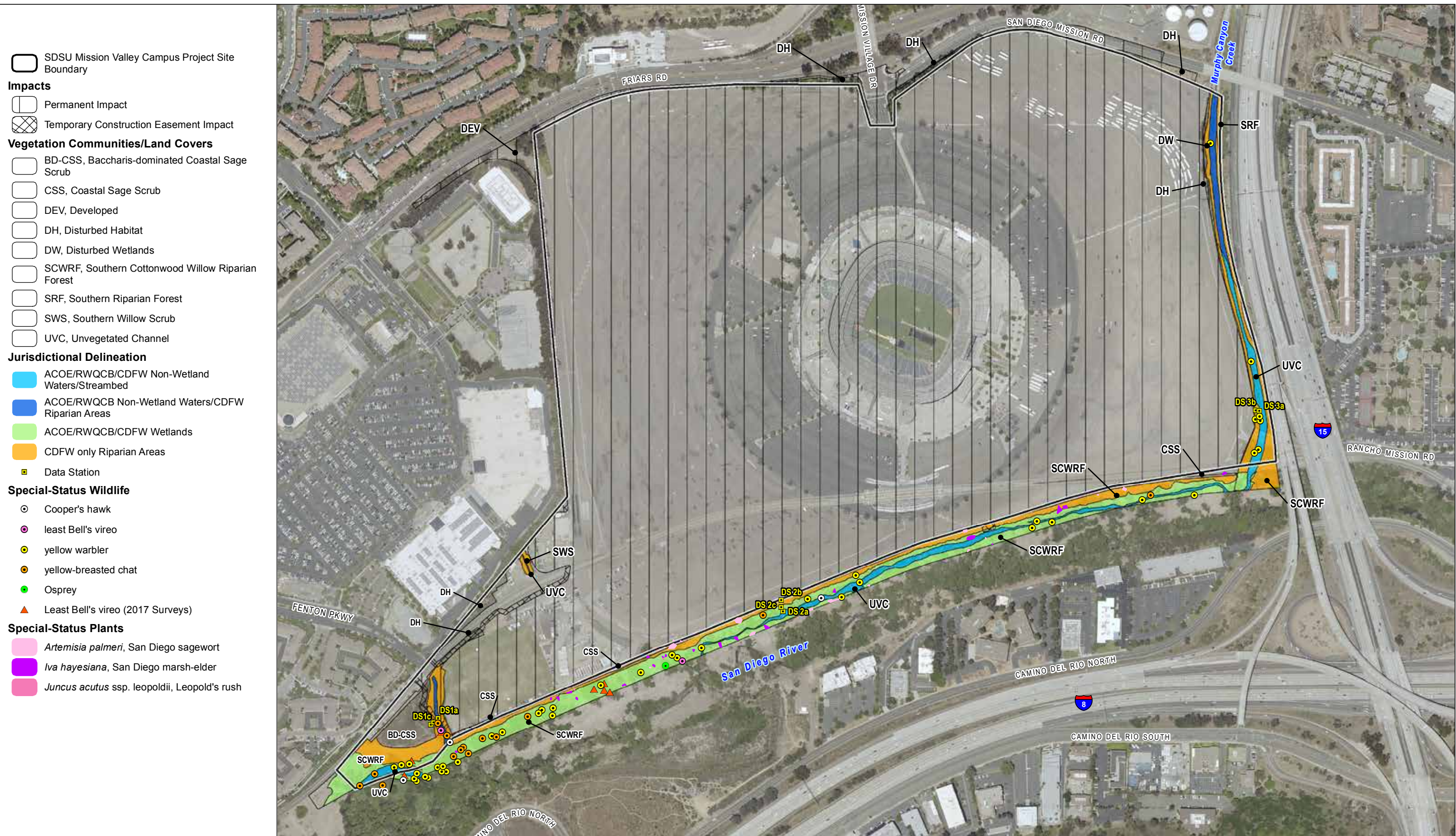


- SDSU Mission Valley Campus Project Site Boundary
- Vegetation Communities/Land Covers**
- CSS, Coastal Sage Scrub
 - DEV, Developed
 - SCWRF, Southern Cottonwood Willow Riparian Forest
 - UVC, Unvegetated Channel
 - Temporary Construction Easement Area
- Jurisdiction Delineation**
- ACOE/RWQCB/CDFW Non-Wetland Waters/Streambed
 - ACOE/RWQCB/CDFW Wetlands
 - CDFW only Riparian
- Special-Status Wildlife**
- yellow warbler
- Special-Status Plants**
- Artemisia palmeri*, San Diego sagewort
 - Iva hayesiana*, San Diego marsh-elder



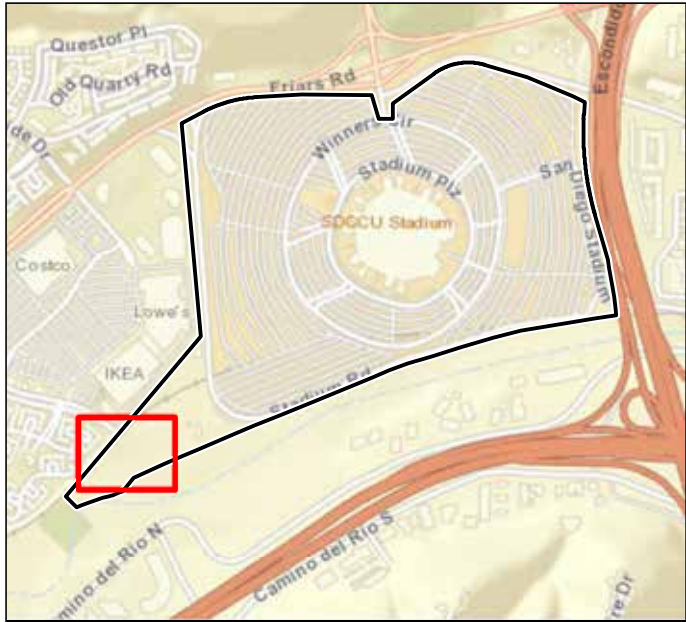
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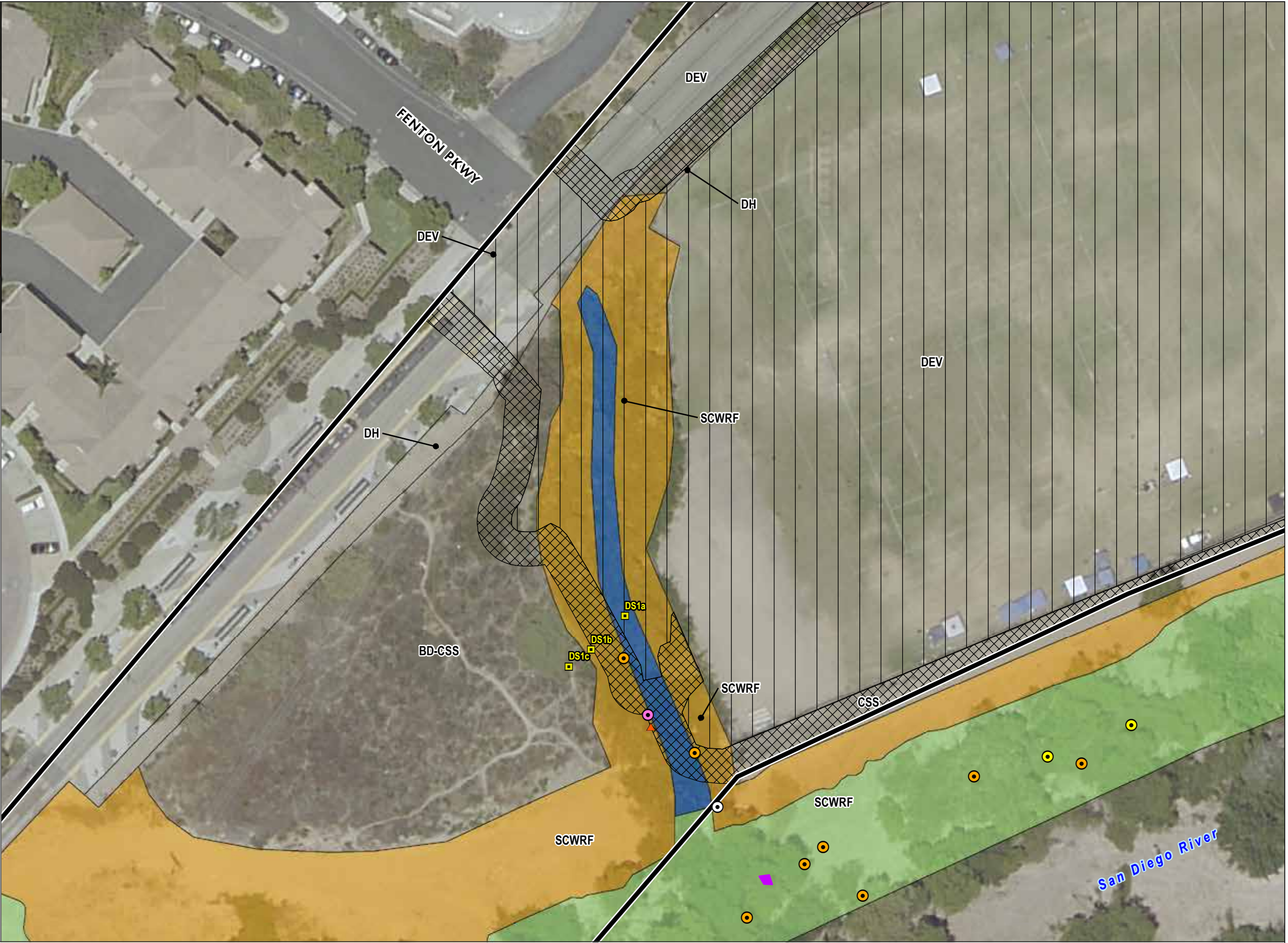


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- SDSU Mission Valley Campus Project Site Boundary
- Impacts**
- Permanent Impact
 - Temporary Construction Easement Impact
- Vegetation Communities/Land Covers**
- BD-CSS, Baccharis-dominated Coastal Sage Scrub
 - CSS, Coastal Sage Scrub
 - DEV, Developed
 - DH, Disturbed Habitat
 - SCWRF, Southern Cottonwood Willow Riparian Forest
- Jurisdiction Delineation**
- ACOE/RWQCB Non-Wetland Waters/CDFW Riparian Areas
 - ACOE/RWQCB/CDFW Wetlands
 - CDFW only Riparian
 - Data Station
- Special-Status Wildlife**
- Cooper's hawk
 - least Bell's vireo
 - yellow warbler
 - yellow-breasted chat
 - Least Bell's vireo (2017 Surveys)
- Special-Status Plants**
- Iva hayesiana*, San Diego marsh-elder

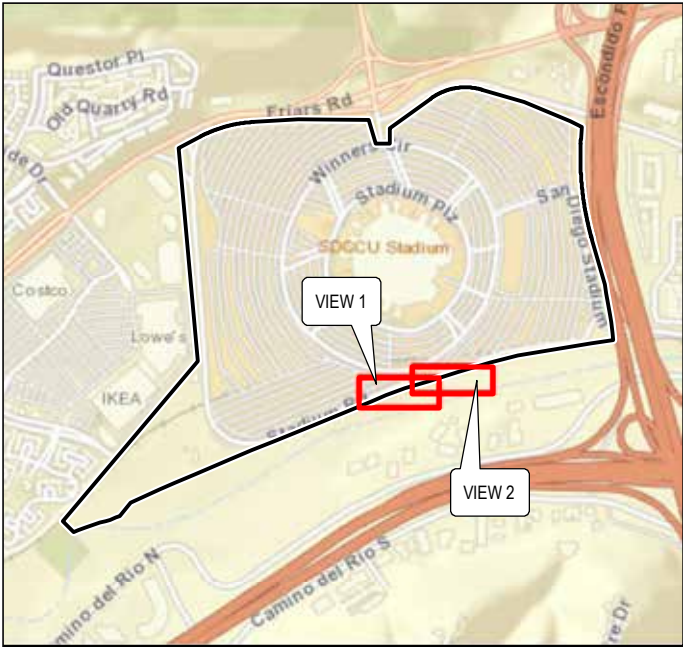


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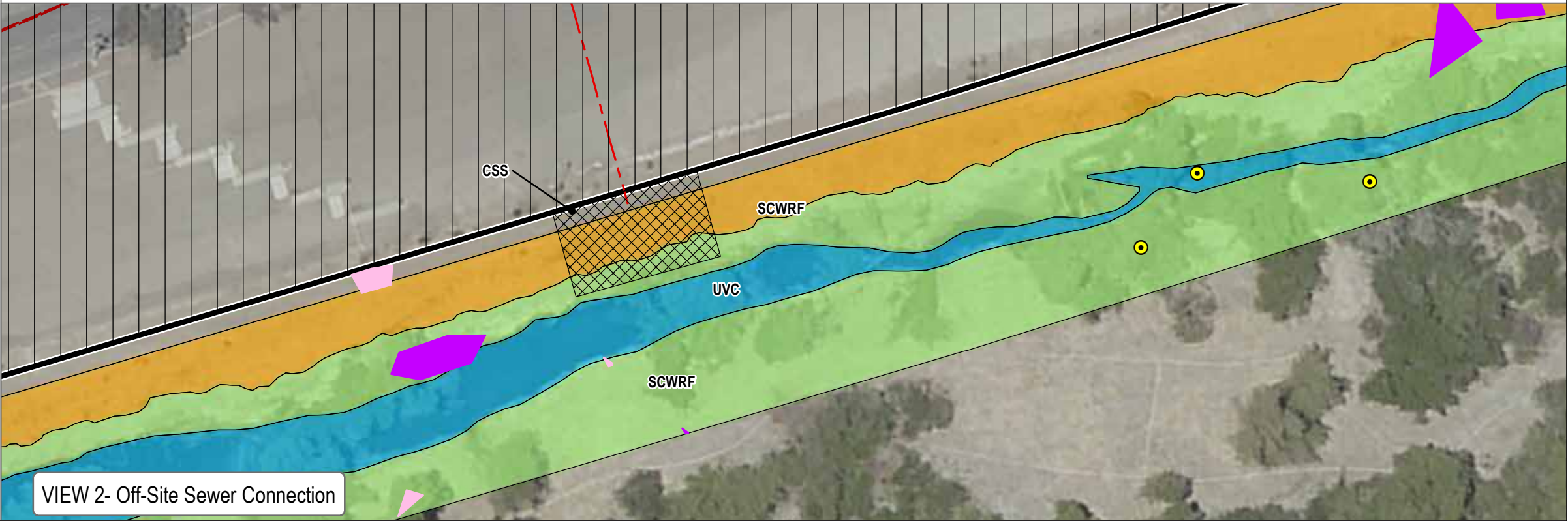
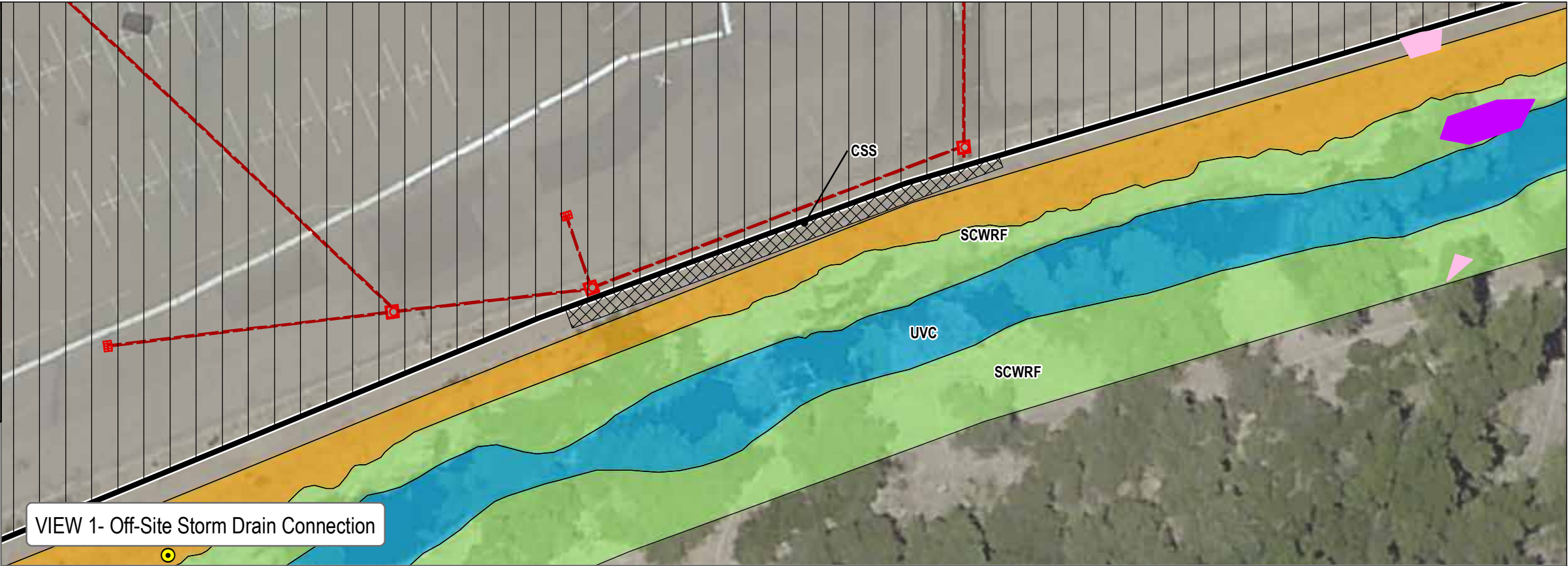


Figure 4.3-5
Impacts to Biological Resources - Fenton Parkway Extension

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- SDSU Mission Valley Campus Project Site Boundary
- Vegetation Communities/Land Covers**
- CSS, Coastal Sage Scrub
 - DEV, Developed
 - SCWRF, Southern Cottonwood Willow Riparian Forest
 - UVC, Unvegetated Channel
- Impacts**
- Permanent Impact
 - Temporary Construction Easement Impact
- Jurisdiction Delineation**
- ACOE/RWQCB/CDFW Non-Wetland Waters/Streambed
 - ACOE/RWQCB/CDFW Wetlands
 - CDFW only Riparian
- Special-Status Wildlife**
- yellow warbler
- Special-Status Plants**
- Artemisia palmeri*, San Diego sagewort
 - Iva hayesiana*, San Diego marsh-elder



SOURCE: AERIAL SANGIS 2017



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4.4 Cultural Resources

This section describes the existing cultural resources conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

Methods for Analysis

A Cultural Resources Technical Report was prepared for the proposed project by Dudek in July 2019, and is included as Appendix 4.4-1 to this environmental impact report (EIR). Dudek completed a separate analysis of San Diego County Credit Union (SDCCU) Stadium's historical significance in a complementary report included as Appendix 4.4-2 to this EIR (Dotter 2019). Information provided in this EIR section is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the Cultural Resources Technical Report (Appendix 4.4-1) and Historical Resources Technical Report (Appendix 4.4-2) prepared for the proposed project.

Dudek conducted a records search at the South Coastal Information Center (SCIC) for the project area and a surrounding 1-mile radius on February 8, 2019. Additional consulted sources included the California Inventory of Historical Resources/California Register of Historical Resources (CRHR) and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and California Department of Transportation Bridge Survey information. Geographic information system maps were produced indicating the spatial relationship between known resources and possible project impacts. Historical aerial maps were also consulted using the internet database Historicaerials.com. These maps were used to determine the development history of the area and to indicate any possible development from the historic era.

Additionally, an intensive pedestrian cultural survey of the proposed project area was conducted by a Dudek archaeologist on March 7, 2019. Native American monitors from Redtail Environmental and the Manzanita Band of Kumeyaay Nation participated in the pedestrian survey. The survey conducted exceeded the applicable Secretary of Interior Professional Qualifications Standards for archaeological survey and evaluation. Large portions of the proposed project's area of potential effect (APE) are covered by buildings, asphalt, and landscaping. The survey team walked the periphery of the APE and viewed any undeveloped portion of the APE, including landscaped hillsides. The southwestern portion of the APE is less developed and was surveyed using transects spaced no more than 15 meters apart. The archaeologist used an Apple 3rd Generation iPad equipped with an 8 MP resolution camera, GPS receiver, and georeferenced PDF maps of the project area. Accuracy of this device ranged between 3 meters and 10 meters. The archaeologist inspected natural and artificial erosion exposures, as well as spoils from rodent burrows as a means to locate evidence for buried cultural deposits. No artifacts were collected during the survey.

On behalf of San Diego State University (SDSU), Dudek requested a search of the Native American Heritage Commission (NAHC) Sacred Lands File on December 19, 2018, to determine if any tribal cultural resources are present within 1 mile of the project area. Steven Quinn, NAHC Associate Government Program Analyst, facilitated this search and returned the results on January 3, 2019. The results of the NAHC search of the Sacred Lands File were positive. As part of the consultation process, the NAHC provided a list of tribal governments and individuals that should be consulted. Dudek sent outreach letters via certified mail to all representatives listed on the NAHC list on February 4, 2019. To date, Dudek has received only one response from the NAHC outreach letters. The NAHC response letter is outlined below under Section 4.4.4.

Under the California Environmental Quality Act (CEQA), the lead agency must consult with Native American Tribes regarding a project's potential impacts on tribal resources. (California PRC Section 21080.3.1.) As lead agency, SDSU and its representatives sent letters via certified mail to the Native American representatives included on the consultation list provided by the NAHC on December 21, 2018. SDSU tracked the certified mail return receipts and tried to establish contact via email or telephone with anyone from whom they did not receive a signed return receipt. SDSU's efforts resulted in responses from six tribal representatives requesting consultation. These responses are outlined in the impacts analysis below under Section 4.4.4.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019 to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to cultural resources focused on the impacts which could occur to historical resources as a result of SDCCU Stadium demolition, known and unknown cultural resources, and the request for qualified tribal cultural monitors during ground-disturbing activities. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.4.1 Existing Conditions

Environmental Setting

The project site is located in the northeast portion of the Mission Valley community within the City of San Diego (City). Specifically, the project site is situated south of Friars Road, west of Interstate (I) 15, north of I-8, and east of the existing Fenton Marketplace shopping center. It is approximately 5 miles from downtown San Diego and approximately 2.5 miles west of the existing SDSU main campus situated along I-8 within the College Area Community of the City. The project site is in a developed area surrounded by major freeways, roadways, existing development, and the San Diego River. Higher density multifamily residential land uses are located to the northwest, southwest, and east, across I-15. Friars Road, Mission Village Road, and San Diego Mission Road are located to the north. The San Diego River, which flows east to west, is located south of the project site; and south of the river are additional office uses and I-8. To the north of Friars Road is San Diego Fire Department Fire Station 45, undeveloped hillsides, and single-family residences situated atop the mesa. To the west are office and large commercial retail uses. Murphy Canyon Creek, a partially earthen and concrete-lined channel that conveys flow into the river, is located within the eastern project boundary, and I-15 is located east of Murphy Canyon Creek. The project does not include any improvement, facility, construction, or staging within any portion of Murphy Canyon Creek; therefore, while the existing creek is within the project boundary, no project element, component, improvement, or feature is contemplated within the creek.

The proposed project's APE encompasses the existing SDCCU Stadium, its parking facilities, a recycling center, open athletic field, and undeveloped land (Figure 4.4-1, Area of Potential Effect). The APE is largely developed and covered by buildings, asphalt, or landscaping; however, the southwestern extent of the project site is undeveloped and overgrown with vegetation. The proposed project APE is located in unsectioned land of the La Jolla and La Mesa U.S. Geological Survey 7.5-minute quadrangle. The elevation ranges from approximately 35 feet above mean sea level to 300 feet above mean sea level. The majority of the project site is relatively flat within the existing large parking area surrounding the stadium structure. Along the southern boundary of the project site there is a small berm beyond the parking lot, which descends into the lower floodplain of the San Diego River. Though ground surface is visible, there is evidence of earthmoving within the floodplain. In the western portion of the project site,

there is a flat training field, and beyond that a storm drain outlet channel that conveys water down into the San Diego River floodplain.

Cultural Context

Evidence indicates that continuous human occupation in the San Diego region spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. This research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1750), and Ethnohistoric (post-AD 1750). It is important to note that Native American aboriginal lifeways did not cease at European contact. Protohistoric refers to the chronological trend of continued Native American aboriginal lifeways at the cusp of the recorded historic period in the Americas. Section 3.3 of the Cultural Resources Technical Report (Appendix 4.4-1) outlines the cultural chronologies in detail.

Archaeological Inventory

The SCIC records search revealed that 159 cultural resource studies have been previously conducted within 1-mile of the current APE (Appendix 4.4-1). Of these previous studies, 23 included portions of the APE (refer to Table 3.1 of Appendix 4.4-1 to this EIR). The studies included records searches, surveys, and monitoring reports for the San Diego River corridor and SDCCU Stadium grounds. Most relevant to this study is the San Diego Stadium Historic Resources Technical Report conducted by Heritage Architecture & Planning (HAP) in 2015. Besides the SDCCU Stadium, these previous studies did not identify any resources within the APE.

The records search also identified one previously recorded resource, SDCCU Stadium (P-37-035171), within the current APE. Additionally, the records search also identified 51 other previously recorded cultural resources within 1 mile of the APE. Historical resources include three historical trash deposits, an electric transmission line, an electric substation, and many historical buildings. Prehistoric resources include two artifact scatters, two isolates, and one unknown site. One multicomponent resource, the Mission of San Diego and the Kumeyaay village of Nipaguay (P-37-000035; CA-SDI-35), is also located 0.5 miles east of the APE (refer to Table 3.2 of Appendix 4.4-1 to this EIR).

In addition to the SCIC records search, Dudek conducted an online review of historic aerial images of the project APE and general vicinity. The aerial photographs indicated that, besides SDCCU Stadium, no other structures within the APE are older than 45 years and none are considered cultural resources (Appendix 4.4-1).

Besides the SDCCU Stadium (P-37-000035; CA-SDI-35), no archaeological resources were observed during intensive pedestrian survey of the project APE. The APE is largely covered by the SDCCU Stadium, other buildings, asphalt, and landscaping. The San Diego River corridor is located immediately outside of the APE. This corridor shows signs of previous earthmoving and is covered by vegetation. The only portion of the APE that is not fully developed is the southwestern corner. This section, though undeveloped, has been heavily disturbed and sculpted by the adjacent construction of the sports field, trolley stop, and river flood plain. All buildings outside of the SDCCU Stadium are not of significant age to be considered cultural resources (Appendix 4.4-1).

Historic Context

As described in the Historical Resources Technical Report, Appendix 4.4-2 to this EIR, HAP prepared the 2015 Historical Resources Technical Report (HRTR) for the City of San Diego's SDCCU Stadium Environmental Impact Report (prepared by AECOM). Because historic resources are not expected to become less significant with the passage of time, the HRTR prepared for the proposed project is based on the analysis and findings contained in the 2015 HRTR and has been updated to reflect any changes in the intervening 4 years since the preparation of that report. The 2015 HRTR found the SDCCU Stadium eligible for listing in the National Register of Historic Places (NRHP), CRHR, and as a City of San Diego Historical Resource. The SDCCU Stadium was found significant for its association in the area of recreation/entertainment based on the role that the stadium played in the cultural and civic life of the San Diego region (NRHP Criterion A, CRHR Criterion 1, and City of San Diego Historical Resource Criterion A). The stadium is also significant in the areas of architecture and engineering for its associations with master architects Frank L. Hope and Charles B. Hope, as well as master engineer Charles "Chuck" Bullock. The stadium is a distinctive example of the Brutalist architectural style in San Diego (NRHP Criterion C, CRHR Criterion 3, and City of San Diego Historical Resource Criteria C and D). The structure was not yet 50 years old when HAP prepared the HRTR; consequently, NRHP Criterion Consideration G thresholds for properties less than 50 years old that have achieved exceptional significance were applied to the evaluation. The stadium reached 50 years of age in 2017, two years after the 2015 HRTR. While Criteria Consideration G no longer applies, it is worth noting that the structure was identified as having exceptional significance meriting designation prior to reaching the standard age for consideration of listing in the NRHP. Primary character-defining features of the stadium are its monumental massing, sculptural quality of exposed concrete, and repetition of forms. After careful review of the 2015 HRTR, Dudek agrees with the findings of the report. Stadium history and architectural style is described in detail in Appendix 4.4-2 to this EIR.

A report completed by AECOM + Magellan Consulting entitled Facilities Condition Assessment Qualcomm Stadium (April 2011) addressed the cost of bringing the existing Stadium up to the standard required by a professional football team. The report estimated that \$80 million would be required to accomplish such work. Of this amount, approximately \$2.25 million was estimated for the cost of a seismic upgrade and a relatively minor amount to cover the cost of repairing the existing concrete. The types of concrete repairs documented in the AECOM report include small areas of concrete spalls and exposed rebar, which may be repaired and do not pose a structural risk. In contrast, the HAP report focused on the physical condition of the Stadium as it existed in 2015, instead of focusing on upgrading all aspects of the Stadium to meet the modern standards of a professional football team. As such, the findings of the HAP report do not contradict the AECOM report, and represent a fair and accurate assessment of the Stadium's current condition.

Given the planned sale of the property to the state as part of the SDSU campus, Dudek evaluated the SDCCU Stadium, in consideration of California Public Resources Code Sections 5024 and 5024.5, for listing as a California Historical Landmark. The Stadium appears to meet all three criteria, and therefore, the SDCCU Stadium is recommended eligible for listing as a California Historical Landmark (Appendix 4.4-2).

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) established the NRHP and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers to carry out some of the functions of the NHPA. Section 106 of the NHPA directs that "[t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP." Section 106 also affords the ACHP a reasonable opportunity to comment on the undertaking (16 USC 470f).

36 Code of Federal Regulations (CFR), Part 800 implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources with important cultural values, to determine whether or not they may be adversely affected by a proposed undertaking and the process for eliminating, reducing, or mitigating the adverse effects.

The content of 36 CFR 60.4 defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historic significance in consultation with the ACHP and the California State Historic Preservation Officer to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Regarding criteria A through D of Section 106, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, cultural resources, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

- A. are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. are associated with the lives of persons significant in our past; or
- C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. have yielded or may be likely to yield, information important in prehistory or history [36 CFR 60.4].

The National Historic Preservation Act Amendments

The 1992 amendments to the NHPA enhance the recognition of tribal governments' roles in the national historic preservation program, including adding a member of an Indian tribe or Native Hawaiian organization to the ACHP. The 1992 amendments to the NHPA include the following:

- Clarify that properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined eligible for inclusion in the NRHP.
- Reinforce the provisions of the ACHP's regulations that require the federal agency to consult on properties of religious and cultural importance.

The 1992 amendments also specify that the ACHP can enter into agreement with tribes that permit undertakings on tribal land and that are reviewed under tribal regulations governing Section 106. Regulations implementing the NHPA state that a federal agency must consult with any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by an undertaking.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 (ARPA) requires landholding federal agencies to notify federally recognized Indian tribes before a permit is issued for archaeological excavation on sites of religious or cultural importance to them in national parks, wildlife refuges, or forests, or on Indian lands. ARPA raised the penalty for looting objects older than 100 years to \$20,000 dollars for a first-time felony infraction. For a repeat infringement the fine was raised to \$100,000 and up to 5 years in prison.

Federally recognized tribes must be notified 30 days before issuing a permit for excavations on public land; upon request, the federal land manager must meet with them in those 30 days to discuss their concerns. On Indian lands, Indian Tribe or individual consent must be obtained before the permit is granted.

Uniform rules and regulations were published by the Departments of the Interior (43 CFR 7), Agriculture (36 CFR 296), and Defense (32 CFR 229), and the Tennessee Valley Authority (18 CFR 1313) in the January 6, 1984, Federal Register. Similar regulations were published for implementing ARPA on Indian lands (25 CFR 262) in the December 13, 1993, Federal Register.

The regulations also state that the federal agency also may notify any other Native American group known by the agency to consider the sites to be of cultural or religious importance. The intentional excavation of human remains, funerary objects, sacred objects, or objects of cultural patrimony from federal lands and tribal lands must follow both the requirements of ARPA and the Native American Graves Protection and Repatriation Act (NAGPRA). The Bureau of Indian Affairs will issue any ARPA permits needed for excavation on private lands within the exterior boundaries of Indian reservations.

The Native American Graves Protection and Repatriation Act

NAGPRA became effective November 16, 1990. NAGPRA addresses the rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to human remains and certain cultural items with which they are affiliated. NAGPRA directs federal agencies and museums to identify, in consultation with Native Americans, the cultural affiliation of Native American human remains and associated funerary objects, unassociated funerary objects, sacred objects, or objects of cultural patrimony, in holdings or collections under their possession (i.e., physical

custody) or control (i.e., having sufficient legal interest). Ultimately, the intent is to repatriate the human remains and other cultural items to the appropriate lineal descendants or tribe. NAGPRA authorizes provisions for federal grants supporting activities of repatriation, and outlines penalties for non-compliance and illegal trafficking of funerary or sacred items. Such civil penalties are to be assessed by the Secretary of the Interior, and generally correspond with those defined in the ARPA.

State

California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated for their potential to cause environmental impacts, including impacts to historical resources. Historical resources are recognized as part of the environment under CEQA, which defines historical resources as “any object, building, structure, site, area, or place that is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (Division I, California PRC, Section 5021.1[b]).

As described further below, the following CEQA statutes and CEQA Guidelines are relevant to the analysis of archaeological and historic resources:

1. California Public Resources Code Section 21083.2(g): Defines “unique archaeological resource.”
2. California Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5(a): Defines historical resources. In addition, CEQA Guidelines Section 15064.5(b) defines the phrase “substantial adverse change in the significance of an historical resource. It also defines the circumstances when a project would materially impair the significance of a historical resource.
3. California Public Resources Code Section 21074 (a): Defines “tribal cultural resources,” and Section 21074(b): defines a “cultural landscape.”
4. California Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5(e): These statutes set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
5. California Public Resources Code Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4: These statutes and regulations provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; identifies preservation-in-place as the preferred manner of mitigating impacts to significant archaeological sites.

Under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an historical resource” (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(b)). An “historical resource” is any site listed or eligible for listing in the CRHR. The CRHR listing criteria are intended to examine whether the resource in question: (a) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; (b) is associated with the lives of persons important in our past; (c) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (d) has yielded, or may be likely to yield, information important in pre-history or history.

The term “historical resource” also includes any site described in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code Section 5024.1(q)).

CEQA also applies to “unique archaeological resources.” California Public Resources Code Section 21083.2(g) defines a “unique archaeological resource” as any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In 2014, CEQA was amended to apply to “tribal culture resources” as well. Specifically, California Public Resources Code Section 21074 provides guidance for defining tribal cultural resources as either of the following:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: (a) Included or determined to be eligible for inclusion in the California Register of Historical Resources. (b) Included in a local register of historical resources as defined in subdivision (k) of [Section] 5020.1.
- (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [Section] 5024.1. In applying the criteria set forth in subdivision (c) of [Section] 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe. (b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

All historical resources and unique archaeological resources – as defined by statute – are presumed to be historically or culturally significant for purposes of CEQA (California PRC 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)). A site or resource that does not meet the definition of “historical resource” or “unique archaeological resource” is not considered significant under CEQA and need not be analyzed further (California PRC Section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)).

Under CEQA, a significant cultural impact results from a “substantial adverse change in the significance of an historical resource [including a unique archaeological resource]” due to the “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines Section 15064.5(b)(1); California PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

(CEQA Guidelines Section 15064.5(b)(2)).

Pursuant to these sections, the CEQA first evaluates whether a project site contains any “historical resources,” then assesses whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource’s historical significance is materially impaired.

When a project significantly affects a unique archeological resource, CEQA imposes special mitigation requirements. Specifically:

If it can be demonstrated that a project will cause damage to a unique archeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

1. Planning construction to avoid archeological sites.
2. Deeding archeological sites into permanent conservation easements.
3. Capping or covering archeological sites with a layer of soil before building on the sites.
4. Planning parks, greenspace, or other open space to incorporate archeological sites.

(California Public Resources Code Section 21083.2(b)(1)-(4).)

If these “preservation in place” options are not feasible, mitigation may be accomplished through data recovery (California PRC Section 21083.2(d); CEQA Guidelines Section 15126.4(b)(3)(C)). California Public Resources Code Section 21083.2(d) states that “[e]xcavation as mitigation shall be restricted to those parts of the unique archeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report.”

These same requirements are set forth in slightly greater detail in CEQA Guidelines Section 15126.4(b)(3), as follows:

- (A) Preservation in place is the preferred manner of mitigating impacts to archeological sites. Preservation in place maintains the relationship between artifacts and the archeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
- (B) Preservation in place may be accomplished by, but is not limited to, the following:
 1. Planning construction to avoid archeological sites;
 2. Incorporation of sites within parks, greenspace, or other open space;
 3. Covering the archeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site[; and]
 4. Deeding the site into a permanent conservation easement.

- (C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.

Note that, when conducting data recovery, “[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation” (CEQA Guidelines Section 15126.4(b)(3)). However, “[d]ata recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archeological or historic resource, provided that determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center” (CEQA Guidelines Section 15126.4(b)(3)(D)).

Finally, CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. If Native American human remains or related cultural material are encountered, Section 15064.5(e) of the CEQA Guidelines (as incorporated from California PRC Section 5097.98) and Health and Safety Code Section 7050.5 define the subsequent protocol. In the event of the accidental discovery or recognition of any human remains, excavation or other disturbances shall be suspended of the site or any nearby area reasonably suspected to overlie adjacent human remains or related material. Protocol requires that a county-approved coroner be contacted in order to determine if the remains are of Native American origin. Should the coroner determine the remains to be Native American, the coroner must contact the NAHC within 24 hours. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in California Public Resources Code Section 5097.98 (14 CCR 15064.5(e)).

CEQA (California PRC Section 21000 et seq.) is the primary state environmental law protecting fossils. CEQA requires that public agencies and private interests identify the environmental consequences of their proposed projects on any object or site of significance to the scientific annals of California (Division I, California PRC, Section 5020.1 [b]). Administrative regulations for the implementation of CEQA are set forth in California Code of Regulations Section 15000 et seq., commonly known as the “CEQA Guidelines.” The CEQA Guidelines define procedures, types of activities, persons, and public agencies required to comply with CEQA. Appendix G of the CEQA Guidelines contains an Environmental Checklist of questions that a lead agency should normally address if relevant to a project’s environmental impacts. CEQA Guidelines Section VII(f) of the Environmental Checklist asks a question directly applicable paleontological resources: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” Fossils are significant examples of the major periods of California prehistory. To comply with CEQA, environmental impact assessments, statements, and reports must answer this question in the Environmental Checklist to determine the potential impact to paleontological resources with and without mitigation.

The CEQA lead agency having jurisdiction over a project is responsible for ensuring that paleontological resources are protected in compliance with CEQA and other applicable statutes. CEQA Section 21081.6 requires that the lead agency demonstrate project compliance with mitigation measures developed during the environmental impact review process.

California Public Resources Code Sections 5024 and 5024.5 (State-Owned Historical Resources)

Sections 5024 and 5024.5 of the California Public Resources Code provide the following guidance:

- 5024 (a-h): Describes the process of inventorying and evaluating state-owned historical resources in consultation with the State Historic Preservation Officer (SHPO).
- 5024.5 (a-g): Describes the process of identifying adverse effects and development of alternatives and mitigation for state-owned historical resources in consultation with, and as determined by, the SHPO.

Under California Public Resources Code Sections 5024(f) and 5024.5, state agencies must provide notification and submit documentation to the SHPO early in the planning process for any project having the potential to affect state-owned historical resources on or eligible for inclusion in the Master List (buildings, structures, landscapes, archaeological sites, and other nonstructural resources). Under California Public Resources Code Section 5024(f), state agencies request the SHPO's comments on the project.

Under California Public Resources Code Section 5024.5, it is the SHPO's responsibility to comment on the project and to determine if it may cause an adverse effect (California Public Resources Code Section 5024.5), defined as a substantial adverse change in the significance of a historical resource (California PRC Section 5020.1(q)). In this case, historical resources are defined as resources eligible for or listed in the NRHP, and/or resources registered for or eligible for registering as a California Historical Landmark (Appendix 4.4-2).

California Historical Landmark Criteria

California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value.

To be eligible for designation as a California Historical Landmark, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code, Section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change"

(California PRC, Section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following criteria:

1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Associated with the lives of persons important in California's past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Yielded, or may be likely to yield, information important in prehistory or history.

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys (California PRC, Section 5020 et seq.).

Local

Because SDSU is a component of the California State University, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, SDSU has considered the following planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to federal and state agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego

As previously stated, though CSU is not required to follow the City's historical resources evaluation protocol, which are set forth in the City of San Diego Historical Resources Guidelines (City of San Diego 2001), CSU has elected to use the protocol due to its applicability to the San Diego built environment. The City of San Diego Historical Resources Guidelines establish a development review process to review projects in the City. This process involves: (1) the implementation of the Historical Resources Regulations and (2) the determination of impacts and mitigation under CEQA. The Historical Resources Guidelines provide property owners, the development community, consultants and the general public with explicit guidelines for the management of historical resources located within the jurisdiction of the City.

The Historical Resources Guidelines help to implement the City's Historical Resources Regulations contained in the Land Development Code (Chapter 14, Division 3, Article 2) in compliance with applicable local, state, and federal policies and mandates, including, but not limited to, the City's General Plan, CEQA, and NHPA Section 106. The intent of the Historical Resources Guidelines is to ensure consistency in the management of the City's historical resources, including identification, evaluation, preservation/mitigation and development.

The City's Historical Resources Guidelines (City of San Diego 2001) observe that:

Historical resources include all properties (historic, archaeological, landscapes, traditional, etc.) eligible or potentially eligible for the National Register of Historic Places, as well as those that may be significant pursuant to state and local laws and registration programs such as the California

Register of Historical Resources or the City of San Diego Historical Resources Register. “Historical resource” means site improvements, buildings, structures, historic districts, signs, features (including significant trees or other landscaping), places, place names, interior elements and fixtures designated in conjunction with a property, or other objects of historical, archaeological, scientific, educational, cultural, architectural, aesthetic, or traditional significance to the citizens of the City. They include buildings, structures, objects, archaeological sites, districts or landscapes possessing physical evidence of human activities that are typically over 45 years old, regardless of whether they have been altered or continue to be used. Historical resources also include traditional cultural properties. The following definitions are based, for the most part, on California's Office of Historic Preservation's (OHP) Instructions for Recording Historical Resources and are used to categorize different types of historical resources when they are recorded

The purpose and intent of the Historical Resources Regulation of the Land Development Code (City of San Diego 2018) is outlined as follows: “To protect, preserve and, where, damaged, restore the cultural resources of San Diego. The regulations apply to all development within the City of San Diego when cultural resources are present within the premises regardless of the requirement to obtain Neighborhood Development Permit or Site Development Permit.”

The City's General Plan Program EIR (City of San Diego 2007) states the following:

The Historical Resources Regulations require that designated cultural resources and traditional cultural properties be preserved unless deviation findings can be made by the decision maker as part of a discretionary permit. Minor alterations consistent with the U.S. Secretary of the Interior's Standards are exempt from the requirement to obtain a separate permit but must comply with the regulations and associated cultural resources guidelines. Limited development may encroach into important archaeological sites if adequate mitigation measures are provided as a condition of approval.

Historical Resources Guidelines, located in the Land Development Manual, provide property owners, the development community, consultants and the general public explicit guidance for the management of cultural resources located within the City's jurisdiction. These guidelines are designed to implement the cultural resources regulations and guide the development review process from the need for a survey and how impacts are assessed to available mitigation strategies and report requirements and include appropriate methodologies for treating cultural resources located in the City.

In general, the City's cultural resources regulations build on federal and state cultural resources laws and guidelines in an attempt to streamline the process of considering impacts to cultural resources within the City's jurisdiction, while maintaining that some resources not significant under federal or state law may be considered historical under the City's guidelines. In order to apply the criteria and determine the significance of potential project impacts to a cultural resource, the project APE must be defined for both direct impacts and indirect impacts. Indirect impacts can include increased public access to an archaeological site, or visual impairment of a historically significant viewshed related to a historic building or structure.

4.4.3 Significance Criteria

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.

4.4.4 Impacts Analysis

Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Construction Impacts

The proposed project would demolish the existing SDCCU Stadium and surrounding affiliated infrastructure to build a Mission Valley campus for SDSU, including a new multipurpose stadium, as well as creation of a River Park as contemplated by San Diego Municipal Code 22.0908.

The SDCCU Stadium (originally named San Diego Stadium, and later, San Diego Jack Murphy Stadium and Qualcomm Stadium) is one of the last remaining “cookie-cutter” type multipurpose stadiums in the United States and the only one built in Southern California. Of the 11 such stadiums built across the United States, only Robert F. Kennedy Memorial Stadium, the Oakland-Alameda County Coliseum, the now-vacant Astrodome, and the SDCCU Stadium remain. Therefore, it is a rare and dwindling resource type. As mentioned above and detailed in the HAP 2015 report, the stadium also had a profound influence on regional sports culture and civic history. Aside from being one of the more notable works designed by Frank L. Hope and Associates, the stadium also is an outstanding example of Brutalist architecture. As such, the SDCCU Stadium is recommended as eligible for listing as a California Historical Landmark. SDCCU Stadium remains substantially intact with virtually all of the original design elements and intent still visible throughout the structure and site. The architect’s report to the City in 1966 reveals that the design of the Stadium made room for possible expansion with its horse-shoe configuration. The design allowed for added seating capacity by enclosing the open end while maintaining the remainder of the seating bowl. The design intent was realized in the later 1984 and 1997 additions (Appendix 4.4-2).

According to the significance evaluation section of the 2015 HRTR (Appendix 4.4-2), the SDCCU Stadium is:

significant at the local level and eligible for historical listing in the National Register, the California Register, and the City of San Diego Historical Resources Register. Historic research and site evaluation reveal that the San Diego Stadium retains integrity to its 1967–1969 period of significance encompassing the construction of San Diego Stadium and the establishment of two professional sports teams, which marked a turning point in regional sports culture and civic history. It thus qualifies under National Register Criterion A, the California Register Criterion 1, and the City’s Historical Register Criterion A.

In addition, San Diego Stadium is also significant for its architecture as a good example of Brutalist architectural style in San Diego with its monumental massing, sculptural quality utilizing exposed concrete, and repetition of forms. San Diego Stadium was also designed by renowned architectural engineering firm Frank L. Hope & Associates and Frank L. Hope, Jr. (Frank L. Hope, III), who contributed to several well recognized Modern landmarks in San Diego. During his tenure, the firm expanded its work both nationally and internationally becoming one of the oldest and largest local architectural firm of its time. San Diego Stadium is therefore eligible for listing under National Register Criterion C, the California Register Criterion 3, and the City's Historical Register Criterion C and D.

The SDSU Mission Valley Campus Master Plan project includes demolition of SDCCU Stadium, a historical resource recommended as eligible under national, state, and local historic designation criteria for its association with important events, as an outstanding example of Brutalist-style architecture, and for being designed by a master architect. Therefore, construction of the proposed project would cause an adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5, and therefore, result in a **potentially significant impact (Impact CUL-1)**.

Operational Impacts

As described above under construction impacts, the proposed project would result in a significant impact due to the demolition of SDCCU Stadium, a historical resource. As stated in *League for Protection of Oakland's Architectural and Historic Resources v. City of Oakland* (1997) 52 Cal.App.4th 896, mitigation measures “do not reasonably begin to alleviate the impacts of [the historical resource’s] destruction. A large historical structure, once demolished, normally cannot be adequately replaced by reports and commemorative markers.” The court also concluded that the effects related to demolition of a historical resource cannot be reduced to a level of insignificance by incorporating design elements or features of the original historical resource into a new building.

The project involves construction and operation of an SDSU Mission Valley campus, including housing, hospitality, educational facilities, open space and recreation areas, a new multi-use stadium, and associated circulation and infrastructure. Where feasible, the applicant would salvage representative architectural features of the existing SDCCU Stadium for use within the future redevelopment of proposed facilities. However, as stated above, an impact to a historical resource cannot be reduced to a level of insignificance by incorporating design elements or features of the original historical resource. Therefore, operational impacts as a result of the proposed project are considered to be a **potentially significant impact (Impact CUL-2)**.

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Construction Impacts

No archaeological resources were identified through the SCIC records search, NAHC and tribal correspondence, or the intensive pedestrian survey of the area. The area has been substantially disturbed and is unlikely to contain intact archaeological deposits. However, due to the proximity of the proposed project to the San Diego River, the Kumeyaay trail system, and the prehistoric village of Nipawai, there is an increased potential that buried cultural deposits, though disturbed, are located within the proposed project area. Likewise, through NAHC outreach letters and Assembly Bill 52 consultation, Kumeyaay tribal representatives expressed concern for possible buried tribal cultural resources within the proposed project area. Not only did they cite the proximity of Nipawai, they identified

the Kumeyaay trail system within Mission Valley and expressed concern that the proposed project APE likely overlays portions of the tribal cultural resources. However, there are no known surface manifestations of this resource adjacent to the APE. The surrounding area has been substantially developed, and increased pedestrian traffic and use by construction personnel would pose little risk to previously recorded archaeological resources in the vicinity.

Although the project site and surrounding area has been substantially disturbed, and there are no known surface manifestations of resources, construction related to the proposed project may have a direct impact to previously unidentified cultural resources. As such, Dudek recommends archaeological and Native American monitoring during initial ground-disturbing activities. Due to the possibility of encountering historical, archaeological, or Native American cultural material within the proposed project area during construction, the project could result in **potentially significant impacts (Impact CUL-3)**.

Operational Impacts

As previously stated, no archaeological resources were identified through the SCIC records search, NAHC and tribal correspondence, or the intensive pedestrian survey of the area. However, due to the immediate proximity of the proposed project to the San Diego River, the Kumeyaay trail system, and the prehistoric village of Nipawai, there is an increased probability that buried cultural deposits are located within the proposed project area. Operational/permanent activities related to the proposed project would not have a direct impact to previously identified archaeological resources since they would have been handled during initial discovery (during construction). Furthermore, the surrounding area has been substantially developed, and increased pedestrian traffic would pose little risk to previously recorded archaeological resources in the vicinity. After construction is finished, operational/permanent activities would **not result in significant impacts** to cultural resources.

Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Construction Impacts

No human remains localities were identified through the SCIC records search, NAHC and tribal correspondence, or the intensive pedestrian survey of the area. However, through NAHC and Assembly Bill 52 consultation, Clint Linton of Santa Ysabel and Kumeyaay Cultural Repatriation Committee stated that Kumeyaay villages were often found where prehistoric trails met waterways. Due to the proposed project's geographic placement, buried village context, including human remains may be encountered during project-related ground disturbance. Although there are no known surface manifestations of this resource adjacent to the proposed project, and the surrounding area has been substantially developed, Dudek recommends archaeological and Native American monitoring during initial ground-disturbing activities. Should construction or other personnel encounter any previously undocumented human remains, the proposed project would result in a **potentially significant impact (Impact M-CUL-4)**.

Operational Impacts

As previously stated, no human remains were identified through the SCIC records search, NAHC and tribal correspondence, or the intensive pedestrian survey of the area. Operational/permanent activities related to the proposed project would **not result in significant impacts** to previously identified human remains since they would have been handled during initial discovery (during construction). Furthermore, the surrounding area has been substantially developed and has defined routes of travel, none of which would be altered by the proposed project.

Would the project result in a cumulative impact to cultural resources?

Future probable proposed projects within the City may potentially contribute to cumulative impacts on cultural resources. In many cases, site redesign or use of fill could minimize these adverse impacts. Total avoidance of the cultural resources is not a reasonable expectation. Additionally, the increased human activity near cultural resources would lead to greater exposure and potential for illicit artifact collection and inadvertent impacts during construction. The City and County of San Diego both maintain guidelines and protocols for addressing project impacts to cultural resources. These include both systematic surveys in areas of high site location potential to identify resources and monitoring programs to ensure that construction work is halted if significant resources are discovered. Since no archaeological resources have been identified through the records searches, NAHC and tribal correspondence, or the intensive pedestrian survey of the area, and because the proposed project area has been substantially developed, the proposed project's contribution to cumulative impacts on archaeological resources would be **less than cumulatively significant**.

4.4.5 Summary of Impacts Prior to Mitigation

- Impact CUL-1** A significant impact to a historical resource would occur as a result of the proposed project due to the demolition of SDCCU Stadium, which is considered a historical resource. Therefore, mitigation is provided (see Section 4.4.6, Mitigation Measures, specifically mitigation measures **MM-CUL-1** through **MM-CUL-3**).
- Impact CUL-2** A significant impact to a historical resource would occur as a result of the proposed project due to the construction and operation of proposed facilities. Therefore, mitigation is provided (see Section 4.4.6, Mitigation Measures, mitigation measures specifically **MM-CUL-2** and **MM-CUL-3**).
- Impact CUL-3** A significant impact to an archaeological resource would occur as a result of the proposed project due to the possibility of encountering historical, archaeological or Native American cultural material within the proposed project area during construction. Therefore, mitigation is provided (see Section 4.4.6, Mitigation Measures, specifically mitigation measure **MM-CUL-4**).
- Impact CUL-4** A significant impact to human remains would occur as a result of the proposed project should construction or other personnel encounter any previously undocumented human remains. Therefore, mitigation is provided (see Section 4.4.6, Mitigation Measures, specifically mitigation measure **MM-CUL-5**).

4.4.6 Mitigation Measures

The recommended mitigation measures for impacts to a historical resource as a result of the proposed project are as follows:

- MM-CUL-1** **Documentation.** Prior to commencement of construction, the historical resource would be documented according to Historic American Buildings Survey (HABS) standards as detailed by the National Park Service Heritage Documentation Programs. The documentation would include a written report done in the outline format; HABS-quality photography of the exterior, interior, and overview shots of the historical resource; measured drawings; and video documentation. The documentation materials would be prepared by a qualified Architectural Historian(s) and an

experienced HABS photographer(s). Copies of the resulting documentation would be submitted to the Library of Congress, the California State Historic Preservation Officer, the San Diego History Center, and the San Diego Public Library. Under this mitigation option, survey work must be conducted prior to any ground disturbance or demolition. The documentation must be completed within 1 year of the initial date of demolition of the structure.

MM-CUL-2 Interpretive Displays. Interpretive displays shall be installed in a publicly visible and accessible location(s) within the project site that describe the history and significance of the historical resource. Documentation prepared under MM-CUL-2 can be utilized in the interpretative displays. The content, design, and location of such signage may be done in consultation with the City’s Historical Resources staff. Work on the interpretative displays should be conducted in tandem with design and construction of the new facility to determine the appropriate location and size for the displays. The interpretative displays must be in place upon completion of the new facility located at the project site.

MM-CUL-3 Salvage of Materials. Prior to demolition, representative architectural features may be identified by a qualified Architectural Historian and, if feasible, salvaged for use within the future redevelopment (i.e., new stadium, future buildings, or open space areas, etc.). Should use of some or all of the salvaged architectural features within the project site not be feasible, the remaining architectural features may be donated to various historical and/or archival institutions.

The following mitigation measures would reduce the potential for impacts on cultural resources:

MM-CUL-4 In order to mitigate impacts to cultural resources to a level that is less than significant, procedures for proper treatment of unanticipated archaeological finds must comply with the California Environmental Quality Act (CEQA) Guidelines. Adherence to the following requirements during initial earth-disturbing activities will ensure the proper treatment of unanticipated archaeological or Native American cultural material:

1. An archaeological monitor and a Kumeyaay Native American monitor shall be present full-time during all initial ground-disturbing activities. If proposed project excavation later presents evidence suggesting a decrease in cultural sensitivity, the monitoring schedule can be reduced pending archaeological, Native American, and San Diego State University (SDSU) consultation.
2. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeological monitor, Native American monitor, construction or other personnel shall have the authority to divert or temporarily halt ground disturbance operations in the area of the find. The archaeological monitor shall evaluate and minimally document isolates and clearly insignificant deposits in the field. More significant deposits shall be evaluated by the cultural Primary Investigator in consultation the Native American monitor and SDSU staff. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the qualified archaeologist and approved by SDSU, then carried out using professional archaeological methods. The Research Design and Data Recovery Program shall include (1) reasonable efforts to preserve (avoidance) “unique” cultural resources or Sacred Sites pursuant to CEQA Section 21083.2(g) as the preferred option; (2) the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap, if avoidance is infeasible;

and (3) data recovery for non-unique cultural resources. Construction activities will be allowed to resume in the affected area only after proper evaluation.

MM-CUL-5 In order to mitigate impacts to human remains to a level that is less than significant, procedures for proper treatment of unanticipated finds must comply with the California Environmental Quality Act (CEQA) Guidelines. In the event of discovery of unanticipated human remains, personnel shall comply with California Public Resources Code Section 5097.98, CEQA Section 15064.5, and Health and Safety Code Section 7050.5 during earth-disturbing activities:

- a. If any human remains are discovered, the construction personnel or the appropriate representative shall contact the County Coroner and SDSU. Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. If the remains are determined to be of Native American origin, the most likely descendent, as identified by the Native American Heritage Commission, shall be contacted by the property owner or their representative in order to determine proper treatment and disposition of the remains. The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the most likely descendent regarding their recommendations as required by California Public Resources Code Section 5097.98 has been conducted. California Public Resources Code Section 5097.98, CEQA Section 15064.5, and Health and Safety Code Section 7050.5 shall be followed.

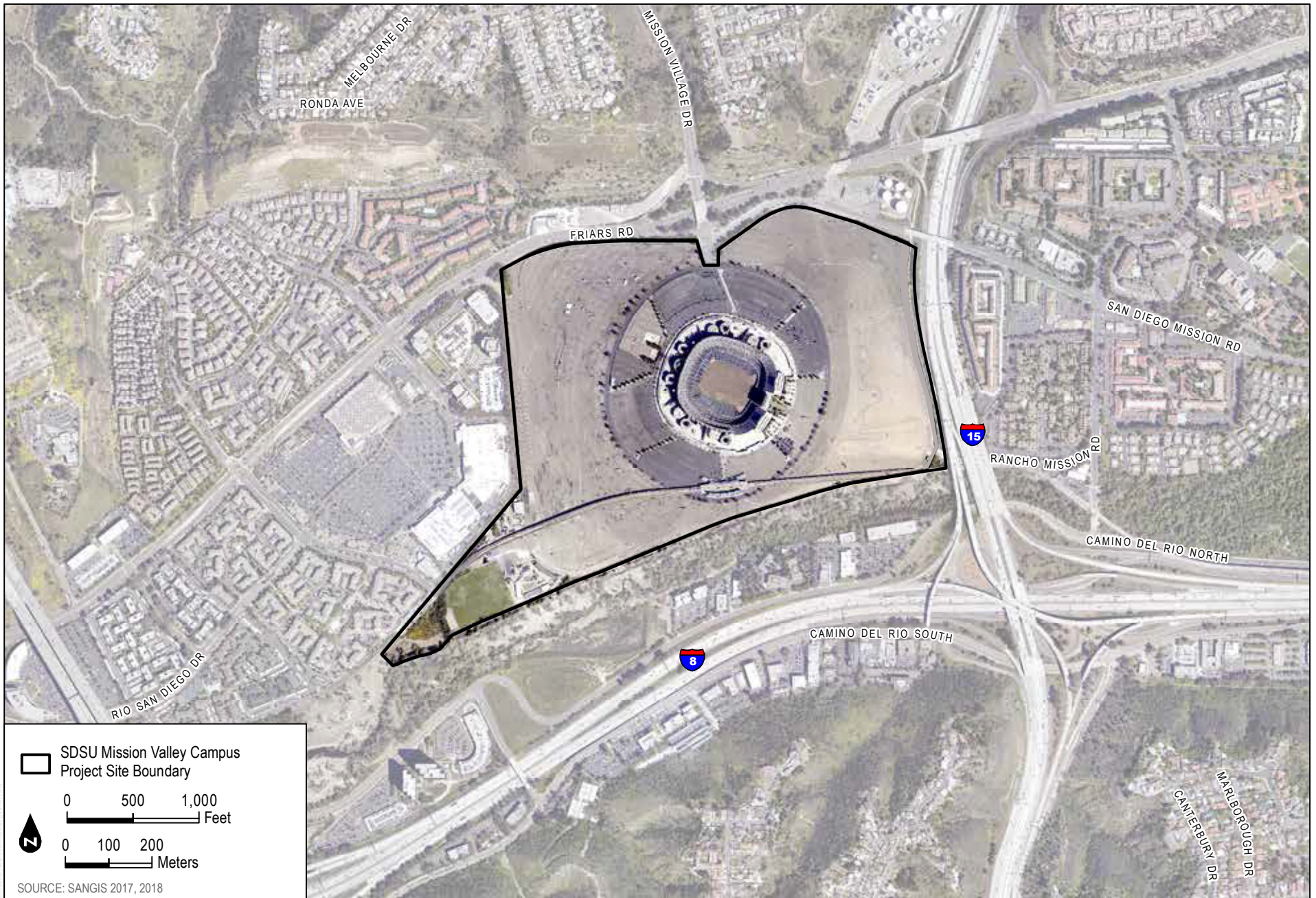
4.4.7 Level of Significance After Mitigation

Implementation of the proposed project would result in substantial adverse change in the significance of a historical resource during both construction and operation. Implementation of mitigation measures **MM-CUL-1** through **MM-CUL-3** during construction (**Impact CUL-1**), and **MM-CUL-2** and **MM-CUL-3** during operation (**Impact CUL-2**), are recommended to reduce the level of impact to historical resources. Avoidance of a historical resource through project redesign would be preferred mitigation. This mitigation, however, is not feasible, as it would be inconsistent with subsection (j) of SDMC Section 22.0908, Sale of Real Property to SDSU, which provides that sale of the Stadium to SDSU “*Shall result in the demolition, dismantling, and removal of the existing Stadium and construction of a new Joint Use Stadium.*” Rehabilitation of the existing Stadium would also be inconsistent with the directives of SDMC Section 22.0908(j), quoted above. Further, this option would be inconsistent with Project Objectives listed in Section 2.2, specifically Objective 5 (“Create a new, 35,000-capacity multi-purpose stadium as the “home” for SDSU Division I collegiate football and other events”) and Objective 7 (“Demolish the existing stadium in accordance with Section 22.0908”), and would limit the ability to achieve other project objectives including Objective 6 (“Provide a new SDSU campus research and innovation village with up to approximately 1.6 million square feet ...”) and Objective 9 (“Provide up to 4,600 residence in a variety of market-rate, workforce, student, faculty, staff and affordable housing...”). Therefore, while mitigation in the form of documentation, interpretive displays, and architectural salvage, would help reduce impacts to a historical resource; the demolition of SDCCU Stadium, a historical resource, and construction and operation of proposed facilities would remain **significant and unavoidable**.

Construction of the proposed project would result in a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 (**Impact CUL-3**). A significant impact to an archaeological resource would occur as a result of the proposed project due to the possibility of encountering historical, archaeological or Native American cultural material within the proposed project area during construction. However,

implementation of mitigation measure **MM-CUL-4** during initial earth-disturbing activities would assure the proper treatment of unanticipated archaeological or Native American cultural material. Therefore, impacts to archaeological resources during construction of the proposed project would be **less than significant with mitigation incorporated**. After construction is finished, operational/permanent activities would **not result in significant impacts** to archaeological resources.

Construction of the proposed project would result in potential impacts to human remains (**Impact CUL-4**). A significant impact to human remains would occur as a result of the proposed project should construction or other personnel encounter any previously undocumented human remains. However, implementation of mitigation measure **MM-CUL-5** would assure proper treatment of unanticipated finds during construction activities, and compliance with applicable regulations. Therefore, impacts to cultural resources during construction of the proposed project would be **less than significant with mitigation incorporated**. After construction is finished, operational/permanent activities would **not result in significant impacts** to cultural resources.



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4.5 Energy

This section describes the existing energy conditions on the project site and in its vicinity, identifies associated regulatory requirements, and evaluates potential impacts, and identifies project design features related to implementation of the proposed project.

Methods for Analysis

The following analysis is based on the Energy Technical Report prepared by Ramboll (Appendix 4.5-1). This environmental impact report (EIR) section evaluates the energy consumption associated with project-related construction activities and operational activities for complete buildout of the proposed project. Project buildout is estimated to be realized in calendar year 2037. Because California has adopted regulatory measures for greenhouse gas (GHG) emissions that take effect by 2030 and serve to influence energy consumption, some aspects of the energy inventory are based on adopted 2030 regulatory measures (e.g., Renewables Portfolio Standard [RPS]). Other aspects of the energy inventory also are representative of project conditions at full buildout. For example, the California Emissions Estimator Model (CalEEMod), which was used to estimate construction and operational energy use, allows for operational years up to 2035; given that the mobile emission factors are based on the operational year, the mobile emission factors used to estimate the corresponding consumption of transportation fuels are based on values from EMFAC2014 for the year 2035.

The analysis is conservative because further beneficial changes to California's regulatory framework, serving to reduce energy consumption and enhance energy efficiency, are reasonably anticipated with the passage of time. For example, California revises its building energy standards (as set forth in Title 24 of the California Code of Regulations) on a periodic basis. More specifically, California's building codes are published in their entirety every 3 years. Intervening Code Adoption Cycles produce supplement pages half-way (18 months) into each triennial period. The next Title 24 code to be published is the 2019 Code; the corresponding building energy standards were adopted in May 2018 and will take effect in January 2020. Each subsequent building code has required more energy efficiency than the previous codes. Accordingly, because this analysis is based on current codes (i.e., the 2016 Code), it necessarily will result in an overestimate of energy usage in buildings.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019 to February 19, 2019. A total of 150 letters were received during this comment period. Comments received related to energy addressed building electrification, renewable energy, smart growth, and zero net energy. Please see Appendix A, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

Project Design Features

The proposed project would include several project design features (PDFs) that are relevant to the analysis provided in this section of the EIR, as follows.

Solar Photovoltaic Panels

The proposed project is incorporating solar photovoltaic (PV) panels on available roof space that is expected to result in a total generation capacity equivalent to 10,819,478 kilowatt hours (kWh) of electricity, or 14.9% of the proposed project's total electricity demand.

Electric Vehicle-Ready Infrastructure and Electric Vehicle Chargers

The proposed project is equipping 3% of total residential parking spaces and 6% of total nonresidential parking spaces with appropriate electric supply equipment to allow for the future installation of electric vehicle (EV) chargers (i.e., "EV ready"). Of these EV-ready spaces, 50% will be equipped with EV charging stations. In total, approximately 500 spaces will be designated as "EV ready," and 252 of the "EV ready" spaces will be equipped with operable EV charging stations.

Transportation Demand Management Program

The proposed project includes a Transportation Demand Management (TDM) Program that incentivizes alternative transportation besides single commuter trips. The TDM Program consists of the following strategies:

- Land Use Diversity
- Neighborhood Site Enhancement
 - New Bicycle Facilities
 - Dedicated Land for Bicycle/Multi-Use Trails
 - Bicycle Parking
 - Showers and Lockers in Employment Areas
 - Increased Intersection Density
 - Traffic Calming
 - Car Share Service Accommodations
 - Enhanced Pedestrian Network
- Parking Policy and Pricing
 - Unbundled Residential Parking
 - Metered On-Street Parking
 - Reduced Parking Supply
- Commute Trip Reduction Services
 - TDM Program Coordinator and Marketing
 - Electric Bike-Share Accommodations
 - Ridesharing Support
 - School Pool
 - Hotel Shuttle Service

These programs, as they pertain to non-stadium land uses, are expected to reduce vehicle miles traveled (VMT) and the corresponding consumption of gasoline by 14.41%.

The TDM Program strategies described above apply to the proposed project's campus educational, office, residential, and retail uses. TDM Program strategies also have been developed exclusively for the project's Stadium land use that are not listed here, as they are not quantitatively accounted for in this analysis. For additional information on the project's TDM Program, both with respect to campus Stadium and non-Stadium uses, please see Fehr & Peers' Transportation Impact Analysis (Appendix 4.15-1) for the project.

Residential Hearths

The proposed project is incorporating a limited number of natural gas fireplaces, and no wood-burning fireplaces, within project residences. Of all residential units in the proposed project, up to 5% of the units may include a natural gas fireplace. This serves to minimize the consumption of natural gas within the building envelopes of project residences.

Other PDFs with energy conservation benefits that have been considered qualitatively in this analysis include the following:

- The layout of the proposed project's development areas has been designed to maximize the unique infill opportunity presented at this Mission Valley location. This includes benefits from the existing Metropolitan Transit System (MTS) Green Line that runs through the proposed project and Stadium Trolley Station, as well as the planned Purple Line and transit station.
- The campus locates buildings in close proximity to one another, which would facilitate the use of common heating/cooling sources, where feasible, as project-level development proceeds. (The use of common heating/cooling sources will be evaluated as the building plans for individual development parcels are developed; relevant factors that will influence the use of such sources include the temporal proximity of development, type of use, and market forces.)
- Project development areas would maximize natural ventilation.
- The proposed project integrates extensive parks and landscaping, including the planting of new, on-site trees to minimize heat gain.
- The proposed project would include adaptive lighting controls, where appropriate and feasible, in order to maximize energy efficiency and minimize light pollution.
- The proposed project would achieve Leadership in Energy and Environmental Design (LEED) Version 4 at a Silver or better certification level, as well as a Neighborhood Development designation for site-wide design. LEED certification is based on standards that encourage the development of energy-efficient and sustainable buildings.
- Events at the proposed project's multipurpose Stadium would benefit from implementation of TDM Program strategies specifically developed for application to Stadium-related events. These strategies focus on the use of alternative modes of transportation, including transit, to reduce single-occupancy vehicle usage and parking demand on event days.

It also is noted that, to the extent applicable, project-related development will comply with the principles and goals set forth in the California State University Sustainability Policy adopted by the California State University Board of Trustees in 2014.

4.5.1 Existing Conditions

Energy Production and Distribution

Among the states, California ranks fourth in the nation in production of crude oil; fifteenth in production of natural gas; second in generation of hydroelectric power; fifteenth in electricity generation from nuclear power; second in net electricity generation from all other renewable energy sources besides hydroelectric; and first as a producer of electricity from biomass, geothermal, and solar energy (EIA 2018a). California produces approximately 10% of the natural gas used in the state; approximately 90% of the natural gas used in California is imported from Canada, the Southwest, and the Rocky Mountains region of the United States. Over half of the crude oil refined in California is from foreign countries, including Saudi Arabia, Ecuador, and Colombia. Additional crude oil is imported from Alaska. Over one-fourth of California's electricity is from out-of-state locations in the Pacific Northwest and the Southwest (EIA 2018b).

Electricity and Natural Gas Supply

The production of electricity requires the combustion, consumption, or conversion of other energy resources, including water, wind, oil, natural gas, coal, solar, geothermal, and nuclear. Of the electricity that is generated within the state, 53% is generated by natural gas-fired power plants, 11% by nuclear power plants, 10% by hydroelectric, and the remaining 26% by other renewables (CEC 2018a).

Natural gas ultimately supplies the largest portion of California's electricity market; natural gas-fired power plants in California meet approximately 34% of the in-state electricity demand (CEC 2018a). In addition to the generation of electricity, natural gas is also widely used for industrial, commercial, and residential heating. Most of the natural gas consumed in California comes from the Southwest, the Rocky Mountains, and Canada, while the remainder is produced in California. Although contractually California can receive natural gas from any producing region in North America, it can only take supplies from these three producing regions due to the current pipeline configuration.

In the City of San Diego, San Diego Gas & Electric Company (SDG&E) is the primary supplier of electricity and natural gas to businesses and residents of the area. SDG&E's 4,100-square-mile service area extends from southern Orange County to San Diego County. SDG&E's electricity production facilities include natural gas-fired and peaking power plants. SDG&E obtains its energy supplies from plants in Southern California and southern Nevada. SDG&E has installed numerous solar energy projects or PV power-generation equipment, throughout its service territory. In 2017, about 45% of the energy delivered to SDG&E's customers came from renewable energy-related projects. In addition, in 2017, SDG&E activated the world's largest lithium ion battery storage facility, capable of storing up to 120 megawatt hours of electricity.

Transportation Fuels Supply

Most petroleum fuel refined in California is for use in on-road motor vehicles and is refined within California to meet state-specific formulations required by the California Air Resources Board (CARB). The major categories of petroleum fuels are gasoline and diesel for passenger vehicles, transit, and rail vehicles; and fuel oil for industry and emergency electrical power generation. Other liquid fuels include kerosene, jet fuel, and residual fuel oil for marine vessels.

California's oil fields make it the third-largest petroleum-producing state in the United States, behind Texas and North Dakota (federal offshore production is the biggest producer in the United States). Crude oil is moved from area to area within California through a network of pipelines that carry it from both onshore and offshore oil wells to the refineries that are located in the San Francisco Bay area, the Los Angeles area, and the Central Valley. Currently, 16 petroleum refineries operate in California, processing approximately 2.0 million barrels per day of crude oil (EIA 2018c).

Other transportation fuel sources are alternative fuels, such as methanol and denatured ethanol (alcohol mixtures that contain no less than 70% alcohol), natural gas (compressed or liquefied), liquefied petroleum gas, hydrogen, and fuels derived from biological materials (i.e., biomass).

Electricity and Natural Gas Consumption

Californians consumed 288,613 gigawatt hours (GWh) of electricity in 2017, which is the most recent year for which data is available. Of this total, the City of San Diego consumed 7,739 GWh (City of San Diego 2018).

Californians consumed 12,571 million therms of natural gas in 2017. Of this total, the City of San Diego consumed 384 million therms of natural gas (City of San Diego 2018).

Existing Energy Consumption

The project site includes three existing uses: (1) a multipurpose Stadium (San Diego County Credit Union Stadium) with an existing capacity of approximately 71,500 seats for football and other events; (2) an associated surface parking lot with approximately 18,870 parking spaces; and (3) the MTS's existing Trolley Green Line transit station, which provides trolley service running toward downtown San Diego to the west and Santee to the east. The San Diego State University main campus is three trolley stops from the existing on-site Trolley Station.

According to Appendix 4.5-1, total annual electricity and natural gas use is estimated to be 4,660,920 kWh and 1,822,990 kilo British thermal units (kBtu), respectively, for the existing Stadium (based on a review of meter readings). Mobile gasoline fuel usage is estimated to be 198,367 gallons per year for the existing condition.

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the oil crisis of 1973, which increased oil prices due to a shortage of reserves. The Act requires that all vehicles sold in the United States meet certain fuel economy goals, known as the Corporate Average Fuel Economy standards. The National Highway Traffic Safety Administration (NHTSA) of the U.S. Department of Transportation administers the Corporate Average Fuel Economy program, and the U.S. Environmental Protection Agency (EPA) provides the fuel economy data.

In April 2010, the EPA and NHTSA issued a final rulemaking establishing new federal fuel economy standards for model years 2012 to 2016 passenger cars and light-duty trucks. For model year 2012, the

fuel economy standards for passenger cars, light trucks, and combined cars and trucks were 33.3 miles per gallon (mpg), 25.4 mpg, and 29.7 mpg, respectively (EPA 2010). These standards increase progressively up to 37.8 mpg, 28.8 mpg, and 34.1 mpg, respectively, for model year 2016. In subsequent rulemakings, the agencies extended the national program of fuel economy standards to passenger vehicles and light-duty trucks of model years 2017–2025, culminating in fuel economy of 54.5 mpg by model year 2025, as well as to medium- and heavy-duty vehicles of model years 2014–2018, including large pickup trucks and vans, semi-trucks, and all types and sizes of work trucks and buses (EPA 2011, 2012).

In August 2016, the EPA and NHTSA adopted the next phase (Phase 2) of the fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles with model year 2018 and later (EPA 2012). In response to the EPA's adoption of the Phase 2 standards, CARB staff brought a proposed California Phase 2 program before its Board in 2017; and the Board approved the program in March 2018 (CARB 2018).

In 2018, the EPA and NHTSA proposed to amend certain existing Corporate Average Fuel Economy standards for passenger cars and light trucks and establish new standards, covering model years 2021–2026. Compared to maintaining the post-2020 standards now in place, the pending proposal would increase U.S. fuel consumption. California and other states have announced their intent to challenge federal actions that would delay or eliminate GHG reductions. Because the pending proposal is still in the rulemaking phase, and because legal challenges to any future adoption of the proposal is likely, the timing and consequences of the pending proposal are speculative at this time.

Energy Policy Act of 2005 and Energy Independence and Security Act of 2007

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Energy Policy Act, consumers and businesses can attain federal tax credits for purchasing fuel-efficient appliances and products. Because driving fuel-efficient vehicles and installing energy-efficient appliances can provide many benefits, such as lower energy bills, increased indoor comfort, and reduced air pollution, businesses are eligible for tax credits for buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are given for the installation of qualified fuel cells, stationary micro-turbine power plants, and solar power equipment.

The Energy Policy Act of 2005 also established the first renewable fuel volume mandate in the United States. The original Renewable Fuel Standard program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007, the Renewable Fuel Standard program was expanded to include diesel and to increase the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.

American Recovery and Reinvestment Act

The American Recovery and Reinvestment Act of 2009 was passed in response to the economic crisis of the late 2000s, with the primary purpose of maintaining existing jobs and creating new jobs. Among the secondary objectives of the American Recovery and Reinvestment Act was investment in “green” energy programs, including funding the following through grants, loans, or other mechanisms: private companies developing renewable energy technologies; local and state governments implementing energy efficiency and clean energy programs; research in renewable energy, biofuels, and carbon capture; and development of high efficiency or electric vehicles.

Intermodal Surface Transportation Efficiency Act

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 promotes the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contains factors that metropolitan planning organizations (MPOs), such as the San Diego Association of Governments (SANDAG), are to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs have adopted explicit policies defining the social, economic, energy, and environmental values that guide transportation decisions in their respective metropolitan areas. The planning process for specific projects would then address these policies. Another requirement of ISTEA is to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption is expected to be a decision criterion, along with cost and other values, to determine the best transportation solution.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century (“TEA-21”) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

State***Assembly Bill 32 and Senate Bill 32 (Statewide GHG Reductions with Energy Co-Benefits)***

The California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) was signed into law in September 2006 (CARB 2006). The law instructed CARB to develop and enforce regulations for the reporting and verification of state-wide GHG emissions. The bulk of GHG emissions in California are carbon dioxide that result from fossil fuel consumption. Therefore, a reduction in GHG emissions typically translates into reduced fuel and increased energy efficiency. The bill directed CARB to set a state-wide GHG emission limit based on 1990 levels, to be achieved by 2020.

AB 32 requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. In December 2008, CARB adopted its Climate Change Scoping Plan: A Framework for Change (Scoping Plan), which included the state’s strategies for achieving AB 32’s reduction targets. These strategies are implemented with additional rules and regulations of relevance to energy analysis, such as the Advanced Clean Cars Program, the Low Carbon Fuel Standard, Title 24 building efficiency standards, and the RPS. These are discussed further below.

Enacted in 2016, Senate Bill (SB) 32 (Pavley, 2016) codifies a 2030 GHG emissions reduction goal and requires CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. Similar to AB 32, a reduction in GHG emissions typically corresponds with a reduction in energy usage as the bulk of GHGs result from the combustion of fossil fuel.

2018 Integrated Energy Policy Report Update

The 2018 Integrated Energy Policy Report Update provides an assessment of major energy trends and issues for a variety of energy sectors, as well as policy recommendations (CEC 2018b). Prepared by the California Energy Commission (CEC), this report details the key energy issues facing California and develops potential strategies to address these issues. The 2018 Integrated Energy Policy Report Update includes a discussion of several strategies to reduce climate change impacts and lessen energy consumption and recommendations for each topic. Examples include a discussion of building decarbonization, strategies to increase energy efficiency, discussion of energy equity, and the impacts of increasing the flexibility of the electricity system. The assessments and forecasted energy demand within this report will be used by the CEC to develop future energy policies.

Title 24 Building Energy Efficiency Standards

The 2016 California Green Building Standards Code, as specified in Title 24, Part 11 of the California Code of Regulations, commonly referred to as CalGreen Building Standards (CalGreen), establishes voluntary and mandatory standards to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The provisions of this code apply to the planning, design, operation, construction, replacement, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California. Examples of CalGreen provisions include reducing indoor water use, moisture-sensing irrigation systems for landscaped areas, construction waste diversion goals, and energy system inspections. CalGreen is periodically amended; the most recent 2016 standards became effective on January 1, 2017.

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods for building features such as space conditioning, water heating, lighting, and whole envelope. The 2005, 2008, and 2013 updates to the efficiency standards included provisions such as cool roofs on commercial buildings, increased use of skylights, and higher efficiency lighting; heating, ventilation, and air conditioning (HVAC); and water heating systems. Additionally, some standards focused on larger energy-saving concepts such as reducing loads at peak periods and seasons and improving the quality of such energy-saving installations. Past updates to the Title 24 standards have proven very effective in reducing building energy use, with the 2013 update estimated to reduce energy consumption in residential buildings by 25% and energy consumption in commercial buildings by 30%, relative to the 2008 standards (CEC 2012). The 2016 updates include additional high-efficiency lighting requirements, high-performance attic and walls, and higher-efficiency water and space heaters. The currently applicable 2016 standards are expected to reduce residential electricity consumption by 28% and non-residential electricity by 5% (CEC 2015). The CEC has developed and adopted 2019 standards, which will go into effect on January 1, 2020.

Given that the 2019 standards will be in effect at the time construction of the proposed project begins, at a minimum, initial phases of project building construction will be subject to the 2019 standards. Over the

course of project buildout, future Title 24 standards are likely to apply as the standards are triggered by the filing of building permit applications. Notably, the data needed to quantitatively account for the 2019 standards (or the post-2019, future standards) is not yet available at the time of preparation of this analysis, and so the 2016 standards are used in this analysis. As previously discussed, this serves to conservatively over-estimate project energy consumption.

Renewables Portfolio Standard

SB 1078 (2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to obtain at least 20% of their energy supply from renewable sources by 2017. SB 107 (2006) changed that target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expanded the state's RPS to 33% renewable power by 2020. In April 2011, Governor Brown signed SB 2X, which legislated the prior Executive Order S-14-08 renewable standard. SB 350 (2015) set an additional RPS goal of 50% renewables by 2030. SB 100 (2018) accelerated and extended again the RPS, requiring achievement of a 50% RPS by 2026 and a 60% RPS by 2030. SB 100 also established a state policy goal to achieve 100% renewables by 2045.

SB 743—Transportation Analysis under the California Environmental Quality Act

Public Resources Code Section 21099(c)(1), as codified through enactment of SB 743, was enacted with the intent to change the focus of transportation analyses conducted under the California Environmental Quality Act (CEQA). SB 743 reflects a legislative policy to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions. As finalized in December 2018, amendments to the CEQA Guidelines adopted in furtherance of SB 743 establish VMT, in lieu of level of service, as the new metric for transportation analysis. Implementation of SB 743 is anticipated to improve the efficiency of transportation fuels consumption.

SB 375—Land Use Planning

SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State of California's climate action goals to reduce GHG emissions through coordinated transportation and land use planning. SB 375 required CARB to establish GHG emission reduction targets (Regional Targets) for each metropolitan planning region. On September 23, 2010, CARB adopted Regional Targets applying to the years 2020 and 2035. In 2011, CARB adopted Regional Targets of 7% for 2020 and 13% for 2035 for the area under SANDAG's jurisdiction. These targets were in place through September 30, 2018. In March 2018, CARB approved updated regional targets of 15% for 2020 and 19% for 2035 for SANDAG, which will be applied by SANDAG in future planning cycles.

SB 375 requires MPOs, including SANDAG, to incorporate a "sustainable communities strategy" in their regional transportation plans that will achieve the GHG emission Reduction Targets set by CARB, primarily by reducing VMT from light-duty vehicles through development of more compact, complete, and efficient communities. SANDAG prepared San Diego Forward to fulfill this requirement, and CARB accepted SANDAG's GHG quantification demonstration for that plan (SANDAG 2015).

Clean Cars

In January 2012, CARB approved the Advanced Clean Cars Program, which established an emissions control program for cars and light-duty trucks (such as SUVs, pickup trucks, and minivans) of model years 2017–2025. When the program is fully implemented, new vehicles would emit 75% less smog-forming pollutants than the average new car sold today, and GHG emissions would be reduced by nearly 35%. This Program would help reduce fossil fuel usage for internal combustion engine powered vehicles.

Commercial Motor Vehicle Idling Regulation

In July 2004, CARB initially adopted an Airborne Toxic Control Measure (ATCM) to limit idling of diesel-fueled commercial motor vehicles (idling ATCM) and subsequently amended it in October 2005, October 2009, and December 2013. This ATCM is set forth in Title 13, California Code of Regulations, Section 2485, and requires, among other things, that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds, including buses and sleeper berth-equipped trucks, not idle the vehicle's primary diesel engine longer than 5 minutes at any location. This anti-idling regulation helps to reduce fuel consumption by reducing engine usage. The ATCM also requires owners and motor carriers that own or dispatch these vehicles to ensure compliance with the ATCM requirements. The regulation consists of new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. Under the new engine requirements, 2008 and newer model year heavy-duty diesel engines need to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after 5 minutes of idling or optionally meet a stringent oxides of nitrogen idling emission standard.

In-Use Off-Road Diesel Fueled Fleets Regulation

In May 2008, CARB approved the In-Use Off-Road Diesel Fueled Fleets Regulation (Off-Road Regulation), which was later amended in December 2009, July 2010, and December 2011. The overall purpose of the Off-Road Regulation is to reduce emissions of oxides of nitrogen (NO_x) and particulate matter from off-road diesel vehicles operating within California. The regulation applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles. The Off Road Regulation:

- Imposes limits on idling (i.e., fleets must limit unnecessary idling to 5 minutes), requires a written idling policy, and requires a disclosure when selling vehicles;
- Requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System, and labelled;
- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).

The anti-idling component of this Off-Road Regulation helps to reduce fuel consumption by reducing engine usage.

Tractor-Trailer Greenhouse Gas Regulation

CARB's Tractor-Trailer Greenhouse Gas Regulation reduces the energy consumption of large trucks. CARB developed this regulation to make heavy-duty tractors more fuel efficient. Fuel efficiency is improved by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires. The tractors and trailers subject to this regulation must either use EPA's SmartWay (SmartWay) certified tractors and trailers, or retrofit their existing fleet with SmartWay verified technologies. The SmartWay certification process is part of their broader voluntary program called the SmartWay Transport Partnership Program. The regulation applies primarily to owners of 53-foot or longer box-type trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low-rolling-resistance tires. All owners, regardless of where their vehicle is registered, must comply with the regulation when they operate their affected vehicles on California highways. Besides the owners of these vehicles, drivers, motor carriers, California-based brokers, and California-based shippers that operate or use them also share in the responsibility for compliance with the regulation.

Local

Because San Diego State University is a component of the California State University, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City of San Diego General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The Conservation Element of the City of San Diego General Plan includes the following energy-related policies (City of San Diego 2008).

Policy CE-A.5: Employ sustainable or "green" building techniques for the construction and operation of buildings.

- a. Develop and implement sustainable building standards for new and significant remodels of residential and commercial buildings to maximize energy efficiency, and to achieve overall net zero energy consumption by 2020 for new residential buildings and 2030 for new commercial buildings. This can be accomplished through factors including, but not limited to:
 - Designing mechanical and electrical systems that achieve greater energy efficiency with currently available technology
 - Minimizing energy use through innovative site design and building orientation that addresses factors such as sun-shade patterns, prevailing winds, landscape, and sun-screens
 - Employing self-generation of energy using renewable technologies
 - Combining energy efficient measures that have longer payback periods with measures that have shorter payback periods

- Reducing levels of non-essential lighting, heating and cooling
 - Using energy efficient appliances and lighting.
- b. Provide technical services for “green” buildings in partnership with other agencies and organizations.

Policy CE-I.3: Pursue state and federal funding opportunities for research and development of alternative and renewable energy sources.

Policy CE-I.4: Maintain and promote water conservation and waste diversion programs to conserve energy.

Policy CE-I.5: Support the installation of photovoltaic panels, and other forms of renewable energy production.

- a. Seek funding to incorporate renewable energy alternatives in public buildings.
- b. Promote the use and installation of renewable energy alternatives in new and existing development.

Policy CE-I.7: Pursue investments in energy efficiency and direct sustained efforts towards eliminating inefficient energy use.

Policy CE-I.10: Use renewable energy sources to generate energy to the extent feasible.

Policy CE-I.12: Use small, decentralized, aesthetically-designed, and appropriately sited energy efficient power generation facilities to the extent feasible.

City of San Diego Energy Strategy for a Sustainable Future

The City of San Diego Environmental Services Department has taken a leadership role to advance policies and practices that support a more sustainable future. In June 2009, the department published its Energy Strategy for a Sustainable Future, which outlines six objectives to achieve more sustainable generation and use of energy, as follows (City of San Diego 2009):

- Energy Conservation – All City employees will be aware of and implement energy conservation measures by 2010.
- Energy Efficiency – Reduce energy use 10% by 2012, using 2000 as a baseline.
- Renewable Energy – Increase megawatts of renewable energy used at City facilities to 17 by 2012, and to 25 by 2020.
- Management of SDG&E Energy Bills – Continue the use of the Electronic Data Interchange.
- Policy Development and Implementation – Guide City efforts by institutionalizing policies and programs that increase energy conservation, efficiency, and the use of renewable energy.
- Leverage Resources – Ensure that state and federal funds are leveraged to the extent possible with existing programs such as CEC loans and the California Public Utilities Commission Partnership funds.

City of San Diego Climate Action Plan

The City of San Diego's Climate Action Plan (CAP) and CAP Checklist are the guiding documents that will be used to demonstrate consistency with the City's energy goals (City of San Diego 2015 and 2017). The CAP identifies five strategies to address GHG emissions. Of these five strategies, three have direct implications to the energy demand of the proposed project: 1. Energy and Water Efficient Buildings, 2. Clean and Renewable Energy, and 3. Bicycling, Walking, Transit and Land Use. Applicable actions within each of these strategies are expected to reduce the overall energy demand of the proposed project:

- Strategy 1: Energy and Water Efficient Buildings
 - Residential Energy Conservation and Disclosure Ordinance
- Strategy 2: Clean and Renewable Energy
 - Community Choice Aggregation Program or Another Program
- Strategy 3: Bicycling, Walking, Transit and Land Use
 - Mass Transit
 - Commuter Walking
 - Commuter Biking
 - Promote Effective Land Use to Reduce Vehicle Miles Travelled

These actions support the overarching goals that the City is striving to achieve. The CAP Checklist provides more targeted guidance to evaluate a project's consistency with the applicable CAP strategies and actions. The targeted guidance that impacts energy include:

- Strategy 1: Energy and Water Efficient Buildings
 - Cool/Green Roofs
- Strategy 2: Clean and Renewable Energy
 - The CAP Checklist does not provide additional targeted guidance for this strategy.
- Strategy 3: Bicycling, Walking, Transit and Land Use
 - Electric Vehicle Charging
 - Bicycle Parking Spaces
 - Designated Parking Spaces
 - Transportation Demand Management Program

Mission Valley Community Plan

The Mission Valley Community Plan is intended to be a blueprint for future development in the Mission Valley Community of San Diego, where the proposed project is located. The final draft of the Mission Valley Community Plan Update was released on May 31, 2019 (City of San Diego 2019). The Mission Valley Community Plan Update contains Design Guidelines and Policies for Development to implement the City's CAP, maximize transit ridership, and increase mobility options, among others. While the draft Mission Valley Community Plan Update has not yet been adopted by the City of San Diego, it is considered in this analysis.

4.5.3 Significance Criteria

The significance criteria used to evaluate the project impacts to energy are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if the project would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.5.4 Impacts Analysis

Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Project construction would begin in 2020, with full buildout expected in 2037. Construction of the proposed project would result in electricity demand, due to the use of power tools (e.g., drills). However, this electricity demand is expected to be supplied by generator sets powered by fuels; thus, no additional electricity is required. (Generator sets are comprised of a generator and diesel engine used to produce power off grid.) Construction of the proposed project also is not anticipated to require natural gas. As such, electricity and natural gas related to construction of the proposed project are not discussed further.

Construction of the proposed project would require the use of transportation fuels, including gasoline and diesel used in construction equipment, hauling trucks, and construction worker vehicles. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction. For purposes of this analysis, heavy-duty construction equipment and haul trucks associated with construction activities would use diesel fuel, and construction workers would primarily use gasoline-powered passenger vehicles.

Heavy-duty construction equipment of various types would be used during each phase of construction. CalEEMod was used to estimate construction equipment usage, and results are included in the appendices to the Air Quality Technical Report and Greenhouse Gas Emissions Technical Report for the proposed project (Appendices B and K, respectively). Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO₂) emissions from each construction phase to gallons using conversion factors for CO₂ to gallons of gasoline or diesel. The estimated diesel fuel usage from off-road construction equipment totals 2,318,597 gallons of diesel over the course of the proposed project construction period as shown in Table 4.5-1.

Table 4.5-1. Construction Off-Road Equipment Fuel Consumption

Year	Diesel Consumption (gallons/year)
2020	198,562
2021	270,031

Table 4.5-1. Construction Off-Road Equipment Fuel Consumption

Year	Diesel Consumption (gallons/year)
2022	687,069
2023	84,710
2024	87,958
2025	111,681
2026	90,982
2027	73,801
2028	81,675
2029	129,265
2030	135,380
2031	114,100
2032	62,819
2033	59,522
2034	53,151
2035	47,639
2036	23,884
2037	6,371
Total	2,318,597

Source: See Table 4-1 of the Energy Technical Report (Appendix 4.5-1).

This analysis assumes that implosion would be used for SDCCU Stadium demolition. If implosion is not used, some additional pieces of off-road construction equipment would be required during the demolition phase. However, total fuel usage from all off-road construction equipment over the entire construction period (2020-2037) is expected to be similar to those presented in Table 4.5-1.

Fuel consumption from worker and vendor trips were estimated by converting the total CO₂ emissions from each construction phase to gallons using conversion factors for CO₂ to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline-fueled, and vendor/hauling vehicles are assumed to be diesel-fueled. Estimated fuel usage totals 202,643 gallons of gasoline and 623,739 gallons of diesel over the course of the proposed project construction period as shown in Table 4.5-2.

Table 4.5-2. Construction On-Road Equipment Fuel Consumption

Year	Gasoline Consumption(gallons/year)	Diesel Consumption (gallons/year)
2020	20,008	207,854
2021	32,544	188,888
2022	18,550	99,166
2023	9,869	3,596
2024	12,611	10,556
2025	16,952	18,263
2026	15,609	18,158
2027	11,552	13,495

Table 4.5-2. Construction On-Road Equipment Fuel Consumption

Year	Gasoline Consumption(gallons/year)	Diesel Consumption (gallons/year)
2028	6,500	4,942
2029	10,586	9,878
2030	8,936	9,843
2031	7,006	7,369
2032	6,051	4,952
2033	9,198	9,736
2034	8,252	9,722
2035	6,389	7,321
2036	1,238	0
2037	795	0
Total	202,643	623,739

Source: See Table 4-2 of the Energy Technical Report (Appendix 4.5-1).

There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies). Further, the construction plan is designed to minimize fuel usage, for example and where possible, by re-using demolition debris on site for fill and thereby avoiding hauling trips associated with (i) disposal of debris and (ii) importing soil needed for fill.

For information purposes, Table 4.5-3 shows the proposed project's gasoline and diesel consumption as compared to the City's and California's demand for those same resources, over the proposed project's anticipated construction duration (approximately 209 months). For comparison, based on 2017 consumption, construction of the proposed project would equate to 0.71% of the total amount of diesel and less than 0.002% of the total amount of gasoline that would be used citywide during the course of the construction period. Construction of the proposed project would equate to less than 0.005% of the total amount of diesel and less than 0.0001 % of the total amount of gasoline that would be used statewide during the course of the construction period.

Table 4.5-3. Construction Energy Resource Summary

Energy Resource	Construction ¹	City of San Diego		California	
		Consumption	Project's Contribution	Consumption	Project's Contribution
Gasoline (gallons)	202,643	10,422,773,921	0.002%	279,312,898,878	0.00%
Diesel (gallons)	2,942,336	414,528,739	0.710%	55,330,515,126	0.005%

Source: See Table 6-3 of the Energy Technical Report (Appendix 4.5-1).

Additionally, the construction activities would comply with state requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and

off-road equipment would be limited to 5 minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation, and trucks would be compliant with the requirements of the Tractor-Trailer Greenhouse Gas Regulation.

Based on the above analysis, fuel use during construction would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Operations

Electricity

Operation of the proposed project would result in electricity demand for the proposed new buildings. Table 4.5-4 below sets forth the annual electricity usage for the existing Stadium (based on a review of meter readings), as well as for the proposed project (based on the CalEEMod default for land uses in climate zone 13, assuming regulatory requirements).

Table 4.5-4. Operational Electricity Consumption

Inventory Year	Electricity Demand (kWh/year)	Service Population (SP)	Electricity per SP (kWh/SP-year)
Baseline	4,660,920	400	11,652
Project – Stadium Only	5,341,540	570	9,371
Project without Design Features	72,720,415	14,946	4,866
Project with Design Features ⁴	61,900,937	14,946	4,142

Source: See Table 4-3 of the Energy Technical Report (Appendix 4.5-1).

As shown in Table 4.5-4, operational electricity would increase from the baseline condition (4,660,920 kWh/year) to the proposed project condition (61,900,937 kWh/year). Of note:

- The project's efficiency (as expressed via an electricity consumption per service population metric) is improved when compared to the existing condition.
- The proposed project would include electricity saving features, some of which have a quantifiable impact on the energy demand. For example, the proposed project would install on-site rooftop solar PV, which is expected to offset approximately 14.9% of the electricity demands of the proposed project. Other electricity saving features of the project, such as the proposed project's consistency with LEED Version 4 design standards, have not been quantified, thereby likely leading to a conservative overestimation of project energy consumption.
- As previously discussed, the energy usage calculation for the proposed project conservatively reflects application of the 2016 Title 24 standards, even though the 2019 Title 24 standards and subsequent updates thereto will apply given the proposed project's construction timeline and would serve to further reduce project energy consumption.

Further, as discussed in connection with the plan-level consistency analysis provided below, the proposed project would implement measures identified by other plans and policies to reduce energy usage. These plans include the City of San Diego CAP and Draft Mission Valley Community Plan Update, which include measures and design guidelines to increase energy efficiency in the region.

For additional context and comparison, Table 4.5-5 depicts that operation of the proposed project would equate to less than 0.8% of the total electricity demand citywide and less than 0.03% of the total electricity demand statewide based on 2017 consumption.

Table 4.5-5. Operation Energy Resource Summary

Energy Resource	Operation ¹	City of San Diego		California	
		Consumption	Project's Contribution	Consumption	Project's Contribution
Electricity (kWh/year)	61,900,937	7,738,649,000	0.800%	288,613,480,216	0.021%
Natural Gas (kBtu/year)	102,012,852	38,390,822,400	0.266%	1,256,804,127,406	0.008%
Gasoline (gallons/year)	4,120,682	570,941,352	0.722%	15,540,154,774	0.027%
Diesel (gallons/year)	1,014,587	67,262,101	1.508%	3,089,833,627	0.033%

Notes: kWh = kilowatt hours; kBtu = kilo British thermal units.

Source: See Table 6-4 of the Energy Technical Report (Appendix 4.5-1).

In 2017, total in-state electric generation, not including small-scale solar installations, was 206,336 GWh, and energy imports accounted for 29% of the statewide power mix (CEC 2018a). The CEC estimates that statewide energy demand will increase to 354,209 GWh in 2030 (CEC 2018c). The proposed project's anticipated electricity usage of 61,901 megawatt hours in 2037 is approximately 0.02% of the projected statewide demand in 2030. Given that the annual growth rate for the state is 1.27%, the anticipated statewide energy demand for 2037 will likely be greater than that in 2030; thus, the proposed project's relative percentage contribution to the statewide energy demand would be even less.

The proposed project's electricity use projections also represent a small percentage of regional estimates for SDG&E. The CEC estimates that SDG&E energy demand will increase to 26,402 GWh in 2030 (CEC 2018d). The proposed project's anticipated electricity usage of 61,901 megawatt hours in 2037 is approximately 0.23% of the projected SDG&E planning area demand in 2030. Overall, the proposed project's projected electricity demand is consistent with, and a small percentage of, state and regional projections.

The proposed project was designed to incorporate energy efficiency measures and allow the proposed project to meet both peak and base demand. Specific aspects of the proposed project's energy system design, including solar PV, allow for renewable or sustainable options for meeting peak demands, as discussed above. The inclusion of solar PV as a source of renewable energy would reduce the demand for electricity generation from the grid resources, particularly during peak times when energy demand is the highest and solar energy potential is also the highest. In 2016, California's peak grid demand was 46,193 megawatts. SDG&E's peak grid demand was 4,294 megawatts in 2016 and is expected to increase to 5,429 megawatts in 2026. The proposed project will have a relatively negligible effect on statewide and SDG&E peak demands.

Based on the above analysis, electricity consumption during operation would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Natural Gas

Operation of the proposed project requires natural gas, mainly for building heating and hot water. Natural gas is imported for on-site use and is estimated using CalEEMod defaults based on averages for the climate zone for the existing conditions, as well as proposed project buildout. Natural gas usage was estimated to be 1,822,990 kBtu for the existing Stadium (based on a review of meter readings) and 102,012,852 kBtu for the proposed project (based on use of CalEEMod parameters) as shown in Table 4.5-6. Of note:

- The project's efficiency (as expressed via a natural gas consumption per service population metric) is improved when compared to the existing condition.
- The proposed project would include natural gas saving features, some of which have a quantifiable impact on the energy demand. For example, the proposed project would limit the installation of natural gas-burning fireplaces to no more than 5% of the total number of residential units. Other energy saving features of the project, such as the proposed project's consistency with LEED Version 4 design standards, have not been quantified, thereby likely leading to a conservative overestimation of project energy consumption.
- As previously discussed, the energy usage calculation for the proposed project conservatively reflects application of the 2016 Title 24 standards, even though the 2019 Title 24 standards and subsequent updates thereto will apply given the proposed project's construction timeline and would serve to further reduce project energy consumption.

Table 4.5-6. Natural Gas Consumption

Inventory Year	Natural Gas Use (kBtu/year)	Service Population (SP)	Natural Gas Use per SP (kBtu/SP-year)
Baseline	1,822,990	400	4,557
Project – Stadium Only	4,143,830	570	7,270
Project	102,012,852	14,946	6,825

Notes: kBtu = kilo British thermal units; SP = Service Population; kBtu/SP-year = kilo British thermal units per service population per year.

Source: See Table 4-4 of the Energy Technical Report (Appendix 4.5-1).

For comparison, based on 2017 consumption, operation of the proposed project would equate to less than 0.3% of the total natural gas demand citywide and less than 0.01% of the total natural gas demand statewide (Table 4.5-5).

Based on the above, natural gas consumption during operation would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Fuel Usage

Operation of the proposed project would require the use of fuel due to students, faculty, staff, attendees, residents, workers, and delivery vehicles associated with the SDSU Mission Valley campus. Activity data (number of trips and/or VMT) for existing conditions and the proposed project was provided by Fehr & Peers. Data from Fehr & Peers is provided in the Transportation Impact Analysis (Appendix 4.15-1). Fuel usage was estimated using an average mpg obtained from EMFAC2014 for the fleet mix corresponding to the vehicle category and fuel type (gasoline or diesel).

Mobile gasoline fuel usage was estimated to be 198,367 gallons/year for the existing condition and 4,120,682 gallons/year for the proposed project buildout, with the totals shown in Table 4.5-7. Of note:

- The project's efficiency (as expressed via a fuel consumption per service population metric) is improved when compared to the existing condition.
- The proposed project would include transportation fuel-saving features, some of which have a quantifiable impact on the energy demand. For example, the proposed project's TDM Program is expected to reduce VMT and the corresponding consumption of gasoline by 14.41%. Additionally, the project's EV-ready spaces and installation of EV charging stations will facilitate the use of newer vehicle technologies that do not rely on traditional transportation fuels, such as gasoline and diesel.
- The energy usage calculation for the proposed project conservatively reflects existing regulatory programs, and does not account for anticipated improvements in fuel efficiency and conversion of the vehicle fleet to zero emission vehicles.
- Existing transit service near the project site includes light rail/trolley and bus services provided by MTS. MTS provides bus and trolley service within the Mission Valley Community, including an existing trolley stop at the south edge of the proposed project site. The Trolley Green Line provides service along the San Diego River corridor, and MTS bus routes 14 and 18 provide service along Qualcomm Way, Fairmount Avenue, Mission Gorge Road, Alvarado Canyon Road, Camino del Rio North, Ward Road, Rancho Mission Road, and Friars Road.

Numerous state policies for the reduction of air quality, GHG, and energy impacts support locating new development, like the proposed project, in infill areas served by transit. The infill location allows the City of San Diego specifically to accommodate existing and projected population and employment growth within a developed, urbanized area. Urban areas served by multimodal transit options can result in a reduced dependence on automobiles, therefore reducing associated VMT and transportation energy usage.

Table 4.5-7. Gasoline Consumption

Inventory Year	VMT (miles/year)	Gasoline Consumption (gallons/year)	Service Population (SP)	Consumption per SP (gallons/SP- year)
Baseline	4,325,858	198,367	400	496
Project	175,724,827	5,263,459	14,946	352
Project with Design Features	137,572,308	4,120,682	14,946	276

Source: See Tables 4-5 and 6-2 of the Energy Technical Report (Appendix 4.5-1).

The proposed project also is expected to include one diesel generator that would provide emergency lighting and power for the new multipurpose Stadium in the event of a power failure. Diesel fuel usage results from generator operation for testing and maintenance, and for emergency operation. Activity data (hours of operation, including some emergency usage) for stationary source diesel fuel consumption was based on 1 hour per week of operation for testing and maintenance emergency usage. Diesel fuel usage from mobile and stationary sources was estimated to be 23,476 gallons/year for the existing condition and 1,014,587 gallons/year for the proposed project buildout as shown in Table 4.5-8.

Table 4.5-8. Diesel Consumption

Inventory Year	Diesel Consumption (gallons/year)	Service Population (SP)	Diesel Consumption per SP (gallons/SP-year)
Baseline	23,476	400	59
Project	1,014,587	14,946	68

Source: See Table 4-6 of the Energy Technical Report (Appendix 4.5-1).

There are no unusual project characteristics that would require diesel consumption that would be more energy intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies).

For comparison, based on 2017 consumption, operation of the proposed project is approximately 1.5% of the total diesel and 0.7% of the total gasoline that would be used citywide each year. Operation of the proposed project is less than 0.04% of the total diesel and less than 0.03% of the total gasoline that would be used statewide each year (Table 4.5-5).

Vehicle use for the proposed project also has been evaluated pursuant to the technical advisory the Governor's Office of Planning and Research published under SB 743, which created a process to change the methods used for transportation impacts analyses under CEQA from focusing on level of service to VMT. (See 14 CCR 15064.3.) VMT has a direct correlation to fuel usage. The SB 743 VMT analysis can be referenced in Section 4.15, Transportation, as well as Section 13 of the Transportation Impact Analysis (Appendix 4.15-1).

As described further in the SB 743 VMT Analysis, the VMT generation for the proposed project's workers and residents represents a reduction compared to the regionwide average VMT for those populations in the absence of the proposed project. The primary reasons for this reduction are the TDM Program, the proximity of the public transit station, and the mixed-use campus nature of the proposed project. Reduced VMT results in reduced mobile fuel use per worker and per resident as compared to the regionwide average without the proposed project.

Based on the above analysis, transportation fuel consumption during operation would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Summary

Despite the projected increase in electricity, natural gas, and fuel usage compared to the baseline for the project site, the overall energy usage requirements expressed per service population decrease with implementation of the proposed PDFs discussed above. This conclusion is reached even while projecting forward electricity and natural gas demand based on current energy use profiles. This is a conservative estimate because anticipated building code updates will allow for further improvements in efficiency to be realized. Even without incorporating these additional energy efficiency improvements, resulting energy use from implementation of the proposed project is not wasteful or unnecessary, and shows efficiencies gained on a per-service population basis. Additionally, the proposed project would develop residential and nonresidential land uses in an infill setting that is served by multimodal transportation options (trolley and bus) and would further enhance other multimodal options by designing the site to encourage pedestrian- and bicycle-oriented connectivity. The proposed project's potential impacts with respect to energy requirements and energy use efficiencies are **less than significant**.

Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would comply with any applicable state plans for renewable energy or energy efficiency to the extent required by law. Further, the proposed project is consistent with the renewable energy and energy efficiency provisions of the City of San Diego's CAP and draft Mission Valley Community Plan. These plans are described in more detail in Section 4.5.2, and the relevant provisions of each plan are listed in Table 4.5-9. The proposed project has been evaluated for consistency with the relevant provisions and has been concluded to be consistent. The assessment for individual local plan measures is found in Table 4.5-9. Additionally the proposed project has been evaluated for consistency with state plans in Table 4.5-10 and has been concluded to be consistent. As such, impacts are **less than significant**.

Would the project result in a cumulative impact to energy?

The proposed project would result in an incremental increase in demand for electricity, natural gas, and fuel usage. However, despite the proposed projected increase in energy as compared to the baseline, the overall energy use requirements expressed per service population decrease with the proposed project PDFs discussed above. This conclusion is reached even while projecting forward electricity and natural gas demand based on current energy use profiles. This is a conservative estimate because anticipated building code updates will allow for further improvements in efficiency to be realized. Even without incorporating these additional energy efficiency improvements, resulting energy use from implementation of the proposed project is not wasteful or unnecessary, and shows efficiencies gained on a per-service population basis.

The proposed project also would incorporate several PDFs as described in Section 4.5.1. For example, the proposed project's overall energy demand will be reduced by incorporating operable windows, building materials that serve as insulators/conductors, and efficient HVAC systems. The proposed project's consistency with LEED Version 4 at a Silver or better certification may also drive additional energy efficiency in design. The proposed project has further committed to installing on-site rooftop solar PV, which is expected to offset approximately 14.9% of the electricity demands of the proposed project. The proposed project would include a TDM Program to reduce its transportation energy use requirements. Lastly, the proposed project would develop campus residential and nonresidential land uses in an infill setting that is served by multimodal transportation options (trolley and bus) and would further enhance other multimodal options by designing the site to encourage pedestrian- and bicycle-oriented connectivity. Therefore, the proposed project is not anticipated to create a significant local or regional demand on electricity that would result in a cumulative impact. The proposed project's potential cumulative impacts with respect to energy requirements and energy use efficiencies are **less than significant**.

4.5.5 Summary of Impacts Prior to Mitigation

Impacts to energy would be **less than significant**.

4.5.6 Mitigation Measures

Impacts to energy would be **less than significant**, and no mitigation is required.

4.5.7 Level of Significance After Mitigation

Impacts to energy would be **less than significant**, and no mitigation is required.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
<i>City of San Diego's Mission Valley Community Plan</i>			
DG-27	Solar Access and Energy Conservation	<p>Employ climate-appropriate design strategies to allow for passive solar access and energy-efficient installations, including:</p> <ul style="list-style-type: none"> - Allowing for adequate access to light and air so that daylight is able to reach all living spaces for part of the day, and adequate ventilation is provided when windows are open. Prioritize south-facing windows and private open space. - Siting building so that plazas and other public spaces will not be kept in shadows at all times and will not experience excessive wind conditions. - Locating parking areas with large paved surfaces to the east and north of adjacent buildings to reduce solar reflection on buildings. - Placing evergreen trees on the west side of buildings to provide protection from prevailing winds. 	<p>Consistent. The proposed project would comply with applicable standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which contributes to the energy conservation noted in this measure. As to the building and site orientation recommendations contained in this measure, the layout of the proposed project's campus development areas has been designed to maximize the unique infill opportunity presented at this Mission Valley location. The proposed project includes a compatible mix of land uses that would intersect in a vibrant campus setting.</p>
DG-28	Energy	Consider clustering buildings to use a common heating/cooling source.	<p>Consistent. The proposed project consists of an SDSU Mission Valley campus, which locates buildings in close proximity. The design of the site will ensure the optimum heating and cooling systems are incorporated. Thus, the nature of the proposed project complies with this measure.</p>
DG-34	Roof Surfaces	Consider locating sloped roof surfaces facing the south, and at an angle that can accommodate solar panel or film installation for renewable energy generation or centralized solar hot water heating.	<p>Consistent. The proposed project would install solar PV panels throughout the development areas, and roof surfaces with appropriate attributes for solar generation would be selected. For more information on the attributes of the solar design PDF, please see Appendix 4.5-1.</p>

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
DG-40 Operable Windows	Wherever applicable, provide operable windows that allow natural ventilation and potentially eliminate the need for mechanical ventilation. If mechanical systems are necessary, use energy-efficient and low emission heating, ventilation, and air conditioning (HVAC) systems.	Consistent. Project development areas would maximize natural ventilation. Mechanical systems also would be designed and built according to all applicable building code and energy efficiency standards (see, e.g., 24 CCR, Parts 6 and 11).
DG-45 Energy and Building Materials	Use building materials which will act as insulators or conductors, depending on energy needs.	Consistent. Project development areas would meet the applicable requirements of the California Building Code (24 CCR, Parts 6 and 11), including requirements for building materials.
DG-62 Sustainable Materials	Where possible, use sustainable building materials to the maximum extent feasible. Incorporate recycled, renewable, sustainable, and non-toxic/low-VOC (volatile organic compound) materials. Use of locally harvested and/or manufactured materials is desired.	Consistent. The proposed project would comply with applicable standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which includes requirements for building materials. In addition, the proposed project would comply with applicable San Diego Air Pollution Control District rules governing volatile organic compound content of coatings. Where applicable, compliance with the Buy Clean California Act (AB 262, 2017) also would be required to aid in the reduction of GHG emissions associated with the manufacture and transport of products used in public works projects.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
DG-63	Sustainable Landscaping	Provide on-site landscaping improvements that minimize heat gain and provide attractive and context sensitive landscape environments, by: - Building roof gardens, eco-roofs, or other vegetated roof systems to help reduce the solar heat gain of building roofs and to serve as shared open space. - Minimizing impervious surfaces that have large thermal gain.	Consistent. The proposed project integrates extensive parks and landscaping, including the planting of new, on-site trees. (See EIR Chapter 2, Project Description.) Further, project design parameters do not preclude the use of vegetated roofing systems; the installation of such systems would be determined on a building-by-building basis, following consideration of site orientation, building use, available rooftop space (following PV installation), and other factors. In addition, the proposed project would comply with applicable requirements of the CalGreen Building Standards Code (24 CCR, Part 11), which address the reduction of impervious surfaces. Site development is compact by design, in order to maximize the available infill opportunity. Impervious surfaces would be utilized where needed, and complemented by the proposed extensive park areas along the San Diego River.
DG-64	Water Efficiency and Conservation	Install water saving appliances and systems such as grey water systems, moisture-sensitive irrigation rainwater cisterns, and low-flow toilets and faucets. Any exterior systems should be integrated into building design.	Consistent. The proposed project would comply with applicable requirements of the California Building Code (24 CCR, Parts 6 and 11), and the City of San Diego's CAP Checklist, which include requirements for water management, efficiency, and conservation.
DG-67	Energy Generation	Integrate energy generation and sustainability such as solar, wind, geothermal or other technologies into the overall building design consistent with the architectural design.	Consistent. The proposed project would install solar PV panels through the development areas. For more information on the attributes of the solar design PDF, please see Appendix 4.5-1.
DG-68	Carbon Sequestration	Incorporate new trees into site plans that have the potential for storage and sequestration of high levels of carbon.	Consistent. The proposed project includes planting of new trees (approximately 3.5 times the number of new trees compared to what currently exists at the site).

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
DG-69	Zero Net Energy Buildings	Strive for zero net energy in a building design.	Consistent. Project development areas would incorporate energy efficiency measures in compliance with the version of the California Building Code (24 CCR, Parts 6 and 11) applicable at the time of building permit application, and incorporate solar PV panels beyond what is required by existing regulatory standards. It also is noted that the 2019 Title 24, Part 6 standards, which go into effect on January 1, 2020, include zero net electricity requirements for low-rise residential buildings (three stories or less).
DG-73	Mobility Hubs	Design areas around transit stations to provide for a range of services that can improve first-last mile connections. This includes drop-off/pick-up areas for ride-hailing and shuttle services, space for scooter- and bike share storage, parking spaces dedicated to car sharing services, charging stations, and package pick-up areas.	Consistent. The proposed project site is located near the existing, underutilized MTS Trolley Green Line Stadium Station, and would provide an enhanced pedestrian connection to this station. The proposed project also would incorporate connectivity as part of the project design, which includes establishing a sustainable, walkable, and transit-oriented campus with enriched pedestrian spaces, walking paths and trails, as well as EV charging stations. The proposed project's TDM Program also includes elements such as bicycle racks and secure bicycle parking, showers and lockers for employees, a transportation corridor and an information-sharing website and kiosks, coordination with SANDAG's iCommute program, guaranteed rides home, unbundled residential parking, and metered and time-limited on-street parking.
RES-4	Residential Development	Affordable housing is encouraged to be built on site.	Consistent. As contemplated by SDMC Section 22.0908, the proposed project would comply with the City's affordable housing requirements by building the required affordable units on-site.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
GBP-1 Green Building Practices	The use of sustainable building practices is highly encouraged. New buildings should strive to qualify for LEED accreditation.	Consistent. The proposed project would comply with applicable green building practices set forth in the California Building Code (24 CCR, Parts 6 and 11). Additionally, individual buildings within the proposed project development area would be designed to achieve LEED Version 4 equivalent standards (Silver minimum); and the proposed project, as a whole, would be designed to achieve LEED-Neighborhood Design Version 4 equivalent standards (Silver minimum).
GBP-3 Green Building Practices	New development should not inhibit the solar access of neighboring buildings to the maximum extent practical.	Consistent. The proposed project is designed to not inhibit solar access of neighboring buildings to the maximum extent practical.
BIC-1 Bicycling	New development required to build 10 long-term bicycle parking spaces should provide a sheltered Bike Kitchen – a place to use tools and repair bicycles.	Consistent. The proposed project would meet, and exceed, the number of bicycle parking spaces per dwelling unit specified in the City of San Diego Municipal Code. The proposed project also would include a place to use tools and repair bicycles.
BIC-3 Bicycling	Access plans for new development should clearly identify ingress and egress for bicycles, with minimum interaction with vehicles.	Consistent. The proposed project incorporates bicycle paths and ingress/egress points with wayfinding to minimize interaction with vehicles.
BIC-4 Bicycling	New development should provide connections to bicycle trails and routes per the San Diego Regional Bicycle Plan. Open spaces should also be located to abut or provide direct access to bicycle facilities.	Consistent. The proposed project incorporates bicycle paths and ingress/egress points. In addition, a hike-and-bike trail would be located throughout the open space portions of the proposed project.
PRK-6 Parking	Parking areas should be distributed throughout a project site to avoid large contiguous parking areas and to integrate landscaping. Each parking area should include no more than 30% of the project's parking spaces.	Consistent. The proposed project integrates landscaping into the project site and disperses parking throughout the site. Notably, many of the parking areas consist of multilevel parking garages that are consolidated, allowing additional space for landscaping, paseos, and other open areas.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
PRK-8 Parking	A minimum of 10% landscaping of the parking lot area is encouraged.	Consistent. The proposed project integrates landscaping into the project site, including in the parking areas.
SMC-2 Smart Cities	For energy efficiency and to minimize light pollution, lighting with adaptive controls should be considered for new and infill development.	Consistent. The proposed project would include adaptive lighting controls, where appropriate and feasible, in order to maximize energy efficiency and minimize light pollution. In addition, the proposed project would comply with applicable energy efficiency standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which address lighting energy efficiency.
SMC-1 Smart Cities	Consider providing priority parking and charging stations (preferably solar) to promote sustainable practices and accommodate the use of Electric Vehicles (EVs), including smaller short-distance neighborhood electric vehicles.	Consistent. The proposed project would include 503 EV-ready parking spaces, of which 252 spaces are equipped with EV charging stations.
PRK-4 Parking	New development should consider designating priority electric vehicle and zero emissions vehicle parking.	Consistent. The proposed project would designate certain parking spaces in prioritized locations for electric vehicles and zero emission vehicles.
PRK-2 Parking	New development should consider unbundled parking to offset development costs and encourage use of alternative transportation modes.	Consistent. The proposed project's TDM Program requires that residential parking be unbundled from unit counts.
TDM-1 Transportation Demand Management	New development considering community circulators as a TDM measure should evaluate a coordinated effort with additional properties to expand the service and access more destinations.	Consistent. This measure is not applicable because the proposed project does not include a community circulator as a part of its TDM Program. However, the proposed project's TDM Program includes several other measures that enhance mobility throughout the project site.
TDM-2 Transportation Demand Management	New development should consider developing and implementing an approved TDM Plan designed to reduce peak period automobile use and lower the minimum parking requirement. Reference San Diego Municipal Code Chapter 14, Article 2, Division 5.	Consistent. The proposed project has developed a TDM Program that includes various measures aimed at reducing peak period single-occupancy automobile use and reducing parking needs.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
TDM-3	Transportation Demand Management	New development should incorporate mobility hub features such as EV chargers, rideshare pick-up/drop-off space, bicycle parking, and transit information.	Consistent. The proposed project will provide EV chargers in the campus educational, residential, retail, office, and Stadium parking areas, as well as rideshare pick-up/drop-off space to serve these uses. Residential bicycle storage will be provided in residential parking areas, and long-term and short-term bicycle parking will be available for public use at various locations in the site. Transit information will be provided by the proposed project's Transportation Coordinator and will be made available to all project employees and residents.
TDM-4	Transportation Demand Management	New development should designate visible space along the property frontage to allow for staging of shared vehicles, bikes, and scooters.	Consistent. Visible space for the staging of shared vehicles, bikes, and scooters will be provided along the proposed project frontage and along the project shared-use path that connects the project's land uses and the Trolley Station, as well as, other locations throughout the site as needed.
TDM-5	Transportation Demand Management	<p>New development should consider participating in existing TDM programs, including but not limited to those overseen by SANDAG and MTS, in order to:</p> <ul style="list-style-type: none"> • Encourage rideshare and carpool for major employers and employment centers. • Promote car/vanpool matching services. • Continue promotion of SANDAG's guaranteed ride home for workers who carpool throughout Mission Valley. • Provide flexible schedules and telecommuting opportunities for employees. 	Consistent. The proposed project's Transportation Coordinator will encourage residents and employees to participate in rideshare and carpool services and promote SANDAG's guaranteed ride home program. Additionally, the Transportation Coordinator will encourage employers to provide flexible schedules and telecommuting opportunities.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
TDM-6	Transportation Demand Management	New development should provide flexible curb space in commercial/retail and residential areas to meet the needs of shared mobility services and the changing demands of users.	Consistent. Flexible curb space will be provided in the commercial/retail and residential areas of the proposed project in order to accommodate Transportation Network Company loading and unloading operations, deliveries, and other loading activities.
TDM-7	Transportation Demand Management	New development should post information related to available transit service and bicycle infrastructure as a means to encourage use of alternative transportation modes.	Consistent. As discussed in relation to measure TDM-3, the proposed project's Transportation Coordinator will provide information related to available transit service and bicycle infrastructure to all residents and employees.
TDM-8	Transportation Demand Management	Employers should consider providing "parking cash out" options to employees—option for employees to receive the cash value of employer-paid parking subsidies in lieu of a parking spot—as an alternative to providing free or subsidized parking or transit passes.	Consistent. Employers that rent office space on the project site will be educated about this program by the Transportation Coordinator and can decide to participate in either of the programs if they choose to do so.
City of San Diego's CAP Checklist			
Strategy 1	Energy and Water Efficient Buildings [Roofing]	<ul style="list-style-type: none"> • Would the project include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code (Attachment A)?; OR • Would the project roof construction have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot as specified in the voluntary measures under California Green Building Standards Code?; OR • Would the project include a combination of the above two options? 	Consistent. Project development areas would comply with one, both or a combination of the roofing options provided in this strategy, upon CSU Building Permit issuance and pursuant to the <i>SDSU Mission Valley Campus Master Plan Design Guidelines</i> .

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
Strategy 1 Energy and Water Efficient Buildings [Residential: Plumbing fixtures and fittings]	Residential buildings: <ul style="list-style-type: none"> • Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi; • Standard dishwashers: 4.25 gallons per cycle; • Compact dishwashers: 3.5 gallons per cycle; and • Clothes washers: water factor of 6 gallons per cubic feet of drum capacity? 	Consistent. The proposed project's residential campus areas would comply with the maximum flow rates for plumbing fixtures and appliances provided in this strategy, upon CSU Building Permit issuance and pursuant to the SDSU Mission Valley Campus Master Plan Design Guidelines.
Strategy 1 Energy and Water Efficient Buildings [Non-residential: Plumbing fixtures and fittings]	Non-residential buildings: <ul style="list-style-type: none"> • Plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 (voluntary measures) of the California Green Building Standards Code (See Attachment A); and • Appliances and fixtures for commercial applications that meet the provisions of Section A5.303.3 (voluntary measures) of the California Green Building Standards Code (See Attachment A)? 	Consistent. The proposed project's nonresidential campus areas would comply with the maximum flow rates for plumbing fixtures and appliances provided in this strategy, as a condition of building permit issuance.
Strategy 3 Bicycling, Walking, Transit, & Land Use [EV Chargers]	Multiple-family projects of 17 dwelling units or less: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official, to allow for the future installation of electric vehicle supply equipment to provide electric vehicle charging stations at such time as it is needed for use by residents?	Not Applicable. This strategy is not applicable because the proposed project includes more than 17 dwelling units.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
Strategy 3	Bicycling, Walking, Transit, & Land Use [EV Chargers]	Multiple-family projects of more than 17 dwelling units: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use by residents?	Consistent. The proposed project would provide a minimum of 85 EV-ready spaces with charging stations in the residential development areas.
Strategy 3	Bicycling, Walking, Transit, & Land Use [EV Chargers]	Non-residential projects: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use?	Consistent. The proposed project would provide a minimum of 167 EV-ready spaces with charging stations in the non-residential campus areas.
Strategy 3	Bicycling, Walking, Transit & Land Use [Bicycle Parking]	Bicycle Parking Spaces: Would the project provide more short- and long-term bicycle parking spaces than required in the City's Municipal Code (Chapter 14, Article 2, Division 5)?	Consistent. The proposed project would meet, and exceed, the number of bicycle parking spaces per dwelling unit specified in the San Diego Municipal Code.
Strategy 3	Bicycling, Walking, Transit & Land Use [Shower facilities]	If the project includes nonresidential development that would accommodate over 10 tenant occupants (employees), would the project include changing/shower facilities in accordance with the voluntary measures under the California Green Building Standards Code as shown in the table?	Consistent. The proposed project's nonresidential campus areas would provide changing/shower facilities as required by the referenced CalGreen provision, as a condition of building permit issuance.
Strategy 3	Bicycling, Walking, Transit & Land Use [Parking spaces]	Designated Parking Spaces: If the project includes a nonresidential use in a TPA [Transit Priority Area], would the project provide designated parking for a combination of low-emitting, fuel-efficient, and carpool/vanpool vehicles in accordance with the table?	Consistent. The proposed project's nonresidential campus areas would provide designated parking for a combination of the specified vehicles, as a condition of building permit issuance.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
Strategy 3 Bicycling, Walking, Transit & Land Use [TDM]	Transportation Demand Management Program. If the project would accommodate over 50 tenant-occupants (employees), would it include a transportation demand management program that would be applicable to existing tenants and future tenants that includes the components listed in the CAP Checklist?	<p>Consistent. A TDM Program has been designed for the proposed project. The TDM Program includes:</p> <ul style="list-style-type: none"> • Land Use Diversity • Neighborhood Site Enhancement <ul style="list-style-type: none"> ○ New Bicycle Facilities ○ Dedicated Land for Bicycle/Multi-Use Trails ○ Bicycle Parking ○ Showers and Lockers in Employment Areas ○ Increased Intersection Density ○ Traffic Calming ○ Car Share Service Accommodations ○ Enhanced Pedestrian Network • Parking Policy and Pricing <ul style="list-style-type: none"> ○ Unbundled Residential Parking ○ Metered On-Street Parking ○ Reduced Parking Supply • Commute Trip Reduction <ul style="list-style-type: none"> ○ TDM Program Coordinator and Marketing ○ Electric Bike-Share Accommodations ○ Ridesharing Support ○ School Pool ○ Hotel Shuttle Service

Table 4.5-10 State Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
1 California Renewables Portfolio Standard (RPS) and SB 100	Increases the proportion of electricity from renewable sources to 33% renewable power by 2020 and 40% renewable power by 2024. SB 100 requires 50% by 2026 and 60% by 2030. It also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	Consistent. The proposed project would be consistent with and not impair implementation of the state's RPS.
2 California Code of Regulations, Title 24, Part 6	Title 24, Part 6 of the California Code of Regulations establishes energy and water efficiency requirements for residential and non-residential new construction, additions to existing buildings, and alterations to existing buildings. Standards include requirements for water heating, HVAC, lighting, electrical systems, and solar design.	Consistent. The proposed project would meet the energy efficiency standards of Title 24.
3 Assembly Bill 1109	The Lighting Efficiency and Toxics Reduction Act (AB 1109) requires a reduction in average statewide electrical energy consumption by not less than 50% from the 2007 levels for indoor residential lighting and not less than 25% from the 2007 levels for indoor commercial and outdoor lighting by 2018.	Consistent. The proposed project would meet the applicable requirements from AB 1109.
4 California Green (CalGreen) Building Standards Code Requirements	CalGreen establishes green building standards to meet the goals of AB 32. CalGreen includes standards for residential and nonresidential structures such as new buildings or portions of new buildings, additions and alteration, and all occupancies where no other state agency has the authority to adopt green building standards applicable to those occupancies. Standards include requirements for site development, indoor and outdoor water use, construction waste reduction, disposal and recycling and building maintenance and operation.	Consistent. The proposed project would meet the CalGreen Building Standards Code Requirements.

4.6 Geology and Soils

This section describes the existing geological conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed San Diego State University (SDSU) Mission Valley Campus Master Plan Project (proposed project).

Methods for Analysis

Information contained in this section is based on project site plans, geotechnical engineering reports prepared for the proposed project, the paleontological resources report prepared for the proposed project, and publicly available maps, data, and reports from the U.S. Geological Survey (USGS), U.S. Department of Agriculture, and the California Geological Survey. Geotechnical investigation reports were prepared for the overall project site development and the Stadium development. Copies of the geotechnical reports prepared for the proposed project are included as Appendix 4.6-1, Report of Geotechnical Investigation - Site Development, Appendix 4.6-2, Report of Geotechnical Investigation - Stadium Development and Appendix 4.6-3, Paleontological Resources Inventory Report for the San Diego State University Mission Valley Campus Master Plan Project.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to geology and soils focused on the impacts of the proposed project on potential chemicals in the soil; project components below existing grade; and inconsistencies with cut and fill estimations. These public comments/concerns are addressed in the analysis within this section. Please see Appendix 1-1, Notice of Preparation Scoping Comments, for a complete compilation of comments received on the NOP.

4.6.1 Existing Conditions

Regional Physiography and Geology

The largest part of San Diego County consists of the interior upland (Peninsular Range) province, which is bordered on the west by the coastal plain and on the east by the Salton Basin. The province stretches from the Los Angeles basin southward to the tip of Baja California and is characterized by a series of northwest-trending mountain ranges separated by subparallel fault zones. The province is composed of ranges of steep-sloped hills and mountains separated by intermediate valleys that are generally of small extent. Most of the slopes that are underlain by granitic rocks are boulder covered, and some mountains and ranges underlain by these rocks are ledge-like. Terrain underlain by metamorphic rocks is subdued in the moist, coastal areas, but more resistant in the drier, inland areas. Metavolcanic rocks along the coast compose resistant hills and mountains (Weber 1963).

The project site is located within the Peninsular Ranges geomorphic province. The project site is located within the coastal plain transected by the west-flowing San Diego River drainage known as Mission Valley and is underlain at depth by Eocene-age sedimentary deposits mapped as the Friars Formation at elevations below approximately 160 feet. Regionally, the Friars Formation dips gently to the southwest between 3 and 5 degrees (Appendix 4.6-1). The Friars Formation consists of six intertonguing, depositionally time-equivalent facies ranging from deep marine, fine-grained siltstone and claystone to the southwest and continental, coarse-grained sandstone and conglomerate to the northeast. The Friars Formation are non-marine and near-shore deposits of lagoonal sandstone, siltstone, and

claystone. The elevation of the top of Friars Formation ranges from 25 feet in the northwest portion of the overall site to less than 0 feet in the central portion of the overall site (including the existing San Diego County Credit Union [SDCCU] Stadium footprint).

Site Setting

The project site includes the existing SDCCU Stadium, parking lot, Metropolitan Transit System Trolley Green Line Stadium Station, and ancillary facilities. There are also several detached small buildings and improvements at the southwest corner of the project site (City of San Diego 2015). As stated in Section 2.1.3, Project Location, the project site is located in the northeast portion of the Mission Valley community, which is located in the central portion of the City of San Diego (City) metropolitan area (Figure 2-1, Concept Design – Site Plan; Figure 2-2, Regional Vicinity Map). The project site is surrounded by major freeways, roadways, existing urban development, and the San Diego River. The San Diego River, which flows east to west, is located south of the project site.

Topography

Topography in San Diego includes Mission Bay on the west, foothills towards the eastern parts of the City, and mountains/canyons in the easternmost portions of the City. Urban areas within the City are generally relatively flat, developed either in valleys or on mesa tops. Some residential areas are located in the foothills. Minimal development occurs within steep mountains and canyons; the majority of these are designated as preservation areas.

Topography of the project site generally slopes from east to west and from north to south with the perimeter around the Stadium structure elevated to create adequate drainage away from the Stadium structure. Existing elevations range from approximately 96 feet above mean sea level in the northwestern corner to approximately 48 feet above mean sea level in the southwestern corner of the project site.

Soils

Based on the National Resource Conservation Services online mapping tool, the project site consists of Made Land (Surficial Soils - Undifferentiated) and a small portion of River Wash on the southern boundary of the project site (Figure 4.6-1, Geologic Map). These soils consist of thick deposits of poorly consolidated, mostly granular alluvium associated with the San Diego River and Murphy Canyon Creek drainages, local deposits of slopewash and colluvium, and relatively shallow fill soils. Made Land soils are not classified as having a hydrologic group due to the varying composition of fill used (NRCS 2019).

Geotechnical explorations of the project site (one specifically for the Stadium and one for the remaining portion of the site development) were completed by Group Delta Consultants Inc. (Appendix 4.6-1 and Appendix 4.6-2). Geotechnical borings of the project site consisted of 16 exploratory borings and three infiltration tests, as well as 17 exploratory borings and five Cone Penetration Tests for the Stadium site. Soils found on the site include surface gravel/fill, middle sand/fine-grained soils, and basal gravel.

Surface gravel and fill deposits on the project site are likely due to deposition from river drainages (historically), as well as fill material from the current development of the site's Stadium and parking. Fill material from nearby areas is up to 35 feet thick in localized areas around the Stadium, to raise grades above the floodplain. These soils observed during the site investigations were found to consist of sand, silty and clayey sand, silty to clayey gravel, and gravel and cobbles.

Middle sand and fine-grained soils were observed in the site investigations and were found to consist of poorly to well-graded sand, silty and clayey sand, silty to clayey gravel, and gravel and cobbles. These soils were found throughout the project site.

Basal gravel located on the project site consists of San Diego River alluvium deposited unconformably on the erosional contact with the Friars Formation. The Basal Gravel appears to be located within the old San Diego River paleo-channels that formed from sea level changes and regional uplift over the past several hundred thousand years. These soils were encountered in borings that consisted of mostly sandy-course gravel and large boulders (up to 2 feet in diameter) throughout the site.

Minerals

Mineral resources are discussed in detail within Section 4.11, Mineral Resources, of this environmental impact report.

Paleontological Resources

Paleontological resources are those remains of prehistoric organisms preserved as fossils in geologic deposits. Paleontological resources are nonrenewable resources that contribute to our knowledge of extinct and extant organisms and their past environments.

A records search from the San Diego Museum of Natural History was performed. Literature searches were conducted to determine whether any previously recorded fossil localities occur within the project site, as well as to research the paleontological potential, stratigraphy, and general geology of the formation in the project site based on previous research. No paleontological survey was conducted due to the development of the project site and lack of native ground or soil exposures to examine. The geologic units from maps of the area were analyzed for their potential paleontological sensitivity based on existing literature and known localities. See Appendix 4.6-3 for additional information.

The project site is largely covered in artificial fill materials which have been emplaced or heavily disturbed by human activities. Fill consisting primarily of Stadium Conglomerate (clayey sand and gravel) and some of the underlying Friars Formation (likely clay, silt, and sand) sourced from cutting into the hills to the north of the project site was placed across the property in 1966 as part of the original site grading. While fill thicknesses are estimated to be as high as 50 feet (more in localized areas) around the perimeter of the existing SDCCU Stadium, cuts and fills appear to have been minor in the area of the proposed new Stadium, at approximately 5 feet or less. Cuts up to 35 feet were excavated in the northwestern quadrant of the project site and, while some fill was likely placed and compacted, fill depths are not known. Due to the fully developed nature of the project site, it is likely that additional artificial fill that has not been mapped covers portions of the site. Artificial fill has no paleontological resource sensitivity.

Geologic Hazards and/or Soil Constraints

Slope Failures and/or Mudflows and Landslides

Slope failures, mudflows, and landslides are common in areas where steep hillsides and embankments are present and have a high potential to slough during earthquakes and/or excessive rain events where the soils become saturated and dislodged and slide downhill.

Expansive and/or Compressible Soils

Expansion and contraction of soil volume can occur when expansive soils undergo alternating cycles of wetting and drying. Wetting causes soils to expand or swell, while drying periods cause soils to compress or shrink. During these types of cycles, the volume of soil can change significantly. Structural damage to buildings and infrastructure could occur if the potentially expansive soils were not anticipated in project design and development. A total of 22 expansion index tests were conducted on soils from approximately 5 feet below existing surface levels across the project site to determine expansion potential. The results are discussed in Section 4.6.4, Impacts Analysis, below.

Corrosive Soils

Corrosivity is a function of the chemical composition of the soils, and the materials from which it is derived. If not addressed by design measures and proper selection of building materials, corrosive soils could cause substantial damage to building foundations, pavements, utilities, and/or other improvements. Corrosion tests were performed at seven locations from cut and borrow areas for the Stadium (Appendix 4.6-2), and 13 locations from cut and borrow areas for the other development on the project site (Appendix 4.6-1). Soils were tested for water-soluble sulfate content.

Test results suggest that the on-site soils have a negligible potential for sulfate attack based on accepted criteria. The pH, resistivity, and chloride content of the soils were estimated to assess the reactivity of the site soils with buried metals. As reported in Appendix C of both Appendix 4.6-1 and Appendix 4.6-2, on-site soils were found to be moderately corrosive to very corrosive to future buried metals.

Soil Settlement and/or Collapse

Soil settlement or differential settlement could occur if buildings or other improvements were built on low-strength foundation materials (including imported fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although differential settlement generally occurs slowly enough that its effects are not dangerous to site inhabitants, it can cause significant building damage over time. Settlement or collapse has the potential to occur if buildings or other improvements were built on materials which are not suited for foundations of structures. Collapsible soils generally consist of loose, dry, low-density materials that collapse and compact under the addition of water or excessive loading. These soils are distributed throughout the southwestern United States, specifically in areas of young alluvial fans, debris flow sediments, and loess (wind-blown sediment) deposits.

Land Subsidence

Subsidence is primarily associated with groundwater extraction, where large amounts of groundwater are pumped out of a location and water does not replenish the area quickly enough, which causes a void in the earth above the groundwater aquifer and wells to collapse and sink. Other effects of subsidence include changes in the gradients of stormwater and sanitary sewer drainage systems in which the flow is gravity-driven. As stated in Appendix 4.6-1 and Appendix 4.6-2, the City is assessing the feasibility of developing the Mission Valley groundwater basin as a source of sustainable water. The City is considering developing three groundwater wells south and southwest of the proposed Stadium site. The project does not propose to pump groundwater or divert water from the San Diego River. It is noted that, due to the existing use as a largely impervious parking lot, the project site currently does not allow for groundwater infiltration. The project would reduce the amount of impervious surface due to the conversion of portions of the project site into landscape parks and recreation and open space areas as proposed by the project.

Seismic Hazards

Regional Seismicity and Faults

Geologic faults in the region of the project site are the result of plate boundary interactions between the lithospheric Pacific and North American plates. Geologic data on the plate boundary is recorded by the USGS. The San Andreas, San Jacinto, and Imperial fault zones are some of the most active in the region, all of which are located in the Imperial Valley and are the major causes for movement between the plates. Northwest-striking faults to the west, including the Elsinore and Newport-Inglewood-Rose Canton faults cause a significantly smaller portion of movement in the region. Offshore faults which also cause significantly smaller amounts of motion in the region include the Coronado Bank, San Diego Trough, and San Clemente fault zones.

Active faults are faults that have had evidence of movement within the last 11,000 years (Holocene). Active faults have the greatest risk of fault rupture hazards as well as being the potential sources of ground shaking. Older faults which have not have movement within the last 11,000 years are less likely to cause ground shaking due to the nature of older faults being stationary. Active faults are mapped by the State of California within Alquist-Priolo Special Studies Zones, or Earthquake Fault Zones. Any development within an Earthquake Fault Zone is required to have building setbacks from the trace (the intersection of a fault with the ground surface) of an active fault to reduce the risk of damage in the event of significant ground shaking. The nearest active fault is the Rose Canyon Fault as part of the Newport-Inglewood-Rose Canyon fault zone. The project site is not located within an Earthquake Fault Zone.

The major active faults in the region are listed in Table 4.6-1 below and depicted in Figure 4.6-2, Fault Map.

Table 4.6-1. Nearby Faults

Fault	Approximate Distance From Project Site (miles)¹	Length (miles)
Newport-Inglewood-Rose Canyon Fault Zone	4	7.2
San Miguel-Vallecintos Fault Zone	35	6.9
Elsinore Fault Zone	35	7.0
San Jacinto Fault Zone	58	6.8
Southern San Andreas Fault Zone	85	7.2
Offshore		
Coronado Bank Fault Zone	15	7.6
San Diego Trough Fault Zone	25	7.5
San Clemente Fault Zone	50	7.7

Source: USGS 2019.

Note:

¹ Distances are rounded down to the nearest whole number.

Ground Shaking and Historic Earthquakes

Due to nearby and distant/larger magnitude earthquakes, the project site could be subject to ground shaking and surface rupture. Through structural design of the buildings and ancillary components of the proposed project, ground shaking hazards would be minimized. These design features would adhere to the requirements for new developments put in place by the California Building Code (CBC). The CBC requires certain design features for

specific soil types. For soil types that are uncommon or have the potential to be unique, geotechnical surveys and evaluations are required to ensure that proposed developments would be constructed to minimize risks.

Earthquakes are measured on a scale of magnitude and class of magnitude (see Table 4.6-2). The majority of earthquakes which occur each year are minor and do not cause significant damage to structures or buildings.

Table 4.6-2. Earthquake Magnitude and Class

Magnitude	Class	Physical Effects	Occurrences each year (approximately and can vary)
2.5 or less	Minor	Usually not felt, but can be recorded by seismographs	900,000
2.5 to 5.4	Light	Often felt, but only minor damages	30,000
5.5 to 6.0	Moderate	Slight damages to structures	500
6.1 to 6.9	Strong	Potential for significant damages	100
7.0 to 7.9	Major	Major earthquake event, significant damages to structures and life	20
8.0 or greater	Great	Total destruction of structures near epicenter and high potential for loss of life	One every 5 to 10 years

Source: UPSeis 2017.

In recent history, San Diego has experienced several thousand minor earthquakes, and a handful of moderate to major earthquakes. Below is a brief list of moderate (5.5) to great (8.0+) earthquakes which have occurred in San Diego (or been felt from nearby epicenters).

Table 4.6-3. Earthquakes Near San Diego, California

Magnitude	Date	Epicenter Location
From 2010 to Present		
5.5	March 28, 2016	San Felipe, Baja California, Mexico
6.3	December 14, 2012	Avalon, California
5.5	August 26, 2012	Brawley, California
7.2	April 4, 2012	Guadalupe Victoria, Baja California, Mexico
5.5	July 7, 2010	Borrego Springs, California
5.8	June 15, 2010	Seeley, California
From 2000–2010		
5.9	December 30, 2009	23 miles south of Calexico, California
7.2	June 14, 2005	90 miles off the Coast of Northern California (tsunami warning for Southern California)
5.6	June 12, 2005	Near Anza, California
Prior to 2000		
6.6	January 17, 1994	Northridge, California
7.3	June 28, 1992	Landers, California
6.2	November 23, 1987	Westmoreland, California
5.9	October 1, 1987	Pasadena, California
6.0	July 8, 1986	Palm Springs, California
6.6	February 9, 1971	San Fernando, California

Table 4.6-3. Earthquakes Near San Diego, California

Magnitude	Date	Epicenter Location
6.8	February 9, 1956	Ensenada, California
7.1	May 18, 1940	Imperial Valley, California
7.1	December 31, 1934	Colorado River delta
6.4	March 10, 1933	Southern California
6.3	June 22, 1915	Imperial Valley, California
5.75	October 23, 1894	San Diego, California
6.0	May 27, 1862	San Diego, California
6.9	December 8, 1812	Southern California
6.5	November 22, 1800	Oceanside, California (Rose Canyon Fault)

Sources: San Diego Tribune 2010; Earthquake Track 2019.

Liquefaction and Lateral Spreading

Liquefaction is where loose, saturated, coarse-grained soils lose their strength and acquire mobility from strong ground motion induced by earthquakes or other seismic movements. The secondary effects of liquefaction include settlement, reduced soil shear strength, lateral spreading, and global instability. Seismic settlement can occur in dry sands as well. The City has developed hazard maps intended for planning purposes.

Tsunami and Seiche

A tsunami is a sea wave generated by a submarine earthquake, landslide, or volcanic action. The project site is outside of the tsunami inundation line area and is not mapped by the California Department of Conservation to be in a tsunami inundation area (DOC 2019). A seiche is an earthquake-induced wave in a confined body of water, such as a lake, reservoir, or bay. However, no portion of the project site lies near a confined body of water on which a seiche could be expected to occur.

4.6.2 Relevant Plans, Policies, and Ordinances

Federal

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction activities. OSHA's Excavation and Trenching standard, Title 29 of the Code of Federal Regulations, Part 1926.650, covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

State

The statewide minimum public safety standard for mitigation of earthquake hazards (as established through the CBC, Alquist–Priolo Earthquake Fault Zoning Act, and the Seismic Hazards Mapping Act) is that the minimum level of mitigation for a project should reduce the risk of ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy; in most cases, preventing or avoiding the ground failure itself

is not required. It is not feasible to design all structures to completely avoid damage in worst-case earthquake scenarios. Accordingly, regulatory agencies have generally defined an “acceptable level” of risk as that which provides reasonable protection of the public safety, although it does not necessarily ensure continued structural integrity and functionality of a project (14 CCR 3721(a)). Nothing in these acts, however, precludes lead agencies from enacting more stringent requirements, requiring a higher level of performance, or applying these requirements to developments other than those that meet the acts’ definitions of “project.”

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code, Division 2, Chapter 7.5) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The purpose of this act is to prohibit the location of most structures for human occupancy across the traces of active faults and thereby mitigate the hazard of fault rupture. In accordance with this act, the state geologist established regulatory zones, called Earthquake Fault Zones, around the surface traces of active faults and has published maps showing these zones. Earthquake Fault Zones are designated by the California Geological Survey and are delineated along traces of faults where mapping demonstrates surface fault rupture has occurred within the past 11,000 years. Construction within these zones cannot be permitted until a geologic investigation has been conducted to prove that a building planned for human occupancy will not be constructed across an active fault. These types of site evaluations address the precise location and recency of rupture along traces of the faults and are typically based on observations made in trenches excavated across fault traces.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code, Chapter 7.8, Sections 2690–2699.6) directs the California Department of Conservation to protect the public from earthquake-induced liquefaction and landslide hazards (note that these hazards are distinct from the fault surface rupture hazard regulated by the Alquist-Priolo Earthquake Fault Zoning Act of 1972). This act requires the state geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones (i.e., zones of required investigation). Before a development permit may be granted for a site within a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the proposed project design. Evaluation and mitigation of potential risks from seismic hazards within zones of required investigation must be conducted in accordance with the California Geological Survey, Special Publication 117A, adopted March 13, 1997, by the State Mining and Geology Board, as updated in 2008 (CGS 2008).

To date, Seismic Hazard Zone Maps have been prepared for portions of Southern California and the San Francisco Bay Area; however, no seismic hazard zones have yet been delineated for the project area (i.e., the Saint Helena USGS 7.5-minute quadrangle). As a result, the provisions of the Seismic Hazards Mapping Act would not apply to the proposed project.

California Building Code

The CBC has been codified in the California Code of Regulations as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 to be enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction.

The 2016 edition of the CBC is based on the 2015 International Building Code published by the International Code Conference. The 2016 CBC contains California amendments based on the American Society of Civil Engineers Minimum Design Standards 7-16, which provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The CBC uses data on frequency of earthquakes, as well as locations of fault zones, in order to set forth requirements for new developments to be prepared for earthquake events. The earthquake design requirements also take into account the occupancy category of the structure, site class, soil classifications, and various other seismic coefficients, which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site, and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

Paleontological Resources

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state laws and regulations, namely California Public Resources Code Section 21000 et seq. and California Public Resources Code, Section 5097.5. Paleontological resources are explicitly afforded protection by the California Environmental Quality Act (CEQA), specifically in Section VII(f) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to “unique paleontological resource[s] or site[s] or . . . unique geological feature[s]” (14 CCR 15000 et seq.). This provision covers scientifically significant fossils—remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group—and localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that, generally, a resource shall be considered “historically significant” if it has yielded or may be likely to yield information important in prehistory or history (14 CCR 15064.5 (a)(3)(D)). Paleontological resources would fall within this category. The California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244, also regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

The Board of Trustees of the California State University (CSU) is the CEQA lead agency for the proposed project. CEQA Guidelines require a determination as to whether a proposed project would directly or indirectly destroy a unique paleontological resource or site. If a project would destroy a unique paleontological resource or site, a paleontological assessment and mitigation and monitoring plan should be designed and implemented.

Local

Because SDSU is a component of the CSU, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents and the project’s site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City’s General Plan, Mission Valley Community Plan, or City municipal zoning code.

San Diego Municipal Code

The San Diego Municipal Code (SDMC) and the CBC require the preparation of a geotechnical investigation report in accordance with the criteria in SDMC 145.1801 and 145.1803 for projects within the City (City of San Diego 2018). The City uses the San Diego Seismic Safety Study to evaluate the relative hazard of the site. Geotechnical reports for projects must include hazards identified in the Seismic Safety Study maps as well as the Alquist-Priolo Earthquake Fault Zoning Act of 1972.

4.6.3 Significance Criteria

The significance criteria used to evaluate the project impacts to geology and soils are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to geology and soils would occur if the project would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.
 - b. Strong seismic ground shaking.
 - c. Seismic-related ground failure, including liquefaction.
 - d. Landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Methodology

Impacts with respect to geology, soils, and seismicity are assessed by comparing conditions expected under the proposed project to the existing environmental setting. The analysis evaluates if the proposed project would directly or indirectly place people, structures, or the general public at increased exposure to health and/or safety risks associated with soil, geologic, or seismic hazards.

Criteria Not Applicable to the Proposed Project

Septic Tanks

The proposed project does not include the use of septic tanks or alternative wastewater disposal systems as the proposed project would connect to the existing Municipal Separate Storm Sewer System (MS4) of the City. Therefore, there would be **no impact** and this issue is not further discussed.

4.6.4 Impacts Analysis

Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- a. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of as known fault.*

Construction

The proposed project is not within an Alquist–Priolo Earthquake Fault Zone and, therefore, is not subject to the requirements of the Alquist-Priolo Earthquake Fault Zoning Act. Further, the project site is not located on an active or potentially active fault. The nearest active fault is the Rose Canyon Fault located approximately 4 miles west of the project site. The project site is not located within an Earthquake Fault Zone or in an area mapped by the City as a fault hazard zone.

The proposed project would demolish the existing SDCCU Stadium and surrounding affiliated infrastructures and build an SDSU Mission Valley campus, including approximately 1.6 million square feet of facilities for educational, research, and office uses; a new, 35,000-capacity multipurpose Stadium in a different quadrant of the project site; campus residential and hotel facilities; and approximately 86 acres of parks, recreation, and open space, including a San Diego River Park as contemplated by SDMC 22.0908. Construction would potentially involve the use of explosives to implode and demolish the existing SDCCU Stadium as well as its foundation.

While not anticipated at this time, due to the presence of the existing SDCCU Stadium structure and the project construction schedule, implosion of the existing SDCCU Stadium or portions thereof may be determined to be the most efficient and preferred method for demolition to implement the proposed project. At the current stage of the proposed project design, a blasting study has not been completed, and no specific blasting timelines or blast parameters are available. Implosion may be initiated in one coordinated event. Implosion in one event would reduce the length of time neighboring areas would be subject to the noise, ground vibrations, and other inconvenience from a lengthy conventional demolition approach. Implosion methods use highly specialized explosives to undermine the supports of a structure so it collapses either within its own footprint or in a predetermined path. Project-specific demolition methods and explosives would be determined based on a demolition plan by a demolition consultant/company. The demolition plan would include enforcement of a human safety standoff distance of a minimum of 1,000 feet, as directed by the demolition consultant/company, during the implosion.

The anticipated construction schedule is a total of approximately 17 years beginning in 2020 and ending in approximately 2037. Demolition is anticipated be completed within the first phase of construction, and implosion of the existing SDCCU Stadium would last less than 1 day. During the remaining years, construction activities would not include explosions or blasting activities, and would not have the potential to rupture nearby active faults. The project site is not located over an active fault, and project demolition and construction would not cause rupture of a fault. Therefore, impacts associated with fault rupture during construction of the proposed project would be **less than significant**.

Operation

The proposed project would include the development of the campus components, including residential, innovation, research and development, hospitality, and commercial land uses. During operation of the proposed project, the project and the vicinity could experience moderate to severe ground shaking from earthquakes. The proposed project is not located on an active fault and would not include any activities that could rupture an active nearby fault. The proposed project would be designed to adhere to all requirements of the CBC. Based on the absence of fault rupture hazard and the planned compliance with the CBC requirements for seismic design, the impacts of fault rupture would be reduced to an acceptable level of risk. Therefore, impacts associated with fault rupture during operation of the proposed project would be **less than significant**.

b. Strong seismic ground shaking?

Construction

As stated above, during demolition activities of the existing SDCCU Stadium, the use of explosives to implode and demolish the existing SDCCU Stadium as well as its foundation is not anticipated; however, implosion of the existing Stadium or portions thereof may be determined to be the most efficient or preferred method for demolition to implement the proposed project. These activities would not last more than a few moments of implosion and could have the potential to cause significant ground shaking on and in the immediate vicinity of the project site. A demolition plan would be developed and would include enforcement of a human safety standoff distance during the implosion, as directed by a demolition consultant/company. The project site is not located over an active fault and project demolition and construction would not cause rupture of a fault. Therefore, impacts associated with strong seismic ground shaking would be **less than significant**.

Operation

As stated above, the project site is located in a region that is seismically active. Historically, major earthquake events have caused significant damages to structures and buildings in the region, with several earthquakes being in or near enough to the City to be felt. Ground shaking from seismic activity is inevitable in the region of the project site. During operation of the proposed project, the project and the vicinity have the potential to experience moderate to severe ground shaking from earthquakes. The operation of the proposed project would not include any activities that would cause strong ground shaking. The proposed project would be designed to adhere to all applicable requirements of the CBC. Based on the CBC requirements for seismic design, the impacts from strong seismic ground shaking would be reduced to an acceptable level of risk for patrons and residents. Therefore, impacts associated with strong seismic ground shaking during operation of the proposed project would be **less than significant**.

c. Seismic-related ground failure, including liquefaction?

Construction

The project site is mapped on the Geologic Hazards and Faults map as an area of High Potential for liquefaction due to shallow groundwater, major drainages, and hydraulic fills (Zone 31) (City of San Diego 2008). As described in Appendix 4.6-1 and Appendix 4.6-2, soil testing of the project site determined that

the project site has potentially liquefiable soils and that secondary effects could include sand boils, settlement, and instabilities with sloping ground. Liquefaction potential is considered widespread throughout the Surficial Soils - Undifferentiated below the groundwater table.

Construction would involve cut and fill levels that would have potential for groundwater influence. As shown in Table 4.6-4, distance to groundwater was determined to be less than 50 feet from the finished subgrade elevation. Analysis determined that groundwater may influence deep construction activities due to working near or below the groundwater level depending on the location within the project site, requiring dewatering.

Table 4.6-4. Depth to Groundwater

Development Area	Finished Subgrade Elevation, Feet	Measured Elevation of Groundwater, Feet	Distance between Finished Subgrade and Groundwater Level, Feet
<i>New Stadium Levels</i>			
Field Level	56 (cut)	37 to 49	7 to 19
Service Level- Loading Dock (Partially Below Grade)	56 (cut)	37 to 49	7 to 19
Service Level- Locker Room (Partially-Below Grade)	60 (cut)	37 to 49	11 to 23
Main Concourse	87 (fill)	37 to 49	38 to 50
<i>Development Area</i>			
Campus Office, Research and Innovation Area(with Garage Parking)	55 (cut)	43 to 45	15 to 17
Campus Office, Research and Innovation Area (with Garage Parking)	75 (cut)	45 to 48	27 to 30
Hotel and Conference Center	85 (fill)	43 to 49	36 to 42
Residential – North (R1 to R9)	70 (cut)	44 to 49	23 to 26
Residential – South (R10 to R15)	65 (cut)	44 to 52	13 to 21

Sources: Appendix 4.6-1 and Appendix 4.6-2.

Dewatering best management practices, such as dewatering tanks or weir tanks that will hold the excavated groundwater, may be used during the construction phase to reduce the potential for liquefaction. All dewatering would be conducted in compliance with the California National Pollutant Discharge Elimination System Construction Stormwater General Permit (Order No. 2009-009-DWQ, as amended by Order 2010-0014-DWQ and 2012-006-DWQ) and the San Diego Regional Water Board's General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region (Order No. R9-2015-0013, National Pollutant Discharge Elimination System No. CAG919003).

Post-construction, no dewatering discharges are to be expected, as the finished subgrades will be designed to be above the groundwater table. If needed, permanent dewatering discharges will be managed to prevent impacts to the San Diego River and groundwater supplies by recharging the dewatering back to groundwater at a suitable location on the project site. As noted above, due to the existing use as a largely impervious parking lot, the project site currently does not allow for groundwater infiltration. The project would reduce the amount of impervious surface due to the conversion of portions of the project site into landscape parks and recreation and open space areas as proposed by the project.

As analyzed in Appendix 4.6-1 and Appendix 4.6-2, liquefaction is widespread throughout the project site and there are significant variations in the estimated liquefaction-induced settlement on the project site. Consequently, differential settlement is likely to exceed thresholds that would allow for shallow foundations. As stated in Appendix 4.6-1 and Appendix 4.6-2, soil settlement and collapse are a consideration at the project site due to the thickness of non-liquefiable soils at the surface and the placement of fill materials on the project site. Through a liquefaction analysis in Appendix 4.6-1 and Appendix 4.6-2, settlement was also evaluated in each development area. Table 4.6-5 shows estimated total dynamic settlement within each proposed development area on the project site.

Table 4.6-5. Estimated Dynamic Settlement

Exploration Identification	Location on Project Site	Thickness of Liquefiable Soils (feet)	Total Settlement (inches)
B-14	Campus Office, Research and Innovation Area	25	2.5
B-15		27	3.5
B-16		47	9.0
B-17		36	5.0
B-27	Campus Office, Research and Innovation Area	48	5.0
S-8		54	9.5
S-13		50	10
B-20	Residential – North	31	4.0
B-21		27	6.0
B-23		32	4.5
B-24		42	3.0
B-26	Residential – South	41	5.0
B-27		48	5.0
B-28		41	2.0
B-30		46	3.0
B-31	Hotel	45	7.0
S-1		24	5.5

Source: Appendix 4.6-1.

There is also potential for strength loss within the saturated fine-grained layers within the alluvium and settlement of dry sands above the groundwater table. These hazards could result in excessive settlement that could damage a structure supported at grade. Such impacts would be **potentially significant (Impact GEO-1)**.

To minimize the potential for liquefaction and secondary effects that could cause distress to the proposed project, the proposed Stadium would either be supported on deep foundations extending to the underlying dense soil or formational material, or on shallow or deep foundations supported by soil that has been densified/stiffened using ground improvement techniques such as stone columns, deep dynamic compaction, deep soil mixing, or other such techniques as determined appropriate for each building. Ground improvement, if used, would be limited to within about 10 feet of the structure. Liquefiable soils and seismic-related ground failure could potentially impact the proposed project's construction.

Operation

During operation of the proposed project, the project site could experience seismic ground shaking as stated earlier, which also could result in the underlying soils experiencing liquefaction. As shown in Figure 4.6-3, Seismic Safety Map, the site is within Geologic Hazard Category 31, which is characterized as having high potential for liquefaction due to “shallow groundwater, major drainages, or hydraulic fills.”

Due to the presence of liquefiable soils on the project site as observed during both geotechnical site investigations (Appendix 4.6-1 and Appendix 4.6-2), as well as the relatively high groundwater table, the potential for liquefaction within portions of the site is moderate to high. There is potential for strength loss within the saturated fine-grained soils on the project site. The potential for soils to experience liquefaction and structural loss has the potential to cause damages to structures and developments on the project site. To minimize risks, the Stadium and other developments would need to be supported by either deep foundations for structural integrity, extending deeper than liquefiable soils, or on shallow or deep foundations that are supported by soils that are suitable for large structures (e.g., replacing current soils with fill materials).

Ground and soil improvement could reduce static and dynamic settlement on the project site. Importing new, more structurally sound soils onto the project site could be economically feasible, rather than using deep foundations that would need to penetrate beyond the underlying soils. Soil improvements through importation would be of soils that would be in conformance with the CBC’s requirements for structures. Liquefiable soils and seismic-related ground failure could potentially impact the proposed project’s operation. Such impacts would be **potentially significant (Impact GEO-2)**.

d. Landslides?

The proposed project is not at risk of landslide or mudflow because it is relatively flat, and because there are no substantial slopes or hillside areas in the immediate vicinity. In addition, the project site is not at risk of mudflow or debris flow runout because the nearest mountains or large hills are located several miles to the east. Therefore, impacts would be **less than significant**.

Would the project result in substantial soil erosion or the loss of topsoil?

Construction

A substantial impact would occur if accelerated and significant soil erosion were to be sufficient in magnitude to undermine structures or compromise slope stability. The project site does not contain any topsoil as the project site is developed and topsoil has been replaced with fill material for the existing SDCCU Stadium and parking lot. During construction activities, approximately 930,000 cubic yards of cut material and approximately 1,335,000 cubic yards of fill material would be needed for the proposed project (Appendix 4.6-1 and Appendix 4.6-2). Extensive cut and fill activities would be required during construction and soil erosion could occur as a result of disturbed soil.

As discussed in Section 4.9, Hydrology and Water Quality, surface stormwater runoff and sedimentation during construction activities would be controlled with the preparation and implementation of a Storm Water Pollution Prevention Plan that would include best management practices specific for the project site and stages of construction. Impacts to soil erosion during construction would be **less than significant**.

Operation

Potential impacts of erosion on water quality are discussed in the Section 4.9. Impacts with regard to agricultural resources (e.g., prime soils) are not addressed due to the lack of agriculture and top soil on the project site due to the site being almost entirely developed and the lack of topsoil. Additionally, the full build out of the proposed project would add open spaces and fill of topsoil for landscaped areas. Stormwater drainage systems would be located throughout the project site and generally funnel all stormwater on site to retention basins. Surface water such as generated during larger storms would be directed to catchment basins near the southern edge of the project site, which would outlet into the San Diego River, located at the southern edge of the project site. The connections are shown on Figure 2-10D, Site Utilities – Concept Drainage Plan.

During operation of the proposed project, the project site would include operational best management practices that would limit wind or surface stormwater erosion of soils. This would include the proposed project's design and development of a retention basin in accordance with (MS4) requirements. Increased landscaped areas as part of the proposed project's design would further reduce surface stormwater runoff potential. The proposed project is designed to decrease impervious surfaces on the project site from approximately 166 acres in the existing condition to approximately 85.9 acres (50.1% of the project site). Runoff would be managed and discharged into existing stormwater infrastructure and the retention basin. The significant decrease of impervious surfaces on the project site, the integration of stormwater treatment basins, and the relatively flat nature of the project site would greatly reduce the potential for off-site erosion from gullies and rills as compared to the project site's current, paved condition. Operational impacts associated with soil erosion would be **less than significant**.

Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Construction

As discussed previously, the proposed project is expected to be underlain by fill (primarily coarse grained), highly variable alluvial deposits (sand, gravel, silt, and clay), and Friars Formation sandstone. Near-surface material is primarily granular in nature, consisting of sand and gravel, although some clay soils are present within the alluvium and possibly within the fill. Therefore, there is some limited potential that expansive soil could be present at the project site. In addition, ground surface settlement could occur as a result of the consolidation of loose and soft alluvial soil layers due to significant fill placement. The potential for other soil phenomena, including collapse and subsidence, is considered low. During construction of the proposed project, earthwork would be conducted per applicable requirements of the CBC and the project specifications. Impacts during construction would be considered **less than significant**.

Operation

Subsurface investigation and laboratory testing performed as part of project geotechnical studies evaluated the potential for expansive soil at the project site, and recommendations were provided for mitigation of the hazard to the proposed project.

Based on laboratory tests of the project site, soils located near the cut and borrow areas are likely to have a very low to medium potential for expansion. Within Appendix C of Appendix 4.6-1, results of 17 expansion index tests performed on soils from approximately 5 feet below existing surface levels revealed that the expansion index ranged from 6 to 75 with an average of 40 (Low Potential Expansion) and a median of 36 (Low Potential Expansion).

Compressible soils were found under the project site. Most of the soils underneath the project site are sands and gravels that are likely to settle with the addition of initial fill and structures. There are local zones of thick clay that could experience time-dependent consolidation settlement (Appendix 4.6-1 and Appendix 4.6-2).

Within the area of the proposed Stadium, nine expansion index tests were conducted on soils from approximately 5 feet below existing surface levels. These tests revealed that the expansion index ranged from 6 to 75, averaging 43 (Low Potential Expansion) with a median of 50 (borderline Low-Medium Potential Expansion) (Appendix C of Appendix 4.6-2.)

Expansive soil may be locally removed and replaced with non-expansive material. Smaller structures and surface improvements that are not supported on deep foundations would be designed to accommodate the expected settlement, and/or the earthwork would be programmed to limit long-term settlement by placing surcharge loads or implementing other measures.

Appendix 4.6-1 and Appendix 4.6-2 both recommend ground improvement of soils on the project site to provide a stable foundation for the proposed project's vertical components. Most improved grounds and soils often support allowable bearing pressures up to 4,000 pounds per square foot and would provide settlement tolerances ranging from 0.5 inches to 1 inch over a horizontal distance of approximately 30 to 40 feet. Deep dynamic compaction, vibro-replacement, deep soil mixing, and vertical drains are viable options that could be implemented for improving soil quality on the project site. However, each of these improvement options are unique and each portion of the project site would need to be evaluated in order to choose the most suitable method to improve the soils in a particular area for each project component. Schedule and costs of each option are variable and would need to be evaluated, as would the accessibility of each method in order for future subsurface quality control investigations to be conducted. However, because the project site is underlain by soils located on a geologic unit or soil that may become unstable and potentially result in liquefaction or collapse, impacts would be **potentially significant (Impact GEO-3)**.

Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

As discussed above, the available data suggest that due to the presence of loose to medium dense granular material and a high groundwater level, the potential for liquefaction within the sandy alluvium at the site is moderate to high (**Impacts GEO-1 and GEO-2**). Further, there is some potential for strength loss within the saturated fine-grained layers within the alluvium and settlement of dry sands above the groundwater table. Given that there is a potential for liquefaction, as well as the presence of sloping ground, the potential exists for lateral spreading or flow sliding to occur at the site. As discussed previously, the potential for lateral spreading or flow sliding is considered low; however, this would need to be verified by detailed site-specific geotechnical studies conducted in accordance with the requirements in the CBC.

The potential impacts to the proposed project that could result from liquefaction and secondary effects, including lateral spreading, are discussed above. Design features intended to reduce the potential consequences of soil liquefaction and secondary effects are also discussed above. With the implementation of the project design features in accordance with the CBC, the potential for these hazards to impact the proposed project would be reduced to an acceptable level of risk and, therefore, would be considered **less than significant**.

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The surface geological mapping (Kennedy 1975; Kennedy and Tan 2008) details the underlying geology within the study area as being Holocene young alluvial floodplain deposits and Pleistocene old alluvial floodplain deposits, with Eocene Friars Formation underlying the younger deposits. Numerous construction projects within sedimentary deposits throughout the City have produced scientifically significant paleontological resources (Appendix 4.6-3, Paleontological Resources Technical Report). The potential, or sensitivity, of a given geological unit to produce scientifically significant paleontological resources is based on past fossil discoveries within the unit.

A review of the records search results letter provided by the San Diego Natural History Museum (SDNHM) indicates that the study area is underlain by geological units of low, moderate, and high paleontological potential (Table 4.6-6) (County of San Diego 2009).

Table 4.6-6. Geological Units, Paleontological Sensitivities, and San Diego Natural History Museum Localities within 1-Mile of the Study Area

Geological Unit	Epoch, Period, or Era	Geological Age (Millions of Years)	Paleontological Sensitivity	No. of SDNHM Localities within One Mile of Program Area
Young Alluvial Floodplain deposits (Qya)	Holocene	<0.120	Low	N/A
Old Alluvial Floodplain deposits (Qoa)	Pleistocene	~ 2.6 – 0.13	Moderate	0
Friars Formation (Tf)	Middle Eocene	~ 46–47	High	11

Source: Appendix 4.6-3.

Note: SDNHM = San Diego Natural History Museum.

Based on the record search results conducted by the SDNHM, no records were found of fossil localities within the boundaries of the project site. However, 11 fossil localities are located within a 1-mile radius of the study area; these are from the same deposits that underlie the study area at depth (the Friars Formation) and have yielded Eocene-age fossils throughout the City (Appendix 4.6-3). The following summarizes the records search results.

The middle-Eocene Friars Formation likely partially or entirely underlies the proposed project at unknown depths, and the SDNHM has 11 fossil collection localities from this formation within a 1-mile radius of the project site (Appendix A to Appendix 4.6-3). Fossils recovered from the Friars Formation within the 1-mile buffer include a coprolite (fossilized feces), an internal mold of a freshwater or terrestrial snail, and fossil terrestrial vertebrates including frogs, turtles, crocodilians, lizards, birds, marsupials, rodents, insectivores, bats carnivores, artiodactyls, brontotheres, rhinoceroses, and primates (Appendix A to Appendix 4.6-3).

The Holocene young alluvial floodplain deposits area generally too young to yield significant paleontological resources, and thus, no fossil localities from this geological unit were reported by the SDNHM. Old alluvial floodplain deposits, which are similar to young alluvial floodplain deposits, but are Pleistocene-age, have produced significant paleontological resources in western San Diego County. However, the SDNHM did not report any fossil localities from this geological unit within the proposed project boundaries or the 1-mile buffer (Appendix A to Appendix 4.6-3). Fossils collected from this geological unit outside the 1-mile buffer include reptiles, birds, and small and large mammals. The large mammals are typical Pleistocene (Ice-Age) megafauna such as mammoth, bison, horse, and camel.

The Friars Formation is considered to have high paleontological potential, the old alluvial floodplain deposits are considered to have moderate paleontological potential, and Holocene-age alluvium are considered to have low

paleontological potential. Because the proposed project is underlain by a formation that is considered to have a high paleontological potential, and because the SDNHM has 11 fossil collection localities from this formation within a 1-mile radius of the project site, the proposed project's impacts to paleontological resources are considered **potentially significant (Impact GEO-4)**.

Would the project result in a cumulative impact to geology and soils?

For cumulative analysis, the geologic and soil geographic scope is generally the area immediately surrounding the project site for soils, and in the general region for geology and seismic concerns. Most potential impacts related to geology and soil risks would be minimized due to compliance with regulatory requirements. These regulations, as detailed in Section 4.6.2, minimize potential for risks associated with the geology and soil of the project site. Cumulative projects would also be subject to federal, state, and local regulations related to development requirements, as well as paleontological resources. In a manner similar to the proposed project, adherence to these regulatory requirements would reduce incremental impacts in each of the affected project areas. Additionally, paleontological impacts are localized, generally affecting a specific site area, thus minimizing the potential for an impact to combine with another project to create a cumulative scenario. Because cumulative projects would be fully regulated, thus reducing the potential for impacts, cumulative impacts associated with geology and soils would be less than significant. Through mitigation and compliance with regulatory requirements, the construction or operation of the proposed project itself would not create significant impacts to geology or soils that could combine with other project impacts to create a significant and cumulatively considerable impact. For these reasons, the proposed project would **not result in cumulatively considerable impacts** related to geology and soils.

4.6.5 Summary of Impacts Prior to Mitigation

Based on the geologic conditions in the site area, the proposed project has the potential to result in the following impacts.

- Impact GEO-1** Liquefiable soils and seismic-related ground failure could potentially impact the proposed project's construction.
- Impact GEO-2** Liquefiable soils and seismic-related ground failure could potentially impact the proposed project's operation.
- Impact GEO-3** The proposed project has the potential to be significantly impacted by potentially unstable soils located on the project site.
- Impact GEO-4** During construction activities, the proposed project has the potential to create a significant impact to paleontological resources that may be present on the project site.

4.6.6 Mitigation Measures

The following mitigation measures would be implemented to reduce all impacts described in this section to levels below significance.

- MM-GEO-1** Prior to the commencement of construction of any of the proposed project's vertical components, California State University (CSU)/San Diego State University or its designee shall retain a qualified geotechnical engineer to prepare a final geotechnical report (or reports) for the portions of the

project site proposed for construction, which shall include, at minimum, the following analyses of the project site's soils for the vertical footprint of each development component of the project:

1. Corrosivity of soils,
2. Liquefiable soils,
3. Potentially unstable soils, including compressible, expandable soils, and
4. Suitability of fill materials to be used.

The final geotechnical report shall also include recommendations on the types of methods that should be utilized to improve soil quality in the footprint of each vertical development component. The final geotechnical report shall be submitted to, and approved by, the CSU Building Official or its designee prior to the issuance of construction permits for any phase of the project. The final geotechnical report shall conform to all applicable laws, regulations, and requirements. All geotechnical recommendations provided in the final geotechnical report shall be followed during grading and construction at the project site.

MM-GEO-2 A geotechnical consultant in the field shall perform geotechnical observation and/or laboratory testing during grading to identify areas of potential liquefaction and unstable soils, and shall develop conclusions and recommendations. All soils in areas of proposed development or future fill subject to potential liquefaction and/or instability shall be treated per the recommendations of the final geotechnical report and field observations. Prior to approval of final inspection of site grading for each phase of the affected areas of the proposed project, the recommendations shall be reviewed and approved by the California State University Building Official or its designee.

MM-GEO-3 Prior to the commencement of any grading activity, California State University (CSU)/San Diego State University or its designee shall retain a qualified paleontologist to ensure the implementation of a paleontological monitoring program. The Society of Vertebrate Paleontology defines a qualified paleontologist as having the following:

1. A graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; and demonstrated competence in field techniques, preparation, identification, curation, and reporting in the state or geologic province in which the project occurs. An advanced degree is less important than demonstrated competence and regional experience.
2. At least two full years professional experience as assistant to a Project Paleontologist with administration and project management experience; supported by a list of projects and referral contacts.
3. Proficiency in recognizing fossils in the field and determining significance.
4. Expertise in local geology, stratigraphy, and biostratigraphy.
5. Experience collecting vertebrate fossils in the field.

The qualified paleontologist shall attend any preconstruction meetings, present a worker environmental training to construction personnel, and manage the paleontological monitor(s) if he or she is not doing the monitoring. A paleontological monitor shall be on site during all excavations

below the depth of previously disturbed sediments. The Society of Vertebrate Paleontology defines a qualified paleontological monitor as having the following:

1. BS [bachelor of science] or BA [bachelor of arts] degree in geology or paleontology and one year experience monitoring in the state or geologic province of the specific project. An associate degree and/or demonstrated experience showing ability to recognize fossils in a biostratigraphic context and recover vertebrate fossils in the field may be substituted for a degree. An undergraduate degree in geology or paleontology is preferable, but is less important than documented experience performing paleontological monitoring, or
2. AS [associate of science] or AA [associate of arts] in geology, paleontology, or biology and demonstrated two years experience collecting and salvaging fossil materials in the state or geologic province of the specific project, or
3. Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in the state or geologic province of the specific project.
4. Monitors must demonstrate proficiency in recognizing various types of fossils, in collection methods, and in other paleontological field techniques.

The paleontological monitor shall be equipped with necessary tools for the collection of fossils and associated geological and paleontological data. The monitor shall complete daily logs detailing the day's excavation activities and pertinent geological and paleontological data. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find.

Following the paleontological monitoring program, a final monitoring report shall be submitted to CSU for approval. The report shall summarize the monitoring program and include geological observations and any paleontological resources recovered during paleontological monitoring for the proposed project.

4.6.7 Level of Significance After Mitigation

The proposed project is not located on a known earthquake fault and therefore the proposed project would result in less than significant impacts during construction. The project site is located within a region that is seismically active. The proposed project would design project components to be in accordance with applicable requirements of the CBC to ensure that the proposed project would minimize impacts from earthquakes. Therefore, the proposed project would result in a **less than significant impact** in regards to fault zones and strong seismic ground shaking.

The proposed project is located on soils which are susceptible to liquefaction and structural failure (**Impacts GEO-1** and **GEO-2**). Through implementation of recommended project design and site preparations as indicated in Appendix 4.6-1 and Appendix 4.6-2, as well as a final geotechnical report (**MM-GEO-1**) and field recommendations from a certified geotechnical consultant (**MM-GEO-2**), the proposed project would result in a **less than significant impact** in regards to liquefaction and structural failure.

The project site and vicinity are relatively flat, are not located on a hill or steep area, and are not subject to landslides from nearby hills or steep areas. There would be **no impact** to or from landslides with the implementation of the proposed project.

The project site does not contain topsoil and, therefore, the proposed project would not impact the loss of topsoil on the project site. There would be **no impact** to the loss of topsoil on the project site.

The project site is underlain by soils located on a geologic unit or soil that may become unstable and potentially result in collapse (**Impact GEO-3**). With implementation of the recommendations contained in the final geotechnical report, as required by the design process in conformance with the CBC, and field recommendations from a certified geotechnical consultant (**MM-GEO-2**), the potential for unstable soil to impact people, the project, or adjacent properties (**Impact GEO-3**) would be reduced to **less than significant**.

The proposed project does not include the use of septic tanks or alternative wastewater disposal systems, and therefore there would be **no impact** with respect to septic-suitable soils on the project site.

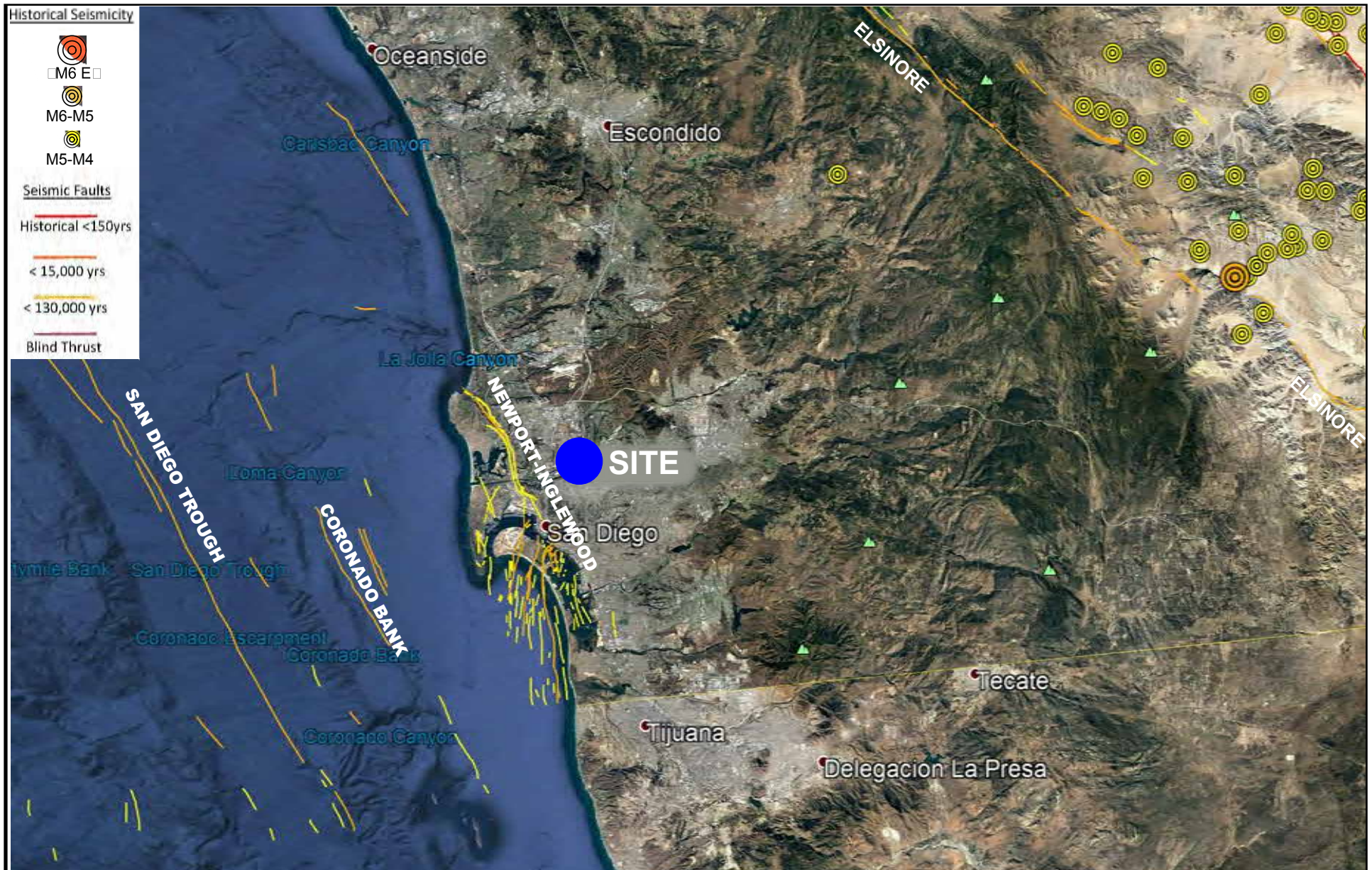
Demolition of the existing SDCCU Stadium and associated facilities and construction of proposed components of the proposed project have the potential to result in potentially significant impacts to paleontological resources (**Impact GEO-4**). To mitigate this potentially significant impact, the proposed project would implement mitigation measure **MM-GEO-3**. Implementation of this mitigation measure would reduce impacts to **less than significant** during demolition and construction activities.

REFERENCE: KENNEDY, M. P., AND TAN, S. S. (2008). GEOLOGIC MAP OF THE SAN DIEGO 30'X60' QUADRANGLE, CALIFORNIA: CALIFORNIA GEOLOGIC SURVEY, SCALE 1:1000,000.

SDSU Mission Valley Campus Master Plan EIR



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REFERENCE: U.S. GEOLOGICAL SURVEY AND CALIFORNIA GEOLOGICAL SURVEY, 2006, QUATERNARY FAULT AND FOLD DATABASE FOR THE UNITED STATES, ACCESSED 3/4/2019, FROM USGS

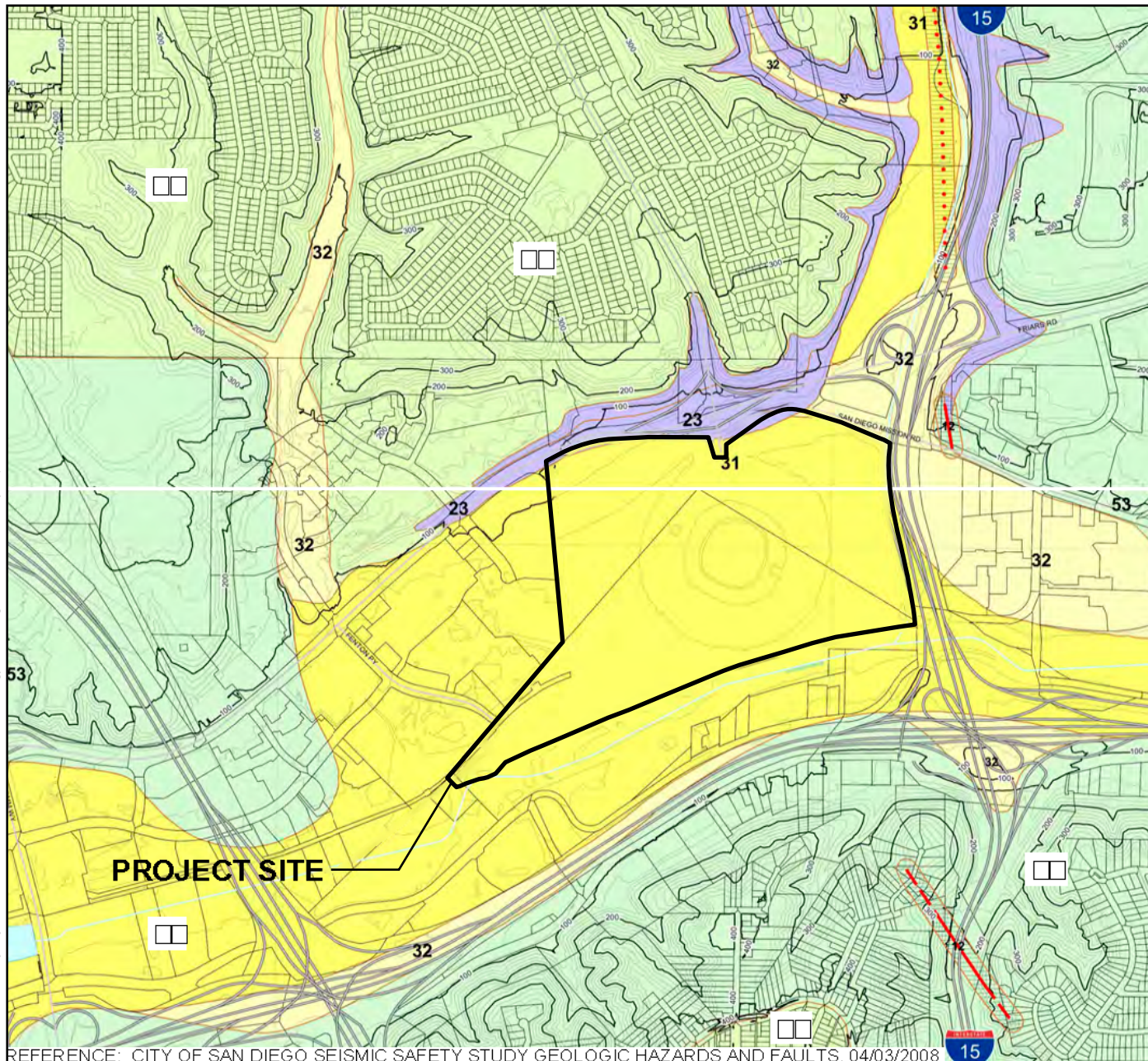
SOURCE: GROUP DELTA CONSULTANTS, 2019

SDSU Mission Valley Campus Master Plan EIR



**Figure 4.6-2
Fault Map**

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LEGEND

Geologic Hazard Categories

FAULT ZONES

- 12 Potentially Active, Inactive, Presumed Inactive, or Activity Unknown

SLIDE-PRONE FORMATIONS

- 23 Friars: neutral or favorable geologic structure

LIQUEFACTION

- 31 High Potential -- shallow groundwater major drainages, hydraulic fills
- 32 Low Potential -- fluctuating groundwater minor drainages

OTHER TERRAIN

- 52 Other level areas, gently sloping to steep terrain, favorable geologic structure, Low risk
- 53 Level or sloping terrain, unfavorable geologic structure, Low to moderate risk

Water (Bays and Lakes)



FAULTS

- Fault
- Inferred Fault
- Concealed Fault
- Shear Zone

SOURCE: GROUP DELTA CONSULTANTS, 2019

SDSU Mission Valley Campus Master Plan EIR



Figure 4.6-3
Seismic Safety Map

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4.7 Greenhouse Gas Emissions

This section describes the existing conditions related to greenhouse gas (GHG) emissions and global climate change, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the San Diego State University (SDSU) Mission Valley Campus Master Plan Project (proposed project).

Methods for Analysis

This section summarizes the GHG emissions analysis for the proposed project that was prepared by Ramboll US Corporation (Ramboll) in May 2019. The complete technical report prepared on this subject is included as Appendix 4.7-1 of the environmental impact report (EIR).

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to GHG emissions focused on use of the City of San Diego (City) Climate Action Plan (CAP) and its GHG emissions reduction goals to reduce project construction and operational GHG emissions, and the implementation of strategies and measures to reduce GHG emission impacts from transportation, building energy use, and water use. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.7.1 Existing Conditions

Site Conditions

As described in Chapter 1, Introduction, and shown in Figure 1-3, Project Site and Surrounding Land Uses, the property comprising the project site includes four existing uses: (1) a multipurpose Stadium (San Diego County Credit Union [SDCCU] Stadium, formerly “Qualcomm Stadium”), with an existing capacity of approximately 71,500 seats for football and other events; (2) an associated surface parking lot with approximately 18,870 parking spaces; (3) the Metropolitan Transit System (MTS) existing Green Line transit station, which provides trolley service running toward downtown San Diego to the west and Santee to the east, and (4) Murphy Canyon Creek. The SDSU main campus is three trolley stops from the existing on-site trolley station.

Greenhouse Gases

There is a general scientific consensus that global climate change is occurring, caused in whole or in part by increased emissions of GHGs that keep the Earth’s surface warm by trapping heat in the Earth’s atmosphere, in much the same way as glass traps heat in a greenhouse. The Earth’s climate is changing because human activities, primarily the combustion of fossil fuels, are altering the chemical composition of the atmosphere through the buildup of GHGs. Indeed, there is a strong scientific consensus that human activity has contributed significantly to global warming. As stated in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), “The evidence for human influence on the climate system has grown since IPCC’S Fourth Assessment Report (AR4)it is extremely likely to have been the dominant cause of the observed warming since the mid-twentieth century” (IPCC 2014).

GHGs allow the Sun's radiation to penetrate the atmosphere and warm the Earth's surface, but do not let the infrared radiation emitted from the Earth escape back into outer space. As a result, global temperatures are predicted to increase over the century. In particular, if climate change remains unabated, surface temperatures in California are expected to increase anywhere from 4.1° to 8.6° Fahrenheit (°F) by the end of the century.

Not only would higher temperatures directly affect the health of individuals through greater risk of dehydration, heat stroke, and respiratory distress, the higher temperatures may increase ozone formation, thereby worsening air quality. Rising temperatures could also reduce the snowpack, which would increase the risk of water shortages. Higher temperatures along with reduced water supplies could reduce the quantity and quality of agricultural products. In addition, there could be an increase in wildfires and a shift in distribution of natural vegetation throughout the state. Global warming could also increase sea levels and coastal storms resulting in greater risk of flooding.

Emissions of carbon dioxide (CO₂) are the leading cause of global climate change, with other pollutants such as methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) also contributing. The magnitude of the impact on global warming differs among the GHGs. For example, HFCs, PFCs, and SF₆ have a greater “global warming potential” than CO₂. In other words, these other GHGs have a greater contribution to global warming than CO₂ on a per-mass basis. The effect each GHG has on climate change is measured as a combination of the volume of its emissions and its global warming potential (GWP), and is expressed as a function of how much warming would be caused by the same mass of CO₂. Thus, GHG emissions are typically measured in terms of metric tons of carbon dioxide equivalent (MT CO₂e). CO₂ has the greatest impact on global warming because of the relatively large quantities of CO₂ emitted into the atmosphere. GWPs of 25 and 298 were used for CH₄ and N₂O, respectively, for this analysis, consistent with the current version of the California Emissions Estimator Model (CalEEMod, version 2016.3.2). In certain components of this section, including the final summary sections, emissions are presented in units of CO₂e either because the GWPs of CH₄ and N₂O were accounted for explicitly, or the CH₄ and N₂O are assumed to contribute a negligible amount of GWP when compared to the CO₂ emissions from that particular emissions category.

In 2017, the United States emitted about 6.5 billion MT CO₂e or about 19.9 metric tons per person per year (MT/person/year), calculated by dividing the emissions total by the U.S. Census Bureau 2017 population estimate (EPA 2017; U.S. Census Bureau 2018). This represents a 12% reduction below 2005 total emission levels. Of the four major sectors nationwide— residential, commercial, industrial, and transportation—transportation accounts for the highest fraction of GHG emissions (approximately 57% of emissions from these four sectors). These emissions are entirely generated from direct fossil fuel combustion. Of these transportation emissions, 59% resulted from passenger car and light-duty truck use. The remaining emissions came from other transportation activities, including the combustion of diesel fuel in medium- and heavy-duty vehicles, and jet fuel in aircraft. According to the Inventory of U.S. Greenhouse Gas Emissions and Sinks, from 2005 to 2017, transportation emissions dropped by 3% due, in part, to increased fuel efficiency across the U.S. vehicle fleet, as well as higher fuel prices, and an associated decrease in the demand for passenger transportation (EPA 2019). However, from 1990 to 2017 as a whole, transportation emissions from fossil fuel combustion rose by 22%, due, in large part, to increased demand for travel (EPA 2019).

In 2016, California emitted approximately 429 million metric tons (MMT) of CO₂e, or about 7% of the U.S. emissions (CARB 2018). California's percentage contribution is due primarily to the sheer size of California, as compared to other states. For example, in 2014 (the most recent year of state rankings for GHG emissions per capita), California had the seventh lowest per-capita GHG emission rates in the country (including Washington, D.C.) (World Resources Institute 2019), due to the success of its energy-efficiency and renewable energy programs and commitments that have lowered the state's GHG emissions rate of emissions growth (Center for Resource Efficient Communities 2013). California's per-capita GHG emissions in 2016 were 10.8 MT per person (CARB 2018), while the U.S. per-capita GHG

emissions in that same year were 20.1 MT per person (EPA 2019; U.S. Census Bureau 2019). Another factor that has reduced California's fuel use and GHG emissions is its mild climate compared to that of many other states.

The California Energy Commission (CEC) found that transportation is the source of approximately 41% of the state's GHG emissions, followed by industrial sources at 23%, and electricity generation (both in-state and out-of-state) at 16%. Residential and commercial activities comprised approximately 12% of the inventory. Agriculture and forestry is the source of approximately 8% of the state's GHG emissions (CARB 2018).

The construction and operation of land use developments cause GHG emissions. Operational phase GHG emissions result from energy use associated with heating, lighting and powering buildings (typically through natural gas and electricity consumption), pumping and processing water, fuel used for transportation, and decomposition of waste associated with building occupants. New development can also create GHG emissions in its construction and demolition phases, including the use of fuels in construction equipment, creation and decomposition of building materials, vegetation clearing, natural gas usage, electrical usage, and transportation.

New land use development does not necessarily create entirely new GHG emissions, since most of the persons who will visit or occupy new development will come from other locations where they were already causing such GHG emissions. Further, because climate change is occurring on a global scale, it is not meaningfully possible to quantify the scientific effect of new GHG emissions caused by a single project. It has not been demonstrated that new GHG emissions caused by a local development project can affect global climate change, or that a project's net increase in GHG emissions, if any, when coupled with other activities in the region, would be cumulatively considerable (CAPCOA 2008).

Potential Effects of Climate Change on Earth

Globally, climate change has the potential to impact numerous environmental resources through anticipated, though uncertain, impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. At the end of the twenty-first century, global surface temperature change is likely to exceed 1.5 ° Celsius (° C) (relative to 1850–1900 levels) in all four assessed climate model projections but one (IPCC 2014).

Acknowledging uncertainties regarding the rate at which anthropogenic GHG emissions would continue to increase (based upon various factors under human control, such as future population growth and the locations of that growth; the amount, type, and locations of economic development; the amount, type, and locations of technological advancement; adoption of alternative energy sources; legislative and public initiatives to curb emissions; and public awareness and acceptance of methods for reducing emissions), and the impact of such emissions on climate change, the IPCC devises emission scenarios which utilize various assumptions about the rates of economic development, population growth, and technological advancement over the course of the next century. For the Fifth Assessment Report, Representative Concentration Pathways (RCPs) were developed to describe four different twenty-first-century scenarios of GHG emissions, atmospheric concentrations, air pollutant emissions, and land use. RCPs are based on a combination of integrated assessment models, simple climate models, atmospheric chemistry, and global carbon cycle models. The four RCPs include a mitigation scenario, two stabilizing scenarios, and one scenario with very high GHG emissions. "The RCPs cover a wider range than the scenarios from the Special Report on Emissions Scenarios used in previous assessments, as they also represent scenarios with climate policy" (IPCC 2014).

The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects according to the IPCC (IPCC 2014).

- It is *very likely* that the Arctic sea ice cover will continue to shrink and thin and that Northern Hemisphere spring snow cover will decrease during the twenty-first century as global mean surface temperature rises. Global glacier volume will further decrease.
- It is virtually certain that there will be more frequent hot and fewer cold temperature extremes over most land areas on daily and seasonal timescales as global mean temperatures increase. It is very likely that heat waves will occur with a higher frequency and duration. Occasional cold winter extremes will continue to occur.
- Global surface temperature change for the end of the twenty-first century is likely to exceed 1.5 °C relative to 1850 to 1900 for all RCP scenarios except the mitigation scenario. It is likely to exceed 2 °C for the highest forcing scenario and one stabilizing scenario, and more likely than not to exceed 2 °C for the remaining stabilizing scenario. Warming will continue beyond 2100 under all RCP scenarios except the mitigation scenario.
- The global ocean will continue to warm during the twenty-first century. Heat will penetrate from the surface to the deep ocean and affect ocean circulation.
- Climate change will affect carbon cycle processes in a way that will exacerbate the increase of CO₂ in the atmosphere (*high confidence*). Further uptake of carbon by the ocean will increase ocean acidification.
- Changes in the global water cycle in response to the warming over the twenty-first century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions. Global mean sea level will continue to rise during the twenty-first century.
- Cumulative emissions of CO₂ largely determine global mean surface warming by the late twenty-first century and beyond. Most aspects of climate change will persist for many centuries even if emissions of CO₂ are stopped.

Potential secondary effects from global warming include global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Potential Effects of Climate Change on the State of California

According to the California Air Resources Board (CARB), some of the potential impacts in California of global warming may include loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB 2006). The California Climate Change Center has released four assessment reports on climate change in California, the most recent in 2018. Per California's Third Climate Change Assessment, by 2050, the state is projected to warm by approximately 2.7 °F above 2000 averages, a threefold increase in the rate of warming over the last century (CCCC 2012). California's Fourth Climate Change Assessment projects an increase by 5.6 °F to 8.8 °F from 2070 to 2100 depending on GHG emission reductions (at a moderate rate or continuing at current rates) (CCCC 2018).

Below is a summary of some of the potential effects reported in an array of studies that could be experienced in California as a result of global warming and climate change.

Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects,

are uncertain. For other pollutants, the effects of climate change and/or weather are less well studied, and even less well understood.

If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. Studies have been conducted to evaluate the potential impacts of climate change on wildfire frequency based on lower and higher emissions scenarios. Per California's Third Climate Change Assessment, under a higher emissions scenario, increases in the number of large wildfires statewide could range from 58% to 128% above historic levels by 2085 (CCCC 2012). The estimated burned area is projected to increase between 57% and 169%, depending on location. However, if higher temperatures are accompanied by wetter, rather than drier, conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires.

Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CCCC 2006a). It is estimated that over the next decade, higher temperatures could increase the demand for electricity by 1 gigawatt during summer months, which would require purchase of costly peak power from external sources or the construction of one new large power plant in California (CCCC 2012). During periods of extreme heat, efficiency of electricity generation is reduced at natural gas plants, hydropower generation is reduced, and increased losses occur at substations, all while electricity demands are increased. These factors are projected to result in the need for more than 17 gigawatts, or 38% of additional capacity, needed by 2100. Additionally, transmission lines lose 7% to 8% of transmitting capacity in higher temperatures, which also results in a need for increased power generation (CCCC 2012).

Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. For example, models that predict drier conditions suggest decreased reservoir inflows and storage, and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions project increased reservoir inflows and storage, and increased river flows (Brekke et al. 2004).

A July 2006 technical report prepared by the California Department of Water Resources addresses the State Water Project, the Central Valley Project, and the Sacramento–San Joaquin Delta. Although the report projects that, “[c]limate change will likely have a significant effect on California’s future water resources ... [and] future water demand,” it also reports that, “there is much uncertainty about future water demand, especially those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain. This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood” (DWR 2006). The California Department of Water Resources adds that “[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future” (DWR 2006). Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (CCCC 2006b).

California’s Third Climate Change Assessment outlines the state’s urgent water management challenges brought on as a result of climate change. These include increasing demand from a growing population as temperatures rise, earlier snowmelt and runoff, and faster-than-historical sea-level rise threatening aging coastal water infrastructure and levees in the Sacramento–San Joaquin Delta (CCCC 2012). Additionally, they predict that competition between urban and agriculture water users and environmental needs will increase due to effects on water supply and stream flows.

The City of San Diego is procuring an agreement for the preparation of a 2020 Long-Range Water Resources Plan and a 2020 Urban Water Management Plan to update demand forecasting projects that are based on modeled scenarios incorporating a variety of climate change impacts (OPR et al. 2018).

Hydrology

As discussed above, climate change could potentially affect the following: the amount of snowfall, rainfall, and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide, and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. Sea level rise can be a product of global warming through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion, and could also jeopardize California's water supply. In particular, saltwater intrusion would threaten the quality and reliability of the state's major fresh water supply that is pumped from the southern portion of the Sacramento–San Joaquin Delta. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events. Assuming the rate of sea level rise continues to follow global trends, sea level along California's coastline in 2050 could be 10 to 18 inches higher than in 2000, and 31 to 55 inches higher by the end of this century (OPR et al. 2018). Based on these current projections, the current 100-year storm could occur once every year. California's Third Climate Assessment projects that changes in stream flow in the Sacramento Valley and San Joaquin Valley would result in critically dry years occurring 8% more frequently in the Sacramento Valley and 32% more frequently in the San Joaquin Valley, compared to the historical period between 1951 and 2000 (CCCC 2012).

Agriculture

California has a \$30 billion agricultural industry that produces half the country's fruits and vegetables. The CCCC notes that higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase, crop-yield could be threatened by a less reliable water supply, and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year that certain crops, such as wine grapes, bloom or ripen, and thus affect their quality (CCCC 2006a).

Ecosystems and Wildfire

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. In 2004, the Pew Center on Global Climate Change released a report examining the possible impacts of climate change on ecosystems and wildlife (Parmesan and Galbraith 2004). The report outlines four major ways in which it is thought that climate change could affect plants and animals: (1) timing of ecological events, (2) geographic range, (3) species' composition within communities, and (4) ecosystem processes such as carbon cycling and storage.

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Air Act

In April 2007, in *Massachusetts v. EPA*, the U.S. Supreme Court directed the Administrator of the U.S. Environmental Protection Agency (EPA) to determine whether GHG emissions from new motor vehicles cause or contribute to air

pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator was directed to follow the language of Section 202(a) of the Clean Air Act. In December 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- Elevated concentrations of GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the “endangerment finding.”
- The combined emissions of GHGs—CO₂, CH₄, N₂O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Federal Vehicle Standards

In response to the *Massachusetts v. EPA* decision discussed above, in 2007, President Bush directed the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the same federal agencies to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model year 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021.

In August 2017, the EPA asked for additional information and data relevant to assessing whether the GHG emissions standards for model years 2022–2025 remain appropriate. In early 2018, the EPA Administrator announced that the midterm evaluation for the GHG emissions standards for cars and light-duty trucks for model years 2022–2025 was completed and stated his determination that the current standards should be revised in light of recent data. Subsequently, in 2018, the EPA and NHTSA proposed to amend certain existing Corporate Average Fuel Economy (CAFE) standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards, covering model years 2021–2026. Compared to maintaining the post-2020 standards now in place, the pending proposal would increase U.S. fuel consumption. California and other states have announced their intent to challenge federal actions that would delay or eliminate GHG reductions. Because the pending proposal is still in the rulemaking phase, and because legal challenges to any future adoption of the proposal is likely, the timing and consequences of the pending proposal are speculative at this time.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards are expected to lower carbon dioxide emissions by approximately 1.1 billion MT and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25% greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200% greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the EPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of the Energy Independence and Security Act address energy savings in government and public institutions, and promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

State

The State of California considers GHG emissions and the impacts of climate change to be a serious threat to the public health, environment, economic well-being, and natural resources of California, and has taken an aggressive stance to mitigate the state’s impact on climate change through the adoption of policies and legislation. CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. California has numerous regulations aimed at reducing the state’s GHG emissions. Some of the major initiatives are summarized below.

Executive Order S-3-05

In 2005, Governor Schwarzenegger issued Executive Order (EO) S-3-05, which identifies statewide GHG emission reduction targets to achieve long-term climate stabilization as follows:

- Reduce GHG emissions to 1990 levels by 2020; and
- Reduce GHG emissions to 80% below 1990 levels by 2050.

In response to EO S-3-05, California Environmental Protection Agency created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (2006 CAT Report; CalEPA 2006). The 2006 CAT Report

identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include, but are not limited to, the reduction of passenger and light-duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture.

Assembly Bill 32

Assembly Bill (AB) 32 (Nunez, 2006), the California Global Warming Solutions Act of 2006, was enacted after considerable study and expert testimony before the Legislature. The heart of AB 32 is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. In order to achieve this reduction mandate, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.

In 2007, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline. CARB's adoption of this limit is in accordance with Health & Safety Code Section 38550, as codified through enactment of AB 32.

Per Health & Safety Code Section 38561(b), CARB also is required to prepare, approve, and amend a scoping plan that identifies and makes recommendations on “direct emission reduction measures, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and nonmonetary incentives for sources and categories of sources that [CARB] finds are necessary or desirable to facilitate the achievement of the maximum feasible and cost-effective reductions of greenhouse gas emissions by 2020.”

2008 Scoping Plan

In 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (2008 Scoping Plan) in accordance with Health & Safety Code Section 38561. During the development of the 2008 Scoping Plan, CARB created a planning framework that is comprised of eight emissions sectors: (1) transportation, (2) electricity, (3) commercial and residential, (4) industry, (5) recycling and waste, (6) high GWP gases, (7) agriculture, and (8) forest net emissions.

The 2008 Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions from the eight emissions sectors to 1990 levels by 2020. In the Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as “Business-As-Usual” [BAU]) (CARB 2008). For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

To achieve the necessary GHG reductions to meet AB 32's 2020 target, CARB developed a series of reduction measures in the Scoping Plan covering a range of sectors and activities. Broadly, the reduction measures can be separated into capped sectors (i.e., covered by the Cap-and-Trade Program discussed below) and uncapped sectors.

Multiple Scoping Plan measures broadly cover emissions associated with new residential and commercial land use development, including, but not limited to, the following:

- **Energy Efficiency/Green Buildings.** The Scoping Plan highlights the importance of energy efficiency efforts in reducing GHG emissions from residential and commercial development and indicates that zero net energy should be the overarching and unifying concept for energy efficiency.
- **Regional Transportation-Related GHG Targets.** The Scoping Plan relies on Senate Bill (SB) 375, discussed below, as an important mechanism to reduce mobile GHG emissions by integrating land use planning and transportation planning at the regional and local level.
- **Vehicle Emissions.** The Scoping Plan relies on various engine, fuel, and other efficiency improvement programs and increasing electrification of the vehicle fleet.
- **Cap-and-Trade Program.** The Scoping Plan identifies the Cap-and-Trade Program as a lynchpin, overarching strategy for California to reduce GHG emissions. As explained in the Scoping Plan, the program's implementing regulations provide assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85% of California's GHG emissions.

In the 2011 Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (2011 Final Supplement; CARB 2011), CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (12% to 20%), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the BAU conditions (CARB 2011).

2014 First Update to the Scoping Plan

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (2014 First Update).¹ The stated purpose of the 2014 First Update is to “highlight [...] California’s success to date in reducing its GHG emissions and lay [...] the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050” (CARB 2014). The 2014 First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals (CARB 2014).

In conjunction with the 2014 First Update, CARB identified “six key focus areas comprising major components of the state’s economy to evaluate and describe the larger transformative actions that will be needed to meet the state’s more expansive emission reduction needs by 2050” (CARB 2014). Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The 2014 First Update identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on CARB’s research efforts, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050” (CARB 2014). Those technologies include energy demand reduction through efficiency and activity

¹ Health & Safety Code Section 38561(h) requires CARB to update the Scoping Plan every 5 years.

changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the 2014 First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15.3% (instead of 28.5% or 16%) from the BAU conditions.

2017 Scoping Plan

In November 2017, CARB published California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), which was subsequently adopted by CARB's Board in December 2017 (CARB 2017a). The 2017 Scoping Plan identifies CARB's strategy for achieving the state's 2030 GHG target as established in SB 32 (discussed below). The strategy includes continuation of the Cap-and-Trade Program through 2030, and incorporates a Mobile Source Strategy that includes strategies targeted to increase zero emission vehicle (ZEV) fleet penetration and a more stringent target for the Low Carbon Fuel Standard by 2030. The 2017 Scoping Plan also incorporates approaches to cutting short-lived climate pollutants under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), and acknowledges the need for reducing emissions in agriculture and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon.

The 2017 Scoping Plan (CARB 2017a) states the following about project-level GHG emissions reduction actions and thresholds:

Project-Level Greenhouse Gas Emissions Reduction Actions and Thresholds

Beyond plan-level goals and actions, local governments can also support climate action when considering discretionary approvals and entitlements of individual projects through CEQA [California Environmental Quality Act]. Absent conformity with an adequate geographically-specific GHG reduction plan ..., CARB recommends that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development. ...

Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. ...

California's future climate strategy will require increased focus on integrated land use planning to support livable, transit-connected communities, and conservation and other lands. Accommodating population and economic growth through travel- and energy-efficient land use provides GHG-efficient growth, reducing GHGs from both transportation and building energy use. GHGs can be further reduced at the project level through implementing energy-efficient construction and travel demand management approaches.

Cap-and-Trade Program

California's Cap-and-Trade Program (17 CCR 95800–96022) regulates the emissions of large electric power plants, large industrial plants, and fuel distributors (including transportation fuel and natural gas). These sources are responsible for about 85% of the state's total GHG emissions inventory (CARB 2015). As described by CARB (CARB 2019a):

Cap-and-trade is a market based regulation that is designed to reduce [GHGs] from multiple sources. Cap-and-trade sets a firm limit or cap on GHGs and minimize[s] the compliance costs of achieving AB 32 goals. The cap will decline approximately 3% each year beginning in 2013. Trading creates incentives to reduce GHGs below allowable levels through investments in clean technologies. With a carbon market, a price on carbon is established for GHGs. Market forces spur technological innovation and investments in clean energy. Cap-and-trade is an environmentally effective and economically efficient response to climate change.

In the Cap-and-Trade Program, the state regulates the quantity of emissions by determining, in advance, how many allowances to issue—i.e., setting the “cap.” Each allowance is essentially a permit issued by the state authorizing a certain quantity of GHG emissions. There are only a finite number of allowances, ensuring that covered entities may only lawfully emit a certain quantity of GHGs. If a covered entity wishes to emit carbon, it must obtain allowances to authorize those emissions.

Importantly, the Cap-and-Trade Program has been designed to provide a firm cap, ensuring that the 2020 statewide emissions limit identified by CARB in the 2008 Scoping Plan will not be exceeded (CARB 2008). Thus, for the emission sources covered by the Program, which are nearly all of the sources associated with land use development projects, compliance with AB 32's 2020 mandate is assured by the Cap-and-Trade Program.

AB 398 (2017) extended the statutorily defined horizon year of the Cap-and-Trade Program to December 31, 2030, thereby facilitating continued reliance on the Cap-and-Trade Program for purposes of achieving SB 32's 2030 statewide reduction target.

Executive Order B-30-15

In April 2015, Governor Brown signed EO B-30-15, which established the following GHG emission reduction goal for California: by 2030, reduce GHG emissions to 40% below 1990 levels. This EO also directed all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing, long-term 2050 goal identified in EO S-3-05 (see discussion above). Additionally, the EO directed CARB to update its Scoping Plan (see discussion above) to address the 2030 goal.

Senate Bill 32 and Assembly Bill 197

Enacted in 2016, SB 32 (Pavley, 2016) codifies the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030.

SB 32 was coupled with a companion bill: AB 197 (Garcia, 2016). Designed to improve the transparency of CARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning statewide programs, policies, and investments related to climate change. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG

emissions when adopting rules and regulations designed to achieve GHG emission reductions; and, include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

Executive Order B-55-18

In September 2018, Governor Brown signed EO B-55-18, which established a new statewide goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” This EO directs CARB to “work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.”

In January 2019, CARB held a workshop regarding carbon neutrality in California, during which CARB staff explained that the definitional parameters and meaning of the term—carbon neutrality—are still being explored (CARB 2019b). CARB intends to hold additional workshops to explore specific topics related to the pursuit of carbon neutrality, engage with other experts in the field and stakeholders, and conduct research to ensure that any path to carbon neutrality balances scientific, economic and social justice principles.

Energy Sources

Renewables Portfolio Standard

As most recently amended by SB 100 (2018), California’s Renewables Portfolio Standard requires retail sellers of electric services and local publicly owned electric utilities to increase procurement from eligible renewable energy resources to 50% of total retail sales by 2026, and 60% of total retail sales by 2030. SB 100 also established a state policy goal to achieve 100% renewables by 2045.

Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations regulates the design of building shells and building components. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The CEC’s 2016 Building Energy Efficiency Standards (2016 Building Standards), which become on effective January 1, 2017, are the currently applicable version of these standards. In general, single-family homes built to the 2016 standards are anticipated to use about 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015). The CEC also has developed and adopted the 2019 Building Standards, which will go into effect on January 1, 2020. The 2019 Building Standards are expected to result in further energy savings and efficiencies, as compared to the 2016 standards.

In addition to the CEC’s efforts, in 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen Building Standard (CALGreen), and establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. Like Part 6 of Title 24, the CALGreen standards are periodically updated, with increasing energy savings and efficiencies associated with each code update.

Appliance Standards

The CEC periodically amends and enforces Appliance Efficiency Regulations contained in Title 20 of the California Code of Regulations. The regulations establish water and energy efficiency standards for both federally regulated appliances and non-federally regulated appliances. The regulations cover numerous categories of appliances (e.g., refrigerators; plumbing fixtures; dishwashers; clothes washer and dryers; televisions) and apply to appliances offered for sale in California (CEC 2019).

Mobile Sources

Sustainable Communities Strategy Plans

SB 375 (Steinberg, 2008), the Sustainable Communities and Climate Protection Act, coordinates land use planning, regional transportation plans, and funding priorities to reduce GHG emissions from passenger vehicles through better-integrated regional transportation, land use, and housing planning that provides easier access to jobs, services, public transit, and active transportation options. SB 375 specifically requires the Metropolitan Planning Organization (MPO) relevant to the project area (here, the San Diego Association of Governments [SANDAG]) to include a Sustainable Communities Strategy (SCS) in its Regional Transportation Plan (RTP) that, if implemented, will achieve GHG emission reduction targets set by CARB by reducing vehicle miles traveled (VMT) from light-duty vehicles through the development of more compact, complete, and efficient communities.

For the area under SANDAG's jurisdiction, including the project site, CARB originally adopted regional targets for reduction of mobile source-related GHG emissions of 7% for 2020 and 13% for 2035. The targets are expressed as a percentage change in per-capita passenger vehicle GHG emissions relative to 2005 emissions levels. These original targets were in place through September 30, 2018. In March 2018, CARB approved updated regional targets of 15% for 2020 and 19% for 2035 for SANDAG, which will apply to future RTP/SCS planning cycles beginning October 1, 2018.

Senate Bill 743

Public Resources Code Section 21099(c)(1), as codified through enactment of SB 743 (Steinberg, 2013), authorized the Office of Planning and Research (OPR) to establish “alternative metrics to the metrics used for traffic levels of service for transportation impacts outside transit priority areas.” SB 743 reflects a legislative policy to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions. As finalized in December 2018, amendments to the CEQA Guidelines adopted in furtherance of SB 743 establish VMT, in lieu of level of service, as the new metric for transportation analysis.

Pavley Regulations

AB 1493 (Pavley, 2002) required CARB to adopt regulations to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks for model years 2009–2016. CARB obtained a waiver from the EPA that allows for implementation of these regulations notwithstanding possible federal pre-emption concerns.

Low Carbon Fuel Standard

EO S-1-07, as issued by Governor Schwarzenegger, called for a 10% or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB by 2020.² In response, CARB approved the Low Carbon Fuel Standard (LCFS) regulations in 2009, which became fully effective in April 2010. Thereafter, a lawsuit was filed challenging CARB's adoption of the regulations; and in 2013, a court order was issued compelling CARB to remedy substantive and procedural defects of the LCFS adoption process under CEQA (*POET, LLC v. CARB* [2013] 217 Cal.App.4th 1214). However, the court allowed implementation of the LCFS to continue pending correction of the identified defects. In September 2015, CARB re-adopted the LCFS regulations. The LCFS would reduce GHG emissions by reducing the carbon intensity of transportation fuels used in California by at least 10% by 2020 and, as most recently amended in 2018, by at least 20% by 2030.

Advanced Clean Cars Program

In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for noncommercial passenger vehicles and light-duty truck for model years 2017–2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZEVs. By 2025, when the rules will be fully implemented, new automobiles will emit 34% fewer global warming gases and 75% fewer smog-forming emissions. Relatedly, in its 2014 First Update, CARB recognized that the light-duty vehicle fleet “will need to become largely electrified by 2050 in order to meet California’s emission reduction goals” (CARB 2014). Accordingly, this program requires about 15% of new cars sold in California in 2025 to be a plug-in hybrid, battery electric, or fuel cell vehicle (CARB 2014).

Zero Emission Vehicles

(ZEVs include hydrogen fuel cell electric vehicles (EVs) and plug-in EVs, such as battery EVs and plug-in hybrid EVs.

In 2012, Governor Brown issued EO B-16-2012, which calls for the increased penetration of ZEVs into California’s vehicle fleet in order to help California achieve a reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of that statewide target for the transportation sector, the EO also calls upon CARB, the CEC, and the California Public Utilities Commission to establish benchmarks that will: (1) allow over 1.5 million ZEVs to be on California roadways by 2025, and (2) provide the state’s residents with easy access to ZEV infrastructure. EO B-16-2012 specifically directed California to “encourage the development and success of zero-emission vehicles to protect the environment, stimulate economic growth, and improve the quality of life in the State.”

In 2018, Governor Brown also issued EO B-48-18, which launched an 8-year initiative to accelerate the sales of ZEVs through a mix of rebate programs and infrastructure improvements. The EO also sets a new target of five million ZEVs in California by 2030, and includes funding for multiple state agencies to increase EV charging infrastructure and provide purchase rebates/incentives.

In furtherance of the state’s ZEV penetration goals, in February 2013, the Governor’s Interagency Working Group on Zero-emission Vehicles issued the 2013 ZEV Action Plan: A roadmap toward 1.5 million zero-emission vehicles on California roadways by 2025 (Governor’s Interagency Working Group 2013). The 2013 ZEV Action Plan identifies four broad goals for state government to advance ZEVs: (1) complete needed infrastructure and planning, (2) expand consumer awareness and demand, (3) Transform fleets, and (4) grow jobs and investment in the private

² Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the “lifecycle” of a transportation fuel.

sector. As part of these goals, some highlighted strategies and actions include: (1) supporting ZEV infrastructure planning and investment by private entities, (2) enabling universal access to ZEV infrastructure for California drivers, (3) reducing upfront purchase costs for ZEVs, (4) promoting consumer awareness of ZEVs, and (5) helping to expand ZEVs in bus fleets. The Action Plan discusses the challenges of ZEV expansion, which include the need to enable EV chargers in homes, increase consumer awareness, address up-front costs and operational limitations, and address that ZEVs are not commercially available for all categories of vehicles.

In October 2016, the Governor's Interagency Working Group on Zero-emission Vehicles issued the 2016 ZEV Action Plan: A roadmap toward 1.5 million zero-emission vehicles on California roadways by 2025 (Governor's Interagency Working Group 2016). This report provides an update on progress toward achieving the 2013 goals and highlights the following four top priorities for the upcoming years: (1) raise consumer awareness and education about ZEVs; (2) ensure ZEVs are accessible to a broad range of Californians; (3) Make ZEV technologies commercially viable in targeted applications in the medium-duty, heavy-duty, and freight sectors; and (4) aid ZEV market growth beyond California. The broad goals to advance ZEV adoption are: (1) achieve mainstream consumer awareness of ZEV options and benefits, (2) make ZEVs an affordable and attractive option for drivers, (3) ensure convenient charging and fueling infrastructure for greatly expanded use of ZEVs, (4) maximize economic and job opportunities from ZEV technologies, (5) bolster ZEV market growth outside of California, and (6) lead by example by integrating ZEVs into state government. The goals and strategies proposed in the 2013 Action Plan will continue to be implemented; however, additional strategies are proposed to help achieve the new goals, including setting targets to increase home charging stations in multi-unit dwellings and disadvantaged communities and for public transit and school bus electrification. The 2016 Action Plan describes challenges toward achieving the 2025 goal of 1.5 million ZEVs in California, such as that most consumers are still not aware of the benefits of passenger ZEVs and that over 1,000,000 charge points will be needed at homes, workplaces, and public locations but only 11,000 non-home charge points are installed as stated in the 2016 ZEV Action Plan.

In September 2018, the Governor's Interagency Working Group on Zero-Emission Vehicles published the 2018 ZEV Action Plan Priorities Update (Governor's Interagency Working Group 2018). This update is the result of Governor Brown's directive to update the 2016 Zero-Emission Vehicle Action Plan to help expand private investment in zero-emission vehicle infrastructure, particularly in low income and disadvantaged communities. The 2018 Priorities Update serves three fundamental purposes: (1) provide direction to state agencies on the most important actions to be executed in 2018 to enable progress toward the 2025 targets and 2030 Vision; (2) Give stakeholders transparency into the actions state agencies plan to take (or are taking) this year to further the ZEV market; and (3) Create a platform for stakeholder engagement, feedback, and collaboration. As of July 2018, over 410,000 ZEVs have been sold in California, which is approximately 150,000 additional ZEVs since the publication of the 2016 Action Plan in October 2016.

California is incentivizing the purchase of ZEVs through implementation of the Clean Vehicle Rebate Project, which is administered by the Center for Sustainable Energy, a nonprofit organization, for CARB and currently subsidizes the purchase of passenger near-zero emission vehicles and ZEVs as follows:

- Hydrogen Fuel Cell Electric Vehicles: \$5,000
- Battery Electric Vehicles: \$2,500
- Plug-In Hybrid Electric Vehicles: \$1,500
- Neighborhood Electric Vehicles and Zero Emission Motorcycles: \$900

In March 2017, CARB also received Volkswagen's (VW's) first 30-month ZEV Investment Plan (Plan; Volkswagen 2017). This Plan is required by California's partial settlement with VW resulting from VW's use of illegal devices in its 2.0-liter (2.0L) diesel cars sold in the state from model years 2009 to 2015. The Plan describes how VW is proposing to spend the first \$200 million in California on ZEV charging infrastructure (including the development and maintenance of ZEV charging stations), public awareness, increasing ZEV access, and a green city demonstration. In June 2017, Electrify America (a subsidiary of VW) provided CARB with additional information on the Plan (Electrify America 2017). CARB approved the first of the four plans in July 2017 (CARB 2017b).

Other statewide and regional initiatives that spur ZEV uptake include the following:

- CARB provides access to high-occupancy vehicle (HOV) lanes to ZEV drivers.
- The CALGreen standards require new residential and nonresidential construction to be pre-wired to facilitate the future installation and use of EV chargers (see Section 4.106.4 and Section 5.106.5.3 of 2016 CALGreen standards for the residential and nonresidential pre-wiring requirements, respectively).

In January 2017, three of California's largest utilities submitted proposals to the California Public Utilities Commission to electrify the state's transportation sector through more than \$1 billion in investments. Of relevance to the project vicinity, San Diego Gas & Electric (SDG&E) submitted an application to install tens of thousands of charging stations in its service area to boost the transition to ZEVs, trucks, shuttles and delivery fleets (SDG&E 2017).

Finally, as part of San Diego Forward: The Regional Plan, SANDAG also is focused on increasing the number of EV charging stations. In many instances, the additional chargers would create the opportunity to increase the electric range of plug-in EVs, thereby reducing VMT that produce tail-pipe emissions (SANDAG 2015). In 2014, SANDAG completed a regional readiness plan for plug-in EVs and charging stations. In February 2016, an expanded plan that addressed readiness for electricity alongside all alternative fuels, the San Diego Regional Alternative Fuel Readiness Plan, was completed. This plan highlighted barriers to alternative fuel development and recommendations for the future. SDG&E also established the Electric Vehicle Grid Integration Pilot Program (Power Your Drive Program) as a pilot program in January 2016 after approval by the CPUC. This Program was designed to increase adoption of EVs and integrates EV charging through an hourly rate. The program has a goal of installing up to 3,500 EV charging stations at apartments, condominiums, and places of work. The most recent report on the program's progress notes that 238 customers have signed Site Agreements equating to more than 2,746 charging ports (SDG&E 2019).

Water

In January 2014, Governor Brown signed EO B-29-15, which directed the State Water Resources Control Board to impose restrictions to reduce residential potable urban water usage; to implement water efficiency measures at commercial, industrial, and institutional properties; and to prohibit irrigation with potable water for certain uses. In addition, this directed the California Department of Water Resources to lead a statewide initiative to replace lawns and ornamental turfs with drought-tolerant landscapes.

Pursuant to the EO B-29-15, water-related standards were adopted as amendments to the 2013 CALGreen Code and carried over into the 2016 code.

Solid Waste Diversion

The California Integrated Waste Management Act of 1989, as modified by AB 341 (Chesbro, 2011), requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25% of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; (2) diversion of 50% of all solid waste on and after January 1, 2000; and (3) source reduction, recycling, and composting of 75% of all solid waste on or after 2020, and annually thereafter. The California Department of Resources Recycling and Recovery (CalRecycle) is required to develop strategies, including source reduction, recycling, and composting activities, to achieve the 2020 goal.

CalRecycle published a discussion document, entitled California's New Goal: 75 Percent Recycling, which identified concepts that would assist the state in reaching the 75% goal by 2020. Subsequently, in August 2015, CalRecycle released the AB 341 Report to the Legislature, which identifies five priority strategies for achievement of the 75% goal: (1) moving organics out of landfills, (2) expanding recycling/manufacturing infrastructure, (3) exploring new approaches for state and local funding of sustainable waste management programs, (4) promoting state procurement of post-consumer recycled content products, and (5) promoting extended producer responsibility (CalRecycle 2015).

Local

As a state agency, California State University (CSU)/SDSU is not subject to local land use regulatory/planning documents, ordinances, regulations, policies, rules, fees, or exactions such as those described herein. However, CSU is willing to purchase the project site pursuant to the framework set forth in San Diego Municipal Code Section 22.0908, in order to implement the overriding purpose of the proposed project. In addition, CSU will evaluate the proposed project's consistency with adopted, applicable state and federal regulatory/planning documents; and, though not required by law, CSU also will consider the proposed project's consistency with adopted, applicable local regulatory/planning documents.

SANDAG's Regional Transportation Plan/Sustainable Communities Strategy

As previously discussed, SB 375 requires SANDAG to incorporate a SCS into its RTP that achieves the GHG emission reduction targets set by CARB. SANDAG's SCS was first included in the 2050 RTP/SCS, which was adopted by SANDAG in October 2011. The original plan has since been superseded by the RTP/SCS adopted by SANDAG's Board in 2015, San Diego Forward: The Regional Plan.

In general, the goals and policies of the SCS that reduce VMT (and result in corresponding GHG emission reductions) focus on transportation and land use planning that include locating residents closer to where they work and play, and designing communities so there is access to high-quality transit service and nonvehicular modes of transportation. The SCS adopted by SANDAG is expected to reduce per-capita transportation emissions by 15% by 2020 and by 21% by 2035, as compared to 2005 baseline levels.

In December 2015, CARB accepted SANDAG's determination that the SCS would meet the region's GHG reduction targets per Government Code Section 65080(b)(2)(J)(ii), as memorialized in CARB's EO G-15-075.

Pursuant to Government Code Section 65080(b)(2)(K), an ACA does not (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it.

San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The project area is located within the San Diego Air Basin and is subject to the San Diego Air Pollution Control District (SDAPCD) guidelines and regulations. The SDAPCD has not adopted rules focused on GHGs or emission-based thresholds for GHG under CEQA.

City of San Diego General Plan

Table CE-1, Issues Related to Climate Change Addressed in the General Plan, which is included in the Conservation Element of the City of San Diego's General Plan, identifies multiple City policies that address the reduction of GHG emissions, as well as climate change adaptation (City of San Diego 2008). Concepts identified in Table CE-1 of the City's General Plan include, but are not limited to, its overall City of Villages Strategy; creating walkable communities that utilize transit, bicycling and transportation demand management (TDM); the use of sustainable energy resources; and water resource and waste management.

City of San Diego Climate Action Plan

On January 29, 2002, the San Diego City Council unanimously approved the San Diego Sustainable Community Program. Actions identified include:

1. Participation in the Cities for Climate Protection program coordinated through the International Council of Local Environmental Initiatives;
2. Establishment of a 15% GHG reduction goal set for 2010, using 1990 as a baseline; and
3. Direction to use the recommendations of a scientific Ad Hoc Advisory Committee as a means to improve the GHG Emission Reduction Action Plan within the City organization and to identify additional community actions.

In 2005, the City released a Climate Protection Action Plan. In December 2015, the City adopted its final CAP (City of San Diego 2015). With implementation of the CAP, the City aims to reduce emissions 15% below the baseline to approximately 11.1 MMT CO₂e by 2020, 40% below the baseline to approximately 7.8 MMT CO₂e by 2030, and 50% below the baseline to approximately 6.5 MMT CO₂e by 2035. It is anticipated that the City would exceed its reduction target by 1.3 MMT CO₂e in 2020, 176,528 MT CO₂e in 2030, and 127,135 MT CO₂e in 2035 with implementation of the CAP.

As provided in CEQA Guidelines Section 15183.5, a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the proposed project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances. The CAP meets the requirements set forth in CEQA Guidelines Section 15183.5, whereby a lead agency (e.g., the City of San Diego) may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, a long-range development plan, or a separate plan to reduce GHG emissions. The CAP quantifies existing GHG emissions as well as projected emissions for the years 2020, 2030, and 2035 resulting from activities within the City's jurisdiction. The CAP also identifies City target emissions levels, below which the citywide GHG impacts would be less than significant. The CAP and its accompanying certified Final Environmental Impact Report also identify and analyze the GHG emissions that would result from the BAU scenario for the years 2020, 2030, and 2035. The CAP includes a monitoring and reporting program to ensure its progress toward achieving the specified GHG

emissions reductions, and specifies 17 actions that, if implemented, would achieve the specified GHG emissions reductions targets. The CAP was adopted in a public process following certification of the Final Environmental Impact Report. Subsequent to the adoption of the CAP, the City has also established additional specific measures that if implemented on a project-by-project basis, would further ensure that the City as a whole achieves the specified GHG emissions reduction targets in the CAP (City of San Diego 2016).

On July 12, 2016, the City amended the CAP to include a Consistency Review Checklist, which is intended to provide a streamlined review process for the GHG emissions analysis of proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

- Under the City's CAP framework, the CAP Consistency Review Checklist is used to evaluate a project's consistency with the City's goals for the reduction of GHG emissions (City of San Diego 2015, 2017). The CAP Checklist identifies pertinent strategies from the CAP that need to be assessed and considered at the project level, as enumerated below.
- Strategy 1: Energy and Water Efficient Buildings
 - Cool/Green Roofs
 - Plumbing Fixtures and Fittings
- Strategy 3: Bicycling, Walking, Transit & Land Use
 - Electric Vehicle Charging
 - Bicycle Parking Spaces
 - Shower Facilities
 - Designated Parking Spaces
 - Transportation Demand Management Program

It is noted that SDSU also has a CAP, which was prepared by the university's Climate Action Planning Council and describes the university's commitment to achieving specified GHG reductions [SDSU 2017]. It contains goals and actions in various emission sectors; however, SDSU's CAP was developed for and is focused on issues specific to the already built-out SDSU main campus located in the College area. SDSU's CAP is not an applicable document for purposes of the proposed project, which proposes the establishment of an SDSU Mission Valley campus. The SDSU Mission Valley Campus Master Plan Design Guidelines are being prepared in order to ensure that SDSU's leadership on sustainability and stewardship issues is carried forward to the proposed project.

Mission Valley Community Plan

The Mission Valley Community Plan (MVCP) is intended to be a blueprint for future development in Mission Valley, where the proposed project is located. The Final Draft of the draft MVCP Update was released on May 31, 2019 (City of San Diego 2019a). The MVCP contains Design Guidelines and Policies for Development to implement the City's CAP, maximize transit ridership, and increase mobility options, among others.

City of San Diego Green Building Regulations

In response to CALGreen, the City of San Diego adopted its Green Building Regulations (Municipal Code Chapter 14, Article 10), which adopt and incorporate by reference specified provisions of the 2016 CALGreen Code.

Other CEQA Guidance

CEQA & Climate Change White Paper

In January 2008, the California Air Pollution Control Officers Association (CAPCOA) published its CEQA & Climate Change white paper.³ In the white paper, CAPCOA surveyed three options available to CEQA lead agencies for purposes of evaluating the significance of a project's GHG emissions, including identifying no significance thresholds for GHG emissions, setting a zero-emissions threshold, or setting a non-zero-emissions threshold. As to the non-zero thresholds, CAPCOA's white paper considered two approaches: one grounded in statute and executive order with four possible options, and one grounded in a tiered framework. As for the approach grounded in statute and executive order, CAPCOA identified four threshold concepts:

- Threshold 1.1: AB 32/S-3-05 Derived Uniform Percentage-Based Reduction
- Threshold 1.2: Uniform Percentage-Based (e.g., 50%) Reduction for New Development
- Threshold 1.3: Uniform Percentage-Based Reduction by Economic Sector
- Threshold 1.4: Uniform Percentage-Based Reduction by Region

For purposes of the tiered framework approach, a project's GHG emissions would result in a less-than-significant impact provided one of the following criteria were achieved: (1) compliance with a general or regional plan in alignment with AB 32, (2) application of a CEQA exemption, (3) inclusion on the "green list," (4) consistency with a qualified GHG reduction strategy, or (5) demonstration that quantified GHG emissions are less than significant. Tables 4 and 5 of the white paper identified advantages and disadvantages associated with all of the options presented for consideration (CAPCOA 2008).

CAPCOA 2010 Quantifying Greenhouse Gas Mitigation Measures

In August 2010, CAPCOA published its Quantifying Greenhouse Gas Mitigation Measures report, which presents information and analysis regarding the quantification of project-level mitigation of GHG emissions associated with land use, transportation, energy use, and other related project areas. CAPCOA and its contractors conducted an extensive literature review in order to provide reliable and substantiated evidentiary bases for the quantification protocols presented in the report; as such, individual GHG reduction measures are accompanied by "fact sheets" that set forth the relevant parameters for the quantification calculations (CAPCOA 2010).

Association of Environmental Professionals

Beyond 2020 White Paper

In March 2015, the Association of Environmental Professionals (AEP) released its draft Beyond 2020: The Challenge of Greenhouse Gas Reduction Planning by Local Governments in California (Beyond 2020) white paper.⁴ In the white paper, AEP presented evidence showing that it is infeasible for a local jurisdiction to achieve EO S-3-05's 2050 reduction target (i.e., 80% below 1990 levels) absent a real post-2020 state plan of action. As such, AEP recommended assessing project significance in relation to the 2050 reduction target by asking whether a project

³ CAPCOA is a non-profit association of the air pollution control officers from all 35 local air quality agencies throughout California.

⁴ AEP is a non-profit association of public and private sector professionals with a common interest in serving the principles underlying CEQA.

would “impede substantial progress in local, regional, and state GHG emissions reductions over time toward long-term GHG reduction targets” (AEP 2015).

Beyond 2020 and Newhall White Paper

In April 2016, AEP released its draft *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California* (Beyond 2020 and Newhall) white paper. In the white paper, AEP surveyed the following significance threshold concepts for utilization in CEQA-oriented GHG emissions analysis, consistency with qualified GHG reduction plans, bright line values, efficiency metrics, hybrid metrics that separate transportation and non-transportation emissions, best management practices, regulatory compliance, and percent reductions from BAU. In doing so, AEP identified the present circumstances as a “transitional period” due to the absence of comprehensive state planning for post-2020, non-legislatively adopted, statewide targets.

4.7.3 Significance Criteria

CEQA Guidelines on GHG Emissions

In 2007, SB 97 was enacted and directed OPR and the California Natural Resources Agency to prepare amendments to the CEQA Guidelines addressing the analysis of GHG emissions under CEQA. Following formal rulemaking, a series of amendments to the CEQA Guidelines were adopted to provide the general framework for the analysis of GHG emissions, and became effective in 2010. The amendments do not provide a mandatory, quantitative rubric for GHG emissions analysis, but instead provide general guidance and recognize long-standing CEQA principles regarding the discretion afforded to lead agencies where supported by substantial evidence. More specifically, CEQA Guidelines Section 15064.4(a) recognizes that the “determination of the significance” of GHG emissions “calls for careful judgment by the lead agency” in accordance with the more general provisions of CEQA Guidelines Section 15064; each agency “shall have discretion to determine” whether to conduct quantitative or qualitative analysis, provided its determination is supported by substantial evidence. Section 15064.4 was most recently amended by OPR and the California Natural Resources Agency in December 2018.

The analysis provided in this report evaluates the significance of the proposed project’s GHG emissions by reference to the following questions from Section VIII, Greenhouse Gases, of Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to GHG emissions would occur if the project would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Other Guidance

Neither the SDAPCD nor the City of San Diego has adopted numeric emission-based thresholds for GHG emissions under CEQA. The City’s CEQA Significance Determination Thresholds (July 2016) state that project-level significance is determined through the CAP Checklist, as discussed above (City of San Diego 2016). OPR’s CEQA and Climate Change Advisory discussion draft, published in December 2018, describes the latest updates to the CEQA Guidelines finalized in December 2018 (OPR 2018). This draft discusses the discretion of selecting and developing appropriate thresholds of significance to analyze a project’s environmental impacts. Among these thresholds is consistency with relevant regulations, plans, policies, and regulatory programs. The City of San Diego’s CAP

Checklist is a forward-looking document, including strategies to reduce GHG emissions to achieve the 2020 and 2035 targets, and maintain a trajectory to meet its proportional share of the 2050 state target identified in EO S-3-05. As such, consideration of the CAP Checklist below is consistent with the City's CEQA Significance Determination Thresholds and OPR's discussion draft document.

Project Approach to Significance

This EIR, relative to Threshold 1, quantifies the proposed project's GHG emissions during operation and construction. This EIR, relative to Threshold 2, evaluates the proposed project for consistency with applicable plans related to GHG emissions, including the CAP Checklist as stated in the City's CEQA Significance Determination Thresholds.

4.7.4 Impacts Analysis

Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The project design includes a number of project design features (PDFs) that are intended to move the proposed project "beyond code." Many of these PDFs are consistent with the City of San Diego CAP and its implementing CAP Consistency Checklist, as well as the City's draft MVCP.

Project Design Features with Quantified Reductions

A subset of the PDFs has been quantitatively accounted for in this analysis. The four PDFs that have been quantified are: solar photovoltaic (PV) panels, EV-ready and EV chargers, TDM Program, and residential hearths.

Solar Photovoltaic Panels

The proposed project is incorporating solar PV panels on available roof space; these panels are estimated to have a total generation capacity equivalent to 10,819,478 kilowatt-hour of electricity, or 14.9% of the proposed project's total project electricity demand.

Electric Vehicle-Ready Parking and Electric Vehicle Chargers

The proposed project is equipping 3% of total residential parking spaces and 6% of total nonresidential parking spaces with appropriate electric supply equipment to allow for the future installation of EV chargers (i.e., "EV ready"). Of these EV-ready spaces, 50% will be equipped with EV charging stations. Based on these parameters, in total, approximately 500 parking spaces on the project site will be designated as "EV ready," and 252 of the "EV ready" spaces will be equipped with operable EV charging stations.

Transportation Demand Management Program

The proposed project's TDM Program, as more fully described in Section 4.15, Transportation, incentivizes alternative transportation besides single-occupant commuter trips. Strategies contained in the TDM Program for the campus office, residential, and retail uses relate to:

- Land Use Diversity
- Neighborhood Site Enhancement
 - New Bicycle Facilities
 - Dedicated Land for Bicycle/Multi-Use Trails
 - Bicycle Parking
 - Showers and Lockers in Employment Areas
 - Increased Intersection Density
 - Traffic Calming
 - Car Share Service Accommodations
 - Enhanced Pedestrian Network
- Parking Policy and Pricing
 - Unbundled Residential Parking
 - Metered On-Street Parking
 - Reduced Parking Supply
- Commute Trip Reduction Services
 - TDM Program Coordinator and Marketing
 - Electric Bike-Share Accommodations
 - Ridesharing Support
 - School Pool
 - Hotel Shuttle Service

The TDM Program's strategies are expected to reduce VMT by 14.41%. Details of the reductions are include in Fehr & Peer's Transportation Impact Analysis (2019) for the proposed project in Appendix 4.15-1. (TDM Program strategies also have been developed for the proposed project's Stadium land use, but conservatively have not been assigned a quantitative reduction value for reasons described in Appendix 4.15-1.)

Residential Hearths

The proposed project is incorporating a limited number of natural gas fireplaces, and no wood-burning fireplaces, within project residences. Of all residential units in the proposed project, up to 5% of the units may include a natural gas fireplace.

Project Design Features with Unquantified Reductions but Expected Benefits

Other PDFs with GHG reduction benefits that have not been quantified and only are considered qualitatively include:

- The layout of the proposed project's development areas has been designed to maximize the unique infill opportunity presented at this Mission Valley location. This includes benefits from the existing MTS Trolley Green Line that runs through the proposed project, as well as the planned Purple Line transit line and trolley station.
- The SDSU Mission Valley campus locates buildings in close proximity to one another, which would facilitate the use of common heating/cooling sources, where feasible, as project-level development proceeds. (The use of common heating/cooling sources will be evaluated as the building plans for individual development parcels are developed; relevant factors that will influence the use of such sources include the temporal proximity of development, type of use, and market forces.)
- Project development areas would maximize natural ventilation.
- The proposed project would include adaptive lighting controls, where appropriate and feasible, in order to maximize energy efficiency and minimize light pollution.
- The proposed project would achieve Leadership in Energy and Environmental Design (LEED) Version 4 at a Silver or better certification level, as well as a Neighborhood Development designation for sitewide design. LEED certification is based on standards that encourage the development of energy-efficient and sustainable buildings.
- Events at the proposed project's multipurpose Stadium would benefit from implementation of TDM Program strategies specifically developed for application to Stadium-related events. These strategies focus on the use of alternative modes of transportation, including transit, to reduce single-occupancy vehicle usage and parking demand on event days

It also is noted that, in 2014, the CSU Board of Trustees adopted its Sustainability Policy (CSU 2014). To the extent applicable, project-related development will comply with the principles and goals set forth in the California State University Sustainability Policy.

Construction and Vegetation Change Emissions

One-time emissions are those emissions that are not reoccurring over the life of the proposed project. This includes emissions associated with construction and emissions associated with land use changes.

Construction Emissions

CalEEMod version 2016.3.2 was used to quantify the construction emissions.

The major construction phases included in this analysis are:

- Demolition: involves tearing down of buildings or structures.
- Grading: involves the cut and fill of land to ensure the proper base and slope for the construction foundation.
- Paving: involves the laying of concrete or asphalt such as in parking lots or roads.
- Building Construction: involves the construction of structures and buildings.
- Architectural Coating: involves the application of coatings to both the interior and exterior of buildings or structures.
- Off-site Improvements: involves the construction of off-site improvements.

Construction generates on-road vehicle GHG emissions from personal vehicles for worker and vendor commuting, and trucks for soil and material hauling. These emissions are based on the number of trips and VMT, along with emission factors from EMFAC2014. Construction of the project would generate 114,680 total hauling trips during the grading and demolition phases. Based on the material imported, the analysis assumes that there will be 11,250 total hauling one-way trips during the first grading period, 28,125 hauling one-way trips during the second grading period, and 12,500 hauling one-way trips during the third grading period. In addition, there will be 5,186 hauling trips during each demolition phase of the SDCCU Stadium.

GHG emissions resulting from off-road equipment are summarized in Table 4.7-1, Annual GHG Construction Emissions from Off-Road Equipment. GHG emissions resulting from on-road equipment are summarized in Table 4.7-2, Annual GHG Construction Emissions from On-Road Equipment. GHG emission resulting from construction are summarized in Table 4.7-3, Summary of Construction Emissions, below. Total GHG emissions from all phases for off-road and on-road emissions are 23,997 and 8,306 MT CO₂e, respectively. Total GHG emissions from all construction activities are 32,303 MT CO₂e. When amortized over a 30-year project lifetime, the construction GHG emissions are 1,077 MT CO₂e/year.⁵

Table 4.7-1. Annual GHG Construction Emissions from Off-Road Equipment

Year	MT CO ₂ e Emissions ^{1, 2}
2020	2,055
2021	2,795
2022	7,111
2023	877
2024	910
2025	1,156
2026	942
2027	764
2028	845
2029	1,338
2030	1,401
2031	1,181
2032	650
2033	616
2034	550
2035	493
2036	247
2037	66
Total	23,997

Notes: MT CO₂e = metric tons carbon dioxide equivalent.

¹ Emissions shown here are based on project-specific construction schedule. CalEEMod defaults were used for the on-site construction equipment list, including equipment horsepower and load factors. Emissions are calculated using CalEEMod.

² CO₂e includes CO₂, CH₄, and N₂O emissions, weighted by their respective GWPs.

⁵ This approach to one-time construction and vegetation change GHG emissions is based on the GHG Threshold Working Group Meeting #13 Minutes from August 26, 2009 (SCAQMD 2009).

Table 4.7-2. Annual GHG Construction Emissions from On-Road Equipment

Year	MT CO ₂ e Emissions ^{1, 2}			
	Hauling	Vendor	Worker	Total
2020	1,872	279	183	2,334
2021	1,594	361	297	2,252
2022	922	104	169	1,196
2023	0	37	90	127
2024	0	109	115	224
2025	0	189	155	344
2026	0	188	143	330
2027	0	140	105	245
2028	0	51	59	110
2029	0	102	97	199
2030	0	102	82	183
2031	0	76	64	140
2032	0	51	55	107
2033	0	101	84	185
2034	0	101	75	176
2035	0	76	58	134
2036	0	0	11	11
2037	0	0	7	7
Total	4,388	2,068	1,850	8,306

Notes: MT CO₂e = metric tons carbon dioxide equivalent.

¹ Emissions shown here are based on Project-specific construction schedule and amount of imported material. CalEEMod defaults were used for on-road vehicle trips. Emissions were calculated using CalEEMod. Refer to Appendix B of Appendix 4.7-1 for detailed CalEEMod outputs.

² CO₂e includes CO₂, CH₄, and N₂O emissions, weighted by their respective GWPs

Table 4.7-3. Summary of Construction Emissions (Without Project Design Features)

Construction Source	MT CO ₂ e Emissions ¹
Off-Road Equipment	23,997
On-Road Vehicles	8,306
Total	32,303
30-year Amortized²	1,077

Notes: MT CO₂e = metric tons carbon dioxide equivalent.

¹ Emissions calculated using CalEEMod. See Tables 4.7-1a and 4.7-1b for detailed emissions inventories

² One-time emissions from construction were amortized over a 30-year period.

This analysis assumes that implosion would be used for Stadium demolition. If implosion is not used, some additional pieces of construction equipment would be required during the demolition phase. However, total GHG emissions from all construction equipment over the entire construction period (2020-2037) is expected to be similar to those presented in Table 4.7-3.

Vegetation Changes

CalEEMod was used to calculate GHG emissions associated with the vegetation activities of land use change and the planting of new trees, as according to the IPCC protocol for vegetation. Conservatively, there is no reduction in GHG

emissions associated with preservation of a land use. The vegetation changes (additional open space and new trees) result in a net gain in carbon sequestration. GHG emissions resulting from vegetation change is summarized in Table 4.7-4, below.

Table 4.7-4. Summary of Vegetation Change Evaluation

Type of Vegetation Change	Initial Vegetation	Final Vegetation	CO ₂ e Emissions
	(acres)	(acres)	(MT)
Grassland	0.0	83.6	-360
Scrub	0.39	0	6
Total Vegetation Change	0.39	83.6	-355
CO ₂ e Sequestered from Net New Trees ¹			-436
CO ₂ e Emissions from Vegetation Change and Net New Trees			-791
30-Year Amortized CO ₂ e Emissions from Vegetation Change and Net New Trees (/year)			-26

Notes: CO₂e = carbon dioxide equivalent; MT = metric tons.

¹ A negative number indicates an increase in carbon sequestration.

Operational Emissions

The operational emissions were modeled in CalEEMod for calendar year 2035. Year 2035 was selected in CalEEMod based on the proposed project's expected operational buildout year of 2037 and model limitation to year 2035. Because California has adopted regulatory measures for GHG emissions that take effect by 2030, some aspects of the project GHG emissions inventory are based on these adopted 2030 regulatory measures (e.g., Renewables Portfolio Standard). Other aspects of the GHG inventory, such as the EMFAC2014 emissions factors for mobile sources, are more representative of project conditions at full buildout. Utilization of year 2035 is conservative and not expected to under-estimate the proposed project's GHG emissions.

Operation of the proposed project would generate GHG emissions through motor vehicle traveling to and from the project site; stationary sources (i.e., emergency diesel generators); landscape maintenance equipment operation; energy use (natural gas and generation of electricity consumed by the proposed project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. Sections 4 and 5 of EIR Appendix 4.7-1 contain a detailed description of the methodological parameters used to estimate GHG emissions from these project-related activities; a brief summary of some key parameters is provided below:

- Area source GHG emissions included in this analysis result from landscaping-related fuel combustion sources, such as lawn mowers, and fireplaces. Emissions from fireplaces are calculated assuming that 5% of dwelling units have natural gas fireplaces and that there are no wood-burning fireplaces or woodstoves, consistent with the project design.
- At a minimum, the proposed project's residential and nonresidential campus land uses shall accord to the 2016 Building Energy Efficiency Standards, as that code cycle became effective on January 1, 2017.
- The energy usage for the proposed Stadium is based on energy data from the SDCCU Stadium. The SDCCU Stadium energy rates were normalized by attendance levels to develop the existing SDCCU Stadium and project Stadium energy use rates.
- The mobile source emissions were calculated using trip rates and trip length information developed by Fehr & Peers for the proposed project's Transportation Impact Analysis (2019), provided in Appendix 4.15-1.
- The water-related emissions analysis account for the CALGreen standards, which require a 20% reduction in indoor potable water use through the use of water saving fixtures and/or flow restrictors (CBSC 2010).

Recycled water also will be used to satisfy a portion of the outdoor, irrigation-related water demand, consistent with the State Water Resources Control Board's recycled water policy (SWRCB 2013).

- Waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting to meet the statewide goal of 75% waste diversion (CalRecycle 2013).
- Emissions from the emergency generator for the proposed Stadium are calculated assuming the generator is diesel powered and is operated 1 hour per week for maintenance and/or required emergency power.

The PDFs described above would result in a reduction of GHGs. With these PDFs, the proposed project emits 68,742 MT CO₂e per year, as shown in Table 4.7-5 below. While the proposed project, even with these PDFs, results in an obvious change to the existing environment by increasing existing GHG emission levels, there is no scientific or regulatory consensus regarding what particular quantity of GHG emissions is significant. Further, no agency with regulatory authority and expertise, such as CARB or the SDAPCD, has adopted numeric GHG thresholds for land use development projects for purposes of CEQA. As such, this numeric increase—on its own—does not indicate that the proposed project's GHG emissions would significantly impact the environment.

Table 4.7-5. Summary of Greenhouse Gas Emissions (With Project Design Features)

Emissions Summary ¹	Existing GHG Emissions ²	Project GHG Emissions ^{2,3}
	(MT CO ₂ e/year)	(MT CO ₂ e/year)
Area Sources	0	240
Energy Usage	1,626	17,528
<i>Solar PV</i>	--	-1,793
Water	42	2,772
Waste Disposed	587	2,253
Traffic	1,946	54,496
<i>EV Charging</i>	--	-2,031
<i>TDM Program</i>	--	-5,812
Stationary	0.73	40
<i>Operational Sub-Total</i>	4,202	67,692
Construction Amortized ⁴	--	1,077
Vegetation ⁴	--	-26
Total⁵	4,202	68,742

Notes: GHG = greenhouse gas; MT CO₂e/year = metric tons of carbon dioxide equivalent per year; PV = photovoltaic; EV = electric vehicle; TDM = Transportation Demand Management; -- = not applicable.

¹ One-time emissions (i.e., construction) and operational emissions were calculated using CalEEMod for the buildout year.

² Emissions are presented as CO₂e, which include CO₂, CH₄, and N₂O emissions, weighted by their respective GWPs.

³ Emissions reductions associated with project design features are shown as negative values due to the decrease in emissions. The project design features related to residential hearths is accounted for in the "Area Sources" table row.

⁴ One-time emissions from construction and vegetation sequestration were amortized over a 30-year period.

⁵ Sum of annualized one-time emissions and operational emissions.

City of San Diego CAP

In order to evaluate the proposed project's potential to conflict with the CAP, reference was made to the City's CAP Consistency Checklist, the purpose of which is to "provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review" under CEQA (City of San Diego 2017). The CAP Checklist "contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. ... Projects that are

consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions.”

As shown in Appendix 4.7-2, City of San Diego CAP Evaluation Memo, the proposed project would be consistent with the CAP and, therefore, result in a less-than-significant impact as a result of its GHG emissions. More specifically, Step 1: Land Use Consistency, of the CAP Checklist assesses a project’s consistency with the growth projections used in the development of the CAP. Under Option B of Step 1, projects may be found to be in compliance with the CAP if they are located within a designated transit priority area (TPA) and implement strategies that would be consistent with the assumptions in the CAP (i.e., though not consistent with the underlying land use, these projects would be developed in TPAs and generally would be considered to implement strategies that reduce GHG emissions).

Relative to the proposed project, the project site is located within a TPA, as it is served by the Stadium Trolley Station on the Trolley Green Line (Figure 2-4 of Chapter 2), as well as the Fenton Parkway Trolley Station, and; therefore, the proposed project is required to comply with Step 2 and Step 3.

Step 2 of the CAP consistency review is to evaluate a project’s consistency with the applicable strategies and checklist items of the CAP. As further explained in Appendix 4.7-2, the proposed project would be consistent with the strategies under Step 2. For Strategy 1, Energy and Water Efficient Buildings, the proposed project would provide for cool and/or green roofs (Checklist Item 1) and would install low flow plumbing fixtures and appliances (Checklist Item 2). As to Strategy 3, the proposed project would designate approximately 500 parking spaces as “EV ready,” and 252 of the “EV ready” spaces would be equipped with operable EV charging stations (Checklist Item 3); would provide short and long-term bicycle parking spaces above those required in the Municipal Code (Checklist Item 4); would include shower/changing facilities consistent with the voluntary measures under the California Green Building Code (Checklist Item 5); would designate parking for low-emitting, fuel efficient, and carpool-vanpool vehicles (Checklist Item 6) and would include a TDM program (Checklist Item 7) as detailed in Section 4.15, Transportation.

Step 3 assesses whether a project is located in a TPA, and includes a land use plan and/or zoning designation amendment that is nevertheless consistent with the assumptions in the CAP because it would implement CAP Strategy 3 actions. The following Step 3 questions for the proposed project are answered below:

1. *Would the proposed project implement the General Plan’s City of Villages strategy in an identified TPA that will result in an increase in the capacity for transit-supportive residential and/or employment densities?*

Yes. The proposed project would implement the General Plan’s City of Villages strategy, which provides capacity for transit-supportive residential density within TPAs. As shown in Figure 4.7-1, Transit Priority Area Map the project site is within a TPA. The proposed project incorporates the MTS Trolley Green Line and existing Stadium Trolley Station, and reserves adequate right-of-way for the planned future MTS Trolley Purple Line. The Stadium Trolley Station is within 0.5 miles of all future residents and jobs within the project site.

The proposed project would accommodate an SDSU Mission Valley campus, including academic and administrative buildings and classrooms; technology, research and development and office space; complementary retail space to serve neighborhood residents, businesses, Stadium games, and events; hotels; faculty and staff housing; undergraduate and graduate student housing; apartment units available for the public; and other workforce, and affordable housing. The proposed project would provide recreational opportunities, employment centers, and a concentration of food and shopping opportunities describe in Chapter 2, Project Description. As a result, the estimated proposed project employment growth would be 5,866 estimated annual jobs and a maximum of 8,282 total estimated jobs (including part-time Stadium employment

and future faculty and staff jobs as explained in Section 4.13, Population and Housing). An approximate population of 8,510 represents the estimate of new residents as a result of the proposed project's residential campus component. The proposed project would include 4,600 dwelling units and would provide for 5,866 jobs, each of which is more than the existing commercial recreation and public recreation land uses anticipated in the CAP's underlying land use assumptions (i.e., the existing Mission Valley Community Plan). This would increase the capacity for transit-supportive residential and employment intensities within the TPA.

2. *Would the proposed project implement the General Plan's Mobility Element in TPAs to increase the use of transit?*

Yes. The project site would be accessible via Trolley via the MTS Trolley Green Line and Stadium Trolley Station on the south end of the project site. The Stadium Trolley Station is within 0.5 miles of all future residents and jobs within the project site. The proposed project would include trolley and public transit improvements, including an enhanced pedestrian connection to the existing Stadium Trolley Station, and accommodating the planned Trolley Purple Line and Transit Station. In addition, the proposed project anticipates future transit service and provides for bus services to the Stadium Trolley Station.

3. *Would the proposed project implement pedestrian improvements in TPAs to increase walking opportunities?*

Yes. The dense and extensive network of on-site pedestrian facilities would provide new connections parallel to the high-stress Friars Road environment that will enhance pedestrian accessibility adjacent to and within the site for area residents, employees, and visitors. The proposed project would include walking paths and biking paths connected to active and passive recreation opportunities and open space for use by the public, including enhanced pedestrian connections to the existing light rail transit center at the Stadium Trolley Station. Within the site itself, nearly all roadways will include a sidewalk or path on both sides of the street. For the few segments with a walking facility on only one side that will serve a pedestrian destination, appropriate street crossings treatments will be provided within a reasonable walking distance. These treatments include traffic signals, raised crosswalks, or stop signs to delineate right-of-way. Therefore, the proposed project would not result in a significant impact to pedestrian facilities.

Additionally, the proposed site connection to Fenton Parkway provides an additional walkable connection to the shops and restaurants at Fenton Marketplace, as well as the low-volume east-west connection provided by Rio San Diego Drive. The proposed connections will provide an improved pedestrian link between the existing neighborhoods along Rancho Mission Road and Fenton Marketplace area. This new connection will be a substantial improvement over the current walking path through the Friars Road/Interstate (I) 15 interchange.

4. *Would the proposed project implement the City of San Diego's Bicycle Master Plan to increase bicycling opportunities?*

Yes. The proposed project would not conflict with any existing or planned bicycle facilities, and it would substantially enhance bicycle travel adjacent to and through the site. The proposed project would include biking paths to facilitate the use of alternative mobility options. A new on-site path system along the northern and eastern edges of the site (connecting to San Diego and Rancho Mission Roads) will provide a safer and lower-stress option for cyclists traveling from west of Stadium Way to east of I-15. The proposed project also would include improvements along the San Diego River Park, which would include 8- to 10-foot-wide linear walking and biking trails. The proposed hike and bike trail would be located throughout the San Diego River Park. The trail would connect to the hike and bike loop, which provides access to the rest of the campus. The trail would complete the bikeway connection from Murphy Canyon to Fenton Parkway and connect to the east side of the

campus and throughout the campus. Buffered bike lanes would be constructed between Northside and Friars Road to increase the safety of bicyclists by adding a barrier between the car and bike lanes of travel.

The existing protected bike lanes on the Mission Village Drive overpass over Friars Road would be maintained with the proposed widening of the overpass, and they would connect to bike lanes on Street 'D' through the center of the site. A connection to existing bike lanes on Friars Road will also be provided by the signalized intersection at Stadium Way. Additionally, the proposed site connection to Fenton Parkway provides a convenient bike-able connection to the shops and restaurants at Fenton Marketplace, improving the link between the Rio San Diego neighborhood and the Rancho Mission Road neighborhood east of I-15.

5. *Would the proposed project incorporate implementation mechanisms that support Transit Oriented Development?*

Yes. The proposed project would establish a transit-oriented SDSU Mission Valley campus consisting of a variety of land uses, includes 4,600 residential units; 95,000 square feet of neighborhood-serving commercial/retail; 1.565 million square feet of educational, research, and innovation space; and approximately 86 acres of parks, recreation and open space, all within a TPA area that is served by the MTS Trolley Green Line and Stadium Trolley Station. As described above, the proposed project would include transit, bicycle, and pedestrian improvements to encourage alternative modes of transportation

The total trip reduction attributable to transit, bicycle, and pedestrian trips is expected to be 4,599 daily trips. The higher of the inbound or outbound volumes that comprise this reduction are 361 and 407 during the AM and PM peak hours, respectively, which include the transit alightings and boardings at the project site. The trip reduction does not segregate between modes of transportation, but using engineering judgment and considering adjacent developments and facilities, the highest share is expected to be transit trips. Using a transit mode share of 85% (with the remaining 15% constituting bicycle and pedestrian trips), the project would add roughly 4,000 daily transit trips ($4,599 \times .85 = 3,909$) to and from the project site, with the vast majority of those trips expected to be trolley trips, rather than bus trips, due to the nearby convenient location of the Stadium Trolley Station within the project site. Conservatively assuming that all peak-hour transit trips are trolley trips, this would equate to roughly 309 and 346 peak directional trolley trips in the AM and PM peak hours, respectively. Engineering judgment was used to estimate that a conservative 65% of these peak-hour trips would occur in the peak direction (westbound in the morning and eastbound in the evening) consistent with the existing directional split. This would result in roughly 202 and 226 trips in the peak direction during each commute hour. With the current 15-minute headways (or four trains per hour) and assuming an equal number of riders per train, the proposed project is expected to add up to 50 and 56 patrons in the AM and PM peak directional hours, respectively. The estimate of transit riders is presented in Appendix H of the Transportation Impact Analysis (Appendix 4.15-1).

As previously discussed, the proposed project also would include a TDM Program that incentivizes alternative transportation besides single-occupant commuter trips. The TDM Program, which applies to the proposed project's campus educational, office, residential and retail uses, is described in Section 4.15, Transportation. To determine the effectiveness of the TDM and the amount of VMT and trip reduction that would be attributable to the SDSU Mission Valley Campus TDM Program, the proposed program elements were compared to CAPCOA standards. CAPCOA developed the Quantifying Greenhouse Gas Mitigation Measures (August 2010), (CAPCOA Report; CAPCOA 2010) as a set of guidelines for quantifying the environmental benefits of mitigation measures. The CAPCOA Report includes the most comprehensive and up-to-date set of calculations for calculating TDM effectiveness. For those TDM strategies not addressed by the CAPCOA standards, case studies were utilized to estimate vehicle trip and VMT reduction.

The detailed calculations for each TDM strategy are described in Appendix G of the Transportation Impact Analysis. For each strategy that is based on the CAPCOA Report, the related CAPCOA strategy code (for example, CAPCOA TRT-6 or SDT-3) is provided. It is important to note that the resulting VMT and trip reductions are not simply additive. Combinations of strategies in the major categories are multiplicative in that there is a dampening effect based on a variety of studies.

The summary of the non-Stadium TDM vehicle trip reductions are included in Table 4.7-6.

Table 4.7-6. Proposed Non-Stadium TDM Trip Reductions

CAPCOA Category	TDM Measure	Initial Reduction ¹	Final Reduction
<i>Neighborhood Site Enhancements</i>	Improve Site Design including: <ul style="list-style-type: none"> • New Bicycle Facilities • Dedicated Land for Bicycle/Multi-use Trails • Bicycle Parking • Increased Intersection Density 	11.08%	5.00%
	Traffic Calming	0.25%	
	Car Share	0.37%	
	Pedestrian Network	2.00%	
Parking Policy/ Pricing	Unbundle Parking	0.95%	4.07%
	Metered On-Street Parking	3.15%	
<i>Commute Trip Reduction</i>	TDM Marketing with Transportation Coordinator including:	2.21%	6.09%
	Shower and Locker Facilities		
	Carpool Matching/Guaranteed Ride Home	2.80%	
	Bicycle Share	0.50%	
	School Pool	0.70%	
	Hotel Shuttle Service	0.04%	
Combined Total Reduction			14.41%

Note:

¹ The Initial Reduction is the individual stand-alone component reductions in accordance with CAPCOA standards or, for those measures not addressed by CAPCOA, estimates based on case studies; whereas the Final Reduction is the calculated total reduction after taking into account redundancies between various components of the TDM.

6. Would the proposed project implement the Urban Forest Management Plan to increase urban tree canopy coverage?

Yes. The proposed project would plant trees throughout the paseos to provide shade and to contribute to the City's 20% urban canopy tree coverage goal. Major streets and pathways within the project site would include trees and other natural amenities to provide shade and create a more inviting pedestrian environment. The landscape plans include multiple tree types throughout the project site. The proposed project would plant a net of 616 new trees. It is further noted the proposed project would convert an area that is largely asphalt parking lot into over 80 acres of parks, recreation and open space, which has additional sequestration benefits as shown in Table 4.7-4, above.

In summary, the proposed project would result in increased density within a TPA and implement CAP Strategy 3 actions. Additionally, as to Step 2: CAP Strategies Consistency, of the CAP Checklist, the proposed project

would implement all applicable strategies and actions of the CAP set forth in its implementing Checklist. Adherence to the CAP Checklist is required by SDMC Section 22.0908, which conditions the sale and development of the project site upon compliance with the City's GHG emission reduction goals.

Mission Valley Community Plan

In order to evaluate the proposed project's potential to conflict with the draft MVCP, reference was made to the draft MVCP, including its Design Guidelines and Policies for Development. One objective of the draft MVCP is to "help implement" the City's CAP, and the City has determined that the "land use policies in this plan are consistent with the policy goals identified in the CAP. ... Through the policies in this plan, the future Mission Valley will be more sustainable, produce less per capita greenhouse gas emissions, and be a vibrant and thriving community that many will have the privilege to call home" (City of San Diego 2019a).

The draft program EIR (SCH No. 2017071066) prepared for the draft MVCP concludes that, while implementation of the draft MVCP would increase GHG emissions as a result of its proposed increase in density and intensity in the Mission Valley planning area, such increase would be a direct result of implementation of the CAP's strategies and the General Plan's City of Villages Strategy. (The City of Villages Strategy is designed to focus redevelopment, infill and new growth into pedestrian-friendly, mixed-use activity centers linked to the regional transit system.) Further, increasing residential density and nonresidential intensity along the transit corridors within the Mission Valley area, and the co-located TPAs, would support the City in achieving its GHG emissions reduction targets under the CAP. As explained in the City's draft program EIR, "[c]oncentrating new growth in an area can result in greater GHG emissions than allowing the less intensive land uses to remain since growth is being directed toward areas that would produce less GHG emissions per capita citywide. Thus, consistency with the City of Villages Strategy can result in one Community Plan area having an increase in GHG emissions, with the result still being an overall decrease in citywide GHG emissions" (City of San Diego 2019b).

As shown in Table 4.7-7, the proposed project would be consistent with applicable strategies for the reduction of GHG emissions in the draft Mission Valley Community Plan.

It also is noted that the draft MVCP contemplates the project site being subject to future redevelopment under a Specific Plan or Campus Master Plan, as proposed by the proposed project. More specifically, the environmental analysis for the draft MVCP anticipates the following uses on the project site: 4,800 residential units, 2 million square feet of office space, 300,000 square feet of retail space, a 40,000-capacity stadium, and active park and open space acreage. The proposed project's proposed land uses fall within this envelope of development parameters. As such, the proposed project would be consistent with the draft MVCP.

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
<i>City of San Diego's Mission Valley Community Plan</i>			
DG-27	Solar Access and Energy Conservation	Employ climate-appropriate design strategies to allow for passive solar access and energy-efficient installations, including: - Allowing for adequate access to light and air so that daylight is able to reach all living spaces for part of the day, and adequate ventilation is provided when windows are open. Prioritize south-facing windows and private open space. - Siting building so that plazas and other public spaces will not be kept in shadows at all times and will not experience excessive wind conditions. - Locating parking areas with large paved surfaces to the east and north of adjacent buildings to reduce solar reflection on buildings. - Placing evergreen trees on the west side of buildings to provide protection from prevailing winds.	Consistent. The proposed project would comply with applicable standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which contributes to the energy conservation noted in this measure. As to the building and site orientation recommendations contained in this measure, the layout of the proposed project's campus development areas has been designed to maximize the unique infill opportunity presented at this Mission Valley location. The proposed project includes a compatible mix of land uses that would intersect in a vibrant campus setting.
DG-28	Energy	Consider clustering buildings to use a common heating/cooling source.	Consistent. The proposed project consists of a SDSU Mission Valley campus, which locates buildings in close proximity. The design of the site will ensure the optimum heating and cooling systems are incorporated. Thus, the nature of the proposed project complies with this measure.
DG-34	Roof Surfaces	Consider locating sloped roof surfaces facing the south, and at an angle that can accommodate solar panel or film installation for renewable energy generation or centralized solar hot water heating.	Consistent. The proposed project would install solar PV panels throughout the development areas, and roof surfaces with appropriate attributes for solar generation would be selected. For more information on the attributes of the solar design commitment, please see Appendix 4.5-1.
DG-40	Operable Windows	Wherever applicable, provide operable windows that allow natural ventilation and potentially eliminate the need for mechanical ventilation. If mechanical systems are necessary, use energy-efficient and low emission heating, ventilation, and air conditioning (HVAC) systems.	Consistent. Project development areas would maximize natural ventilation. Mechanical systems also would be designed and built according to all applicable building code and energy efficiency standards (see, e.g., 24 CCR, Parts 6 and 11).

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
DG-45 Energy and Building Materials	Use building materials which will act as insulators or conductors, depending on energy needs.	Consistent. Project development areas would meet the applicable requirements of the California Building Code (24 CCR, Parts 6 and 11), including requirements for building materials.
DG-62 Sustainable Materials	Where possible, use sustainable building materials to the maximum extent feasible. Incorporate recycled, renewable, sustainable, and non-toxic/low-VOC (volatile organic compound) materials. Use of locally harvested and/or manufactured materials is desired.	Consistent. The proposed project would comply with applicable standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which includes requirements for building materials. In addition, the proposed project would comply with applicable SDAPCD rules governing volatile organic compound content of coatings. Where applicable, compliance with the Buy Clean California Act (AB 262, 2017) also would be required to aid in the reduction of GHG emissions associated with the manufacture and transport of products used in public works projects.
DG-63 Sustainable Landscaping	Provide on-site landscaping improvements that minimize heat gain and provide attractive and context sensitive landscape environments, by: - Building roof gardens, eco-roofs, or other vegetated roof systems to help reduce the solar heat gain of building roofs and to serve as shared open space. - Minimizing impervious surfaces that have large thermal gain.	Consistent. The proposed project integrates extensive parks and landscaping, including the planting of new, on-site trees. (See EIR Chapter 2, Project Description.) Further, project design parameters do not preclude the use of vegetated roofing systems; the installation of such systems would be determined on a building-by-building basis, following consideration of site orientation, building use, available rooftop space (following PV installation), and other factors. In addition, the proposed project would comply with applicable requirements of the CalGreen Building Standards Code (24 CCR, Part 11), which address the reduction of impervious surfaces. Site development is compact by design, in order to maximize the available infill opportunity. Impervious surfaces would be utilized where needed, and complemented by the proposed extensive park areas along the San Diego River.

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
DG-64	Water Efficiency and Conservation	Install water saving appliances and systems such as grey water systems, moisture-sensitive irrigation rainwater cisterns, and low-flow toilets and faucets. Any exterior systems should be integrated into building design.	Consistent. The proposed project would comply with applicable requirements of the California Building Code (24 CCR, Parts 6 and 11), and the City of San Diego’s CAP Checklist, which include requirements for water management, efficiency, and conservation.
DG-67	Energy Generation	Integrate energy generation and sustainability such as solar, wind, geothermal or other technologies into the overall building design consistent with the architectural design.	Consistent. The proposed project would install solar PV panels through the development areas. For more information on the attributes of the solar design commitment, please see Appendix 4.5-1.
DG-68	Carbon Sequestration	Incorporate new trees into site plans that have the potential for storage and sequestration of high levels of carbon.	Consistent. The proposed project includes planting of new trees (approximately 3.5 times the number of new trees compared to what currently exists at the site).
DG-69	Zero Net Energy Buildings	Strive for zero net energy in a building design.	Consistent. Project development areas would incorporate energy efficiency measures in compliance with the version of the California Building Code (24 CCR, Parts 6 and 11) applicable at the time of building permit application, and incorporate solar PV panels beyond what is required by existing regulatory standards. It also is noted that the 2019 Title 24, Part 6 standards, which go into effect on January 1, 2020, include zero net electricity requirements for low-rise residential buildings (three stories or less).

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
DG-73 Mobility Hubs	Design areas around transit stations to provide for a range of services that can improve first-last mile connections. This includes drop-off/pick-up areas for ride-hailing and shuttle services, space for scooter- and bike share storage, parking spaces dedicated to car sharing services, charging stations, and package pick-up areas.	Consistent. The proposed project site is located near the existing MTS Trolley Green Line Stadium Station, and would provide an enhanced pedestrian connection to this station. The River Park is also located near the existing Fenton Station, in the southwest corner of the project site. The proposed project would incorporate connectivity as part of the project design, which includes establishing a sustainable, walkable, and transit-oriented campus with enriched pedestrian spaces, walking paths, and trails, as well as EV charging stations. The proposed project's TDM Program also includes elements such as bicycle racks and secure bicycle parking, showers and lockers for employees, a transportation corridor and an information-sharing website and kiosks, coordination with SANDAG's iCommute program, guaranteed rides home, unbundled residential parking, and metered and time-limited on-street parking.
RES-4 Residential Development	Affordable housing is encouraged to be built on site.	Consistent. As contemplated by SDMC Section 22.0908, the proposed project would comply with the City's affordable housing requirements by building the required affordable units on-site.
GBP-1 Green Building Practices	The use of sustainable building practices is highly encouraged. New buildings should strive to qualify for LEED accreditation.	Consistent. The proposed project would comply with applicable green building practices set forth in the California Building Code (24 CCR, Parts 6 and 11). Additionally, individual buildings within the proposed project development area would be designed to achieve LEED-equivalent standards (Silver minimum); and the proposed project, as a whole, would be designed to achieve LEED-Neighborhood Design equivalent standards (Silver minimum).
GBP-3 Green Building Practices	New development should not inhibit the solar access of neighboring buildings to the maximum extent practical.	Consistent. The proposed project is designed to not inhibit solar access of neighboring buildings to the maximum extent practical.

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
BIC-1	Bicycling	New development required to build 10 long-term bicycle parking spaces should provide a sheltered Bike Kitchen – a place to use tools and repair bicycles.	Consistent. The proposed project would meet, and exceed, the number of bicycle parking spaces per dwelling unit specified in the City of San Diego Municipal Code. The proposed project also would include a place to use tools and repair bicycles.
BIC-3	Bicycling	Access plans for new development should clearly identify ingress and egress for bicycles, with minimum interaction with vehicles.	Consistent. The proposed project incorporates bicycle paths and ingress/egress points with wayfinding to minimize interaction with vehicles.
BIC-4	Bicycling	New development should provide connections to bicycle trails and routes per the San Diego Regional Bicycle Plan. Open spaces should also be located to abut or provide direct access to bicycle facilities.	Consistent. The proposed project incorporates bicycle paths and ingress/egress points. In addition, a hike-and-bike trail would be located throughout the open space portions of the proposed project.
PRK-6	Parking	Parking areas should be distributed throughout a project site to avoid large contiguous parking areas and to integrate landscaping. Each parking area should include no more than 30% of the project's parking spaces.	Consistent. The proposed project integrates landscaping into the project site and disperses parking throughout the site. Notably, many of the parking areas consist of multilevel parking garages that are consolidated, allowing additional space for landscaping, paseos, and other open areas.
PRK-8	Parking	A minimum of 10% landscaping of the parking lot area is encouraged.	Consistent. The proposed project integrates landscaping into the project site, including in the parking areas.
SMC-2	Smart Cities	For energy efficiency and to minimize light pollution, lighting with adaptive controls should be considered for new and infill development.	Consistent. The proposed project would include adaptive lighting controls, where appropriate and feasible, in order to maximize energy efficiency and minimize light pollution. In addition, the proposed project would comply with applicable energy efficiency standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which address lighting energy efficiency.
SMC-1	Smart Cities	Consider providing priority parking and charging stations (preferably solar) to promote sustainable practices and accommodate the use of Electric Vehicles (EVs), including smaller short-distance neighborhood electric vehicles.	Consistent. The proposed project would include 503 EV-ready parking spaces, of which 252 spaces are equipped with EV charging stations.
PRK-4	Parking	New development should consider designating priority electric vehicle and zero emissions vehicle parking.	Consistent. The proposed project would designate certain parking spaces in prioritized locations for electric vehicles and ZEVs.

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
PRK-2	Parking	New development should consider unbundled parking to offset development costs and encourage use of alternative transportation modes.	Consistent. The proposed project's TDM Program requires that residential parking be unbundled from unit counts.
TDM-1	Transportation Demand Management	New development considering community circulators as a TDM measure should evaluate a coordinated effort with additional properties to expand the service and access more destinations.	Consistent. This measure is not applicable because the proposed project does not include a community circulator as a part of its TDM Program. However, the proposed project's TDM Program includes several other measures that enhance mobility throughout the project site.
TDM-2	Transportation Demand Management	New development should consider developing and implementing an approved TDM Plan designed to reduce peak period automobile use and lower the minimum parking requirement. Reference San Diego Municipal Code Chapter 14, Article 2, Division 5.	Consistent. The proposed project has developed a TDM Program that includes various measures aimed at reducing peak period single-occupancy automobile use and reducing parking needs.
TDM-3	Transportation Demand Management	New development should incorporate mobility hub features such as EV chargers, rideshare pick-up/drop-off space, bicycle parking, and transit information.	Consistent. The proposed project will provide EV chargers in the campus educational, residential, retail, office, and Stadium parking areas, as well as rideshare pick-up/drop-off space to serve these uses. Residential bicycle storage will be provided in residential parking areas, and long-term and short-term bicycle parking will be available for public use at various locations in the site. Transit information will be provided by the proposed project's Transportation Coordinator and will be made available to all project employees and residents.
TDM-4	Transportation Demand Management	New development should designate visible space along the property frontage to allow for staging of shared vehicles, bikes, and scooters.	Consistent. Visible space for the staging of shared vehicles, bikes, and scooters will be provided along the proposed project frontage and along the project shared-use path that connects the project's land uses and the Trolley Station, as well as other locations throughout the site as needed.

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
TDM-5	Transportation Demand Management	<p>New development should consider participating in existing TDM programs, including but not limited to those overseen by SANDAG and MTS, in order to:</p> <ul style="list-style-type: none"> • Encourage rideshare and carpool for major employers and employment centers. • Promote car/vanpool matching services. • Continue promotion of SANDAG's guaranteed ride home for workers who carpool throughout Mission Valley. • Provide flexible schedules and telecommuting opportunities for employees. 	Consistent. The proposed project's Transportation Coordinator will encourage residents and employees to participate in rideshare and carpool services and promote SANDAG's guaranteed ride home program. Additionally, the Transportation Coordinator will encourage employers to provide flexible schedules and telecommuting opportunities.
TDM-6	Transportation Demand Management	New development should provide flexible curb space in commercial/retail and residential areas to meet the needs of shared mobility services and the changing demands of users.	Consistent. Flexible curb space will be provided in the commercial/retail and residential areas of the proposed project in order to accommodate Transportation Network Company loading and unloading operations, deliveries, and other loading activities.
TDM-7	Transportation Demand Management	New development should post information related to available transit service and bicycle infrastructure as a means to encourage use of alternative transportation modes.	Consistent. As discussed in relation to measure TDM-3, the proposed project's Transportation Coordinator will provide information related to available transit service and bicycle infrastructure to all residents and employees.
TDM-8	Transportation Demand Management	Employers should consider providing "parking cash out" options to employees—option for employees to receive the cash value of employer-paid parking subsidies in lieu of a parking spot—as an alternative to providing free or subsidized parking or transit passes.	Consistent. Employers that rent office space on the project site will be educated about this program by the Transportation Coordinator and can decide to participate in either of the programs if they choose to do so.

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
<i>City of San Diego's CAP Checklist</i>			
Strategy 1	Energy and Water Efficient Buildings [Roofing]	<ul style="list-style-type: none"> Would the project include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code (Attachment A)?; OR Would the project roof construction have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot as specified in the voluntary measures under California Green Building Standards Code?; OR Would the project include a combination of the above two options? 	Consistent. Project development areas would comply with one, both or a combination of the roofing options provided in this strategy, upon CSU Building Permit issuance and pursuant to the <i>SDSU Mission Valley Campus Master Plan Design Guidelines</i> .
Strategy 1	Energy and Water Efficient Buildings [Residential: Plumbing fixtures and fittings]	Residential buildings: <ul style="list-style-type: none"> Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi [pounds per square inch]; Standard dishwashers: 4.25 gallons per cycle; Compact dishwashers: 3.5 gallons per cycle; and Clothes washers: water factor of 6 gallons per cubic feet of drum capacity? 	Consistent. The proposed project's residential campus areas would comply with the maximum flow rates for plumbing fixtures and appliances provided in this strategy, upon CSU Building Permit issuance and pursuant to the <i>SDSU Mission Valley Campus Master Plan Design Guidelines</i> .
Strategy 1	Energy and Water Efficient Buildings [Non-residential: Plumbing fixtures and fittings]	Non-residential buildings: <ul style="list-style-type: none"> Plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 (voluntary measures) of the California Green Building Standards Code (See Attachment A); and Appliances and fixtures for commercial applications that meet the provisions of Section A5.303.3 (voluntary measures) of the California Green Building Standards Code (See Attachment A)? 	Consistent. The proposed project's nonresidential campus areas would comply with the maximum flow rates for plumbing fixtures and appliances provided in this strategy, as required by the <i>SDSU Mission Valley Campus Master Plan Design Guidelines</i> .

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
Strategy 3 Bicycling, Walking, Transit, & Land Use [EV Chargers]	Multiple-family projects of 17 dwelling units or less: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official, to allow for the future installation of electric vehicle supply equipment to provide electric vehicle charging stations at such time as it is needed for use by residents?	Not Applicable. This strategy is not applicable because the proposed project includes more than 17 dwelling units.
Strategy 3 Bicycling, Walking, Transit, & Land Use [EV Chargers]	Multiple-family projects of more than 17 dwelling units: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use by residents?	Consistent. The proposed project would provide a minimum of 85 EV-ready spaces with charging stations in the residential development areas.
Strategy 3 Bicycling, Walking, Transit, & Land Use [EV Chargers]	Non-residential projects: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use?	Consistent. The proposed project would provide a minimum of 167 EV-ready spaces with charging stations in the non-residential campus areas.
Strategy 3 Bicycling, Walking, Transit & Land Use [Bicycle Parking]	Bicycle Parking Spaces: Would the project provide more short- and long-term bicycle parking spaces than required in the City's Municipal Code (Chapter 14, Article 2, Division 5)?	Consistent. The proposed project would meet, and exceed, the number of bicycle parking spaces per dwelling unit specified in the San Diego Municipal Code.
Strategy 3 Bicycling, Walking, Transit & Land Use [Shower facilities]	If the project includes nonresidential development that would accommodate over 10 tenant occupants (employees), would the project include changing/shower facilities in accordance with the voluntary measures under the California Green Building Standards Code as shown in the table?	Consistent. The proposed project's nonresidential campus areas would provide changing/shower facilities as required by the referenced CALGreen provision, as required by the SDSU Mission Valley Campus Master Plan Design Guidelines.
Strategy 3 Bicycling, Walking, Transit & Land Use [Parking spaces]	Designated Parking Spaces: If the project includes a nonresidential use in a TPA [Transit Priority Area], would the project provide designated parking for a combination of low-emitting, fuel-efficient, and carpool/vanpool vehicles in accordance with the table?	Consistent. The proposed project's nonresidential campus areas would provide designated parking for a combination of the specified vehicles, as required by the SDSU Mission Valley Campus Master Plan Design Guidelines.

Table 4.7-7. Local Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
Strategy 3 Bicycling, Walking, Transit & Land Use [TDM]	Transportation Demand Management Program. If the project would accommodate over 50 tenant-occupants (employees), would it include a transportation demand management program that would be applicable to existing tenants and future tenants that includes the components listed in the CAP Checklist?	<p>Consistent. A TDM Program has been designed for the proposed project. The TDM Program includes:</p> <ul style="list-style-type: none"> • Land Use Diversity • Neighborhood Site Enhancement <ul style="list-style-type: none"> ○ New Bicycle Facilities ○ Dedicated Land for Bicycle/Multi-Use Trails ○ Bicycle Parking ○ Showers and Lockers in Employment Areas ○ Increased Intersection Density ○ Traffic Calming ○ Car Share Service Accommodations ○ Enhanced Pedestrian Network • Parking Policy and Pricing <ul style="list-style-type: none"> ○ Unbundled Residential Parking ○ Metered On-Street Parking ○ Reduced Parking Supply • Commute Trip Reduction <ul style="list-style-type: none"> ○ TDM Program Coordinator and Marketing ○ Electric Bike-Share Accommodations ○ Ridesharing Support ○ School Pool ○ Hotel Shuttle Service

San Diego Association of Governments

SANDAG’s San Diego Forward plan (the current RTP/SCS for the region) contains five basic strategies. As discussed below, the proposed project is consistent with each of these strategies.

1. *Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.*

The proposed project is consistent with Strategy 1 because it co-locates housing and employment on an infill site in an urbanized area that is served by transit. By way of background, the project site is identified as a potential “Town Center” (specifically, “SD MV-5”) on SANDAG’s Smart Growth Concept Map for the Mid-City and East County Subregion (SANDAG 2016a). As described by SANDAG, “Existing/Planned smart growth areas are locations that either contain existing smart growth development or allow planned smart growth in accordance with the identified land use targets, and are accompanied by existing or planned transit services included in San Diego Forward: The Regional Plan” (SANDAG 2016b).

Here, the existing MTS San Diego Trolley Green Line runs through the project site; the Stadium Station also is located on site and presently is frequented by the traveling public during Stadium events. The Green Line provides daily service along a 23.6-mile route, with 27 stations, and operates from the Santee Transit Center through Mission Valley to the 12th & Imperial Transit Center in downtown San Diego. In addition to the Green Line, MTS Bus Route 14 also is in the vicinity of the project site; the closest bus stop is located at Rancho Mission Road/San Diego Mission Road, which is an approximately 0.5-mile walk from the existing Stadium’s main gate. MTS Bus Route 14 connects to other bus routes and several trolley stations.

SANDAG also is studying the feasibility of the San Diego Trolley Purple Line. Potential alignments for this future trolley line would enter the project site from the southeast, heading in a west-northwesterly direction, and would include the siting of another trolley station on the project site.

2. *Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.*

The proposed project is consistent with Strategy 2 because it would provide approximately 86 acres of parks, recreation, and open space, including a River Park. Impacts to biological resources are discussed in Section 4.3; however, it is noted that 98% of the project site is currently urban/developed, and impacts to sensitive habitat/communities are limited to less than 1 acre. No portion of the project site is designated as farmland. Cultural Resources impacts are discussed in Section 4.4 and would be reduced to less than significant with implementation of mitigation.

3. *Invest in a transportation network that gives people transportation choices and reduces GHG emissions.*

The proposed project is consistent with Strategy 3 because it would provide further enhancements to the existing transportation options located on the project site (see trolley and bus options discussed above). Further, as explained above under the City of San Diego CAP discussion, the proposed project would include walking paths and sidewalks connected to enhanced pedestrian connections to the existing light rail transit center at the Stadium Trolley Station, as well as off-site pedestrian improvements and connections. The proposed project would also include biking paths. The proposed project would include a new on-site path system along the northern and eastern edges of the site (connecting to San Diego and Rancho Mission Roads) and improvements along the San Diego River Park, which would include 8- to 10-foot-wide linear walking and biking trails. The proposed hike and bike trail would be located throughout the San Diego River Park. The trail would connect to the hike and bike loop, which provides access to the rest of the project site. The trail would complete the bikeway connection from Murphy Canyon to Fenton Parkway and connect to the east side of the campus and throughout the campus. Buffered bike lanes would be constructed between

Northside and Friars Road to increase the safety of bicyclists by adding a barrier between the car and bike lanes of travel. Additionally, through implementation of the multifaceted TDM Program, the proposed project would reduce its VMT by approximately 14%.

4. *Address the housing needs of all economic segments of the population.*

The proposed project is consistent with Strategy 4 because it would provide a range of housing for faculty, staff, and students, as well as other workforce and affordable housing. As to the latter type of housing, up to approximately 10% of the residential units would be built on-site as affordable housing. Provision of affordable housing accords to SDMC Section 22.0908, which conditions the sale and development of the project site upon conformance with the City's housing impact fees/affordable housing requirements.

5. *Implement the Regional Plan through incentives and collaboration.*

The proposed project is consistent with Strategy 5 because it includes a TDM Program that incorporates innovative pricing policies discussed in San Diego Forward, such as unbundling parking and alternative transportation (e.g., bicycle share). These measures help further the implementation of the RTP/SCS.

Based on the consistency with all five basic strategies of the Regional Plan, and SANDAG's identification of the project site as a potential "Town Center" on its Smart Growth Concept Map, the proposed project would not conflict with SANDAG's San Diego Forward plan.

Statewide Emissions Reduction Targets

Studies have shown that, in order to meet the statewide 2050 reduction target, aggressive and economy-wide technological changes in the transportation and energy sectors, including electrification of the vehicle fleet and decarbonization of electricity and fuel sources, will be required among many other possible measures (California Council on Science and Technology 2011). One study indicated that, even with these emerging technologies, the 2050 goal will not be met, due to the population growth to 55 million by 2050 (LBL 2013). A more recent study, however, shows that the existing and proposed regulatory framework will allow the state to reduce GHG emissions to 40% below 1990 levels by 2030, and to 60% below 1990 by 2050 (Greenblatt 2015). Even though this study did not provide a regulatory and technology roadmap to achieve the 2050 target, it demonstrated that various combinations of policies could allow statewide emissions to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the state to meet the 2050 target. The 2017 Scoping Plan describes two paths to achieving the 2050 target. The first path would be one in which consistent progress is made between 2020 and 2050, the 2030 target is achieved, and progress leads to achievement of the 2050 target earlier. The other path is one that begins with the 2030 target and then progresses towards the 2050 target of 80% below 1990 levels (CARB 2017a).

Statewide efforts are underway to facilitate the state's achievement of its 2050 target, and it is reasonable to expect the proposed project's emissions to decline as the regulatory initiatives identified by CARB in its Scoping Plan are implemented, new regulatory programs or incentives are implemented to reduce GHG emissions, and other technological innovations occur. Many of these initiatives include reducing the carbon content of motor fuels and fuels for electricity generation.⁶ Reducing the carbon content of motor fuels and fuels for electricity generation will reduce CO₂e emissions from this project over time.

For example, CARB's 2014 First Update "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050." And, many of the emission

⁶ The extent to which GHG emissions from traffic at the proposed project will change in the future depends on the quantity (e.g., number of vehicles, average daily mileage) and quality (i.e., carbon content) of fuel that will be available and required to meet both regulatory standards and residents' needs. In addition, renewable power requirements, LCFs, and vehicle emissions standards discussed above will all decrease GHG emissions per unit of energy delivered or per VMT.

reduction strategies recommended by CARB would serve to reduce the proposed project's post-buildout (2037) emissions level to the extent applicable by law:

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives would serve to reduce the proposed project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the proposed project's emissions level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the proposed project's emissions level.
- **Water Sector:** The proposed project's emissions level will be reduced as a result of further desired enhancements to water conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the proposed project's emissions level.

In addition, it is important to note that the majority of the proposed project's GHG emissions are related to sectors that are covered by the California Cap-and-Trade Program. Emissions from major GHG-emitting sources, such as electricity generation, fuel distributors (e.g., natural gas and propane fuel providers and transportation fuel providers), and large stationary sources are capped under the rules of the Cap-and-Trade Program, and the majority of policy proposals developed by CARB and other state agencies pursuing GHG emissions-reducing strategies are designed to secure reductions from these sectors well into the future. If the proposed project emissions associated with these sectors are excluded, the only category that remains is related to vegetation change.

The proposed project's emissions total at buildout (2037) represents the maximum emissions inventory for the proposed project as California's emissions sources are being regulated (and are foreseeably expected to continue to be regulated in the future) in furtherance of the state's environmental policy objectives. Indeed, in light of the above, the proposed project's emissions at project buildout (2037) are reasonably anticipated to decline due to continued regulatory and technological advancements.

Further, the project design itself advances many of the state's primary policies directed towards the reduction of GHG emissions. For example, approximately 68% of the proposed project's emissions profile is attributable to transportation-related emissions. The proposed project addresses that emissions source in two complementary ways: First, the proposed project would facilitate the use of ZEVs through the provision of on-site charging infrastructure. The extension of ZEV infrastructure is critical to the transition of the vehicle fleet from internal combustion engines to zero emission engines. Second, the SB 743 analysis prepared for the proposed project (see Fehr & Peers' Transportation Impact Analysis [2019]) confirms that—with implementation of the TDM Program—the project-generated VMT per service population would represent an approximately 25% reduction from the regional baseline VMT per service population level and an approximately 21% reduction from the citywide baseline VMT per service population level. Further, when viewed in the cumulative setting, the proposed project would reduce regional VMT as compared to regional VMT without the proposed project, illustrating the benefits of the locational attributes of developing residential and nonresidential uses on the project site. The proposed project's reduction from baseline VMT per service population levels is consistent with the focus of CARB, in its 2017 Scoping Plan, on reducing statewide VMT through a suite of strategies. The proposed project also would provide on-site renewable energy (through the installation of solar PV panels) and be designed to achieve LEED Version 4 at a Silver or better certification level (this commitment extends to individual buildings, including the Stadium, on the project site, and also includes a Neighborhood Development designation for

sitewide design). These PDFs illustrate that the built environment will go beyond the bounds of existing regulatory compliance in pursuit of sustainability.

Finally, the location of the project site is compatible with and complementary of the state's GHG reduction goals. More specifically, the proposed campus project would develop residential and nonresidential land uses in an infill setting that is served by multimodal transportation options (trolley and bus), and would further enhance other multimodal options by designing the site to encourage pedestrian- and bicycle-oriented connectivity. The infill location allows the City of San Diego specifically, and the San Diego region generally, to accommodate existing and projected population and employment growth within a developed, urbanized area (i.e., Mission Valley), thereby avoiding the conversion of undeveloped land to developed uses, which also is consistent with CARB's objectives in the 2017 Scoping Plan.

In summary, the proposed project would not conflict with the statewide emissions reduction targets for 2020, 2030, and 2050.

Summary

While the proposed project would represent an increase in GHG emissions when compared to the existing conditions on the site, accommodating California's growing population base at this location and with the proposed project's proposed design attributes is more efficient than other alternatives, such as development in a non-urbanized area without transit. As explained in the City's General Plan (City of San Diego 2008):

The City of Villages strategy to direct compact growth in limited areas that are served by transit is, in itself, a conservation strategy. Compact, transit-served growth is an efficient use of urban land that reduces the need to develop outlying areas and creates an urban form where walking, bicycling, and transit are more attractive alternatives to automobile travel. Reducing dependence on automobiles reduces vehicle miles traveled which, in turn, lowers greenhouse gas emissions.

Further, as discussed above, the proposed project would not conflict with the City's CAP, the City's draft MVCP, SANDAG's RTP/SCS, or statewide emission reduction targets. Various factors support these determinations, such as the proposed project's location on an infill site in Mission Valley that is served by transit; the proposed project's implementation of a TDM Program that reduces VMT at a level that is consistent with the objectives of SB 743; and the proposed project's exceedance of existing regulatory compliance standards for the built environment. Therefore, the proposed project's GHG emissions will be **less than significant**.

Would the project result in a cumulative impact to greenhouse gas emissions?

GHG impacts are cumulative impacts; therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. If a project exceeds the identified significance thresholds, its contribution of GHG emissions would be cumulatively considerable, resulting in a cumulatively significant impact on climate change. The City's CAP Consistency Checklist also serves as the significance determination threshold for cumulative impacts related to climate change. Therefore, the proposed project's GHG emissions would not be cumulatively considerable.

4.7.5 Summary of Impacts Prior to Mitigation

As discussed above, the proposed project would not conflict with the City's CAP, the City's draft MVCP, SANDAG's RTP/SCS, or statewide emission reduction targets. Therefore, the proposed project and cumulative GHG emissions impacts would be **less than significant**.

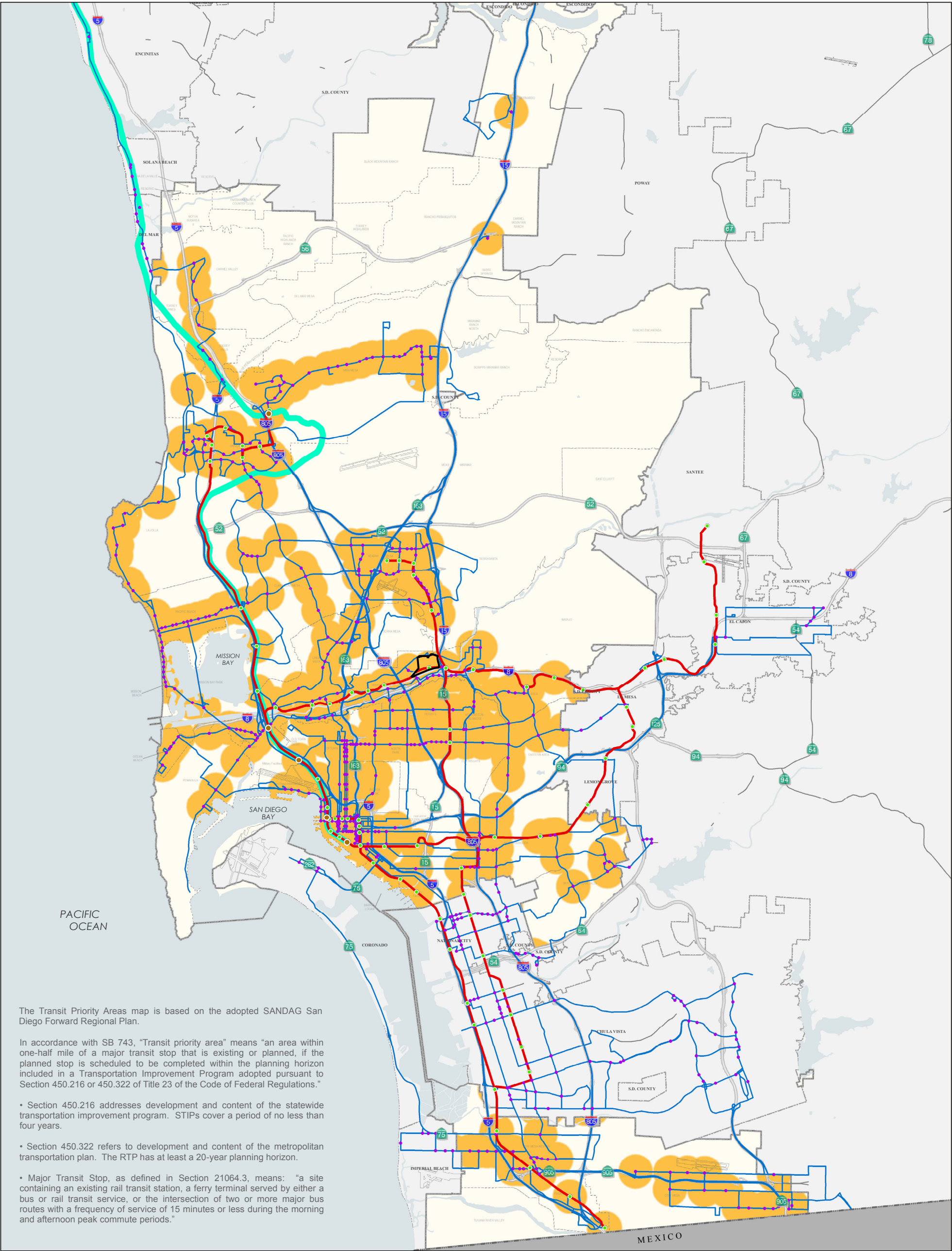
4.7.6 Mitigation Measures

No significant impacts related to GHG emissions have been identified. No mitigation measures are required.

4.7.7 Level of Significance After Mitigation

Project and cumulative impacts would be **less than significant** without mitigation.

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The Transit Priority Areas map is based on the adopted SANDAG San Diego Forward Regional Plan.

In accordance with SB 743, "Transit priority area" means "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations."

• Section 450.216 addresses development and content of the statewide transportation improvement program. STIPs cover a period of no less than four years.

• Section 450.322 refers to development and content of the metropolitan transportation plan. The RTP has at least a 20-year planning horizon.

• Major Transit Stop, as defined in Section 21064.3, means: "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods."

Long Term through 2035

Legend

- Major Transit Stops

●

 Trolley Stations

●

 Coaster Station
- High Frequency Routes

Trolley Lines

Coaster Line

Transit Priority Areas

Planning Areas

Municipal Boundaries
-
-
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- Document Path: L:\GIS\PGIS\Transportation\SB 743\TPA - LongTerm 2019 Revision to 2017 TPA.mxd
- SDSU Mission Valley Campus Master Plan EIR
- SAN DIEGO STATE UNIVERSITY
- Figure 4.7-1
Transit Area Priority Map

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4.8 Hazards and Hazardous Materials

This section describes the existing hazards and hazardous materials conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed San Diego State University (SDSU) Mission Valley Campus Master Plan Project (proposed project).

Documents Reviewed for Analysis

The analysis for this section is based on information from the following documents:

- 2015 Phase I Environmental Site Assessment prepared by AECOM (Appendix 4.8-1),
- 2019 Hazards and Hazardous Materials Technical Report prepared by Geosyntec Consultants (Appendix 4.8-2),
- 2019 Report of Environmental Investigation prepared by Group Delta Consultants Inc. (Appendix 4.8-3),
- 2019 Asbestos, Lead-Based Paint, and Universal Waste Survey prepared by Aurora Industrial Hygiene (Appendix 4.8-4), and
- 2019 Limited Soil and Groundwater Investigation Along Fuel Pipeline report prepared by Group Delta Consultants Inc. (Appendix 4.8-5).

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period (Appendix 1-1). Hazard and hazardous material comments on the NO focused on the following areas:

- potential impacts from previously contaminated soil and groundwater due to historical spills at the Kinder Morgan Energy Partners Mission Valley Terminal (MVT) north of the project site, as well as safety of development in proximity to the MVT facility; and
- potential impacts to established emergency evacuation plans.

4.8.1 Existing Conditions

4.8.1.1 Environmental Setting

The project site is located on approximately 172 acres of land within the Mission Valley Community of the City of San Diego (City) (refer to Figure 2-4, Project Site and Surrounding Land Uses, in Chapter 2, Project Description, of this environmental impact report [EIR]). The project site is approximately 5 miles from downtown San Diego and approximately 2.5 miles west of the existing SDSU main campus situated along Interstate (I) 8 within the College Area Community of the City of San Diego. Adjacent land uses include Friars Road to the north, I-15 to the east, I-8 to the south, and Fenton Marketplace shopping center to the west. The Kinder Morgan Energy Partners MVT¹ facility, located at 9950 and 9966 San Diego Mission Road, abuts the northeastern boundary of the project site. Bulk fuel storage operations have occurred at the MVT since the early 1960s. A 10-inch-diameter underground pipeline that

¹ The Kinder Morgan Energy Partners MVT facility is also referred to as on-Terminal in several remediation documents. The project site is referred to as off-Terminal.

transmits fuel products from MVT to the San Diego Harbor runs north–south along the eastern project site boundary, partially within the project site. Topography generally slopes from east to west and north to south. The existing stadium structure is elevated to direct surface flows away from the stadium structure.

The project site is underlain by fill soils placed during grading for stadium construction in 1966, Quaternary alluvial flood-plain deposits, and the Friars Formation. The fill material used at the project site was primarily derived from the Stadium Conglomerate (clayey sand and gravel) and some of the underlying Friars Formation. Fill thickness is estimated to range up to 35 feet at the project site (Appendix 4.8-2). For further information, please refer to Section 4.6, Geology and Soils.

Multiple environmental investigations and remedial activities have occurred at the project site related to releases of petroleum hydrocarbons, primarily from MVT. As a result of these investigations, more than 100 groundwater monitoring wells, extraction wells, and soil vapor monitoring probes have been installed at the project site. The Regional Water Quality Control Board (RWQCB) has approved decommissioning some of the monitoring and extraction wells and soil vapor monitoring probes, and these wells are reportedly scheduled to be decommissioned in late 2019 or early 2020. Only a few sentinel wells will reportedly remain near the northeastern boundary of the project site in order to monitor the progress of ongoing remediation at the MVT property, and to confirm that contaminants from the MVT property are no longer migrating onto the project site (Appendix 4.8-2). As of July 2019, dozens of monitoring wells, extraction wells, and soil vapor monitoring probes remain on the project site.

4.8.1.2 Current Site Uses

The project site includes three existing uses as shown on Figure 2-3: (1) a multipurpose stadium (San Diego County Credit Union [SDCCU] Stadium) with an existing capacity of approximately 70,000 seats for football and other events, as well as other outlying buildings, maintenance, and storage facilities associated with athletic and stadium activities; (2) an associated surface parking lot with 18,870 parking spaces; and (3) the existing San Diego Trolley Stadium Station, accessible via the Green Line, which traverses the southern part of the project site. Two Metropolitan Transit System–owned and operated transformer buildings are present in the southeast and southwest portions of the project site. A cellular tower owned by Sprint is also located on the project site. As noted above, monitoring wells, extraction wells, and soil vapor monitoring wells also remain on site.

4.8.1.3 Historical Site Uses

Historically, the project site was part of the Guglielmetti Dairy from 1909 through the late 1940s and continued to be used for agriculture, including cultivation of row crops and pastureland, through the mid-1960s. Construction of the San Diego Stadium (currently SDCCU Stadium) began in the mid-1960s, resulting in the channelization of the San Diego River to the south of the project site. The stadium opened in 1967, with notable upgrades/expansions occurring in 1983 and 1997 (Appendix 4.8-2).

4.8.1.4 Previous Environmental Investigations

Dudek reviewed the available environmental investigations completed for the project site, as listed above in Documents Reviewed for Analysis; these documents are included as Appendices 4.8-1 through 4.8-5. The following is a summary of the known current or past environmental hazardous waste and/or materials conditions on the project site, based on the findings of these investigations.

Kinder Morgan Energy Partners Mission Valley Terminal

Between 1987 and 1991, there was an unauthorized release of approximately 200,000 gallons of gasoline from the MVT facility. The resulting groundwater contamination plume migrated southward, ultimately impacting the project site. Extensive investigations and remediation have occurred both on the MVT site and on the project site under Cleanup and Abatement Order (CAO) 92-01 issued by the San Diego RWQCB. In July 2016, the San Diego RWQCB concluded that the off-Terminal remediation had achieved the objectives stated in the cleanup order, and approved discontinuance of site remediation and post-remediation monitoring activities. Specifically, on July 15, 2016, the San Diego RWQCB issued Addendum No. 8 to CAO 92-01, which states,

groundwater and remediation monitoring are no longer necessary in the off-Terminal² area because the alternative groundwater cleanup levels have been attained . . . the dischargers installed a hydraulic containment barrier utilizing extraction wells RW-35, RW-36, and RW-37 to prevent petroleum hydrocarbon waste constituents in groundwater beneath the terminal from migrating beyond the MVT property limits . . . and continued monitoring of sentinel wells (T-11, R-10, R-43AS-AD, R-79AS-AM-AD, and R-87AS) is necessary to evaluate hydraulic containment effectiveness near the property boundary.

In addition, with the exception of the five sentinel wells, Addendum No. 8 requires “all off-Terminal wells and borings installed for the purpose of investigating, remediating, and monitoring the unauthorized off-Terminal pollution must be properly destroyed or transferred in accordance with applicable local and State requirements.”

A copy of Addendum No. 8 to CAO 92-01 is provided as Appendix 4.8-6. An abandonment permit, valid June 26, 2019, through October 24, 2019, was issued by the County of San Diego (County) for destruction of the remaining 318 wells (not including the sentinel wells). Therefore, the remaining wells should be removed before October 2019. A copy of the permit is included as Appendix 4.8-7. Four of the five sentinel wells to remain as stipulated in Addendum No. 8 are located on the project site in the northeastern corner of the parking area, near San Diego Mission Road, as shown on Figure 4.8-1, Project Site Hazards. The fifth well, R-43AS-AD, is located on the northern side of San Diego Mission Road, north of the project site. The Geosyntec report indicates the sentinel wells will continue to be monitored, and although further monitoring and remediation is no longer required, it is possible that residual contamination not previously identified during the investigations may be encountered in the future (Appendix 4.8-2).

The 2019 investigation conducted by Group Delta (Appendix 4.8-3) states that petroleum contamination was not present in soil above Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Note 3 or U.S. Environmental Protection Agency (EPA) regional screening levels (RSLs) (whichever was lower). Diesel-range hydrocarbons were detected in groundwater at concentrations between 55 and 240 micrograms per liter (µg/L). The Group Delta report states there are no state or federal maximum contaminant levels for diesel-range hydrocarbons. However, the concentration of 240 µg/L is above the Tier 1 environmental screening level (ESL) of 100 µg/L for residential use (SFBRWQCB 2019).³ The ESLs include screening levels for petroleum hydrocarbons in soil and groundwater in the State of California and are referenced by DTSC and San Diego Department of

² Refers to the portion of the groundwater contamination plume that extends onto the project site.

³ The ESLs provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. They are intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. The ESL documents are prepared by staff of the San Francisco Bay RWQCB, but have been used on a variety of sites under regulatory guidance throughout the state of California. Information provided in these documents is not intended to establish policy or regulation.

Environmental Health as they are the only current screening levels that include fuel hydrocarbons. Gasoline-range hydrocarbons and volatile organic compounds (VOCs) were detected in soil gas; benzene, ethylbenzene, and methyl tert-butyl ether were detected in soil gas samples at concentrations exceeding the EPA Vapor Intrusion Screening Levels (VISLs).

Former Underground Storage Tanks

The 2015 Phase I Environmental Site Assessment (Appendix 4.8-1) identified four former underground storage tanks (USTs) that were installed on the project site, all of which have been removed. All of the USTs were located in the southwestern portion of the project site, near the maintenance buildings.

One of the former USTs was removed in 1991. The AECOM report states that “although the UST was removed and the case was closed, it does not appear that soil samples were collected below any associated fuel dispensers or underground piping or if underground piping associated with the UST was removed and properly disposed.” This UST was reportedly located near the pesticide building in the southwestern corner of the project site.

The AECOM report also identified a historic leaking UST (LUST) as found in the Environmental Data Resources Records Search conducted for the phase I environmental site assessment. The LUST was reportedly active in 2006 and 2007. No additional information was obtained. AECOM requested regulatory files from the San Diego County Department of Environmental Health (DEH); no records of a LUST were identified. Dudek conducted a review of the State Water Quality Control Board GeoTracker database (GeoTracker 2019) and the California Environmental Protection Agency Regulated Site Portal (CalEPA 2019) and did not find any information regarding a LUST at the project site.

Other Soil and Groundwater Contamination

The reports reviewed each summarize various findings of contamination in soil and groundwater on the project site, including contamination from the MVT site as listed above, jet fuel–contaminated soil and groundwater discovered during installation of the transformer building in the southeastern portion of the project site (Appendix 4.8-2), and two tanker truck rollovers which occurred at the intersection of San Diego Mission Road and Mission Village Drive.

Jet fuel–impacted soil and groundwater were reportedly encountered in 1995 in the southeastern area of the project site during the installation of the foundation for the Metropolitan Transit System Trolley line transformer building. A spill report indicated approximately 1,000 gallons of dissolved jet fuel mixed with water was encountered during dewatering activities associated with construction activities. Impacted water and contaminated soil encountered during construction activities were reportedly containerized and shipped off site. In 2019, Group Delta Consultants conducted a limited soil and groundwater investigation near the fuel pipeline to screen for potential soil and groundwater contamination associated with any pipeline leakage (Appendix 4.8-5). No field evidence of VOC-impacted soil was observed during the investigation. Although some low residual total petroleum hydrocarbons (THP) concentrations were detected in the soil and groundwater samples, none of the concentrations exceeded applicable screening levels. No VOCs were detected in soil or groundwater samples except for acetone in one soil sample at a low concentration significantly below the RSL. Based on the investigation, no evidence of a fuel pipeline leak was observed.

As to tanker truck rollovers, one truck rollover, which occurred in April 2013, resulted in the release of approximately 3,500 gallons of ethanol into soil and groundwater. Various environmental investigations, including multiple soil sampling events, subsequently occurred to delineate potential impacts. It was determined that ethanol impacted a

localized area of shallow groundwater in the vicinity of the spill, and that aerobic and/or anaerobic degradation processes mitigated groundwater impacts via natural attenuation (Appendix 4.8-2). Based upon the soil and groundwater sampling data presented, the DEH determined no further action was warranted to delineate or remediate subsurface impacts associated with the ethanol spill. The case was closed in February 2014.

In December 2005, a tanker truck containing gasoline overturned at the southeast corner of Mission Village Drive and San Diego Mission Road, resulting in a gasoline spill and fire; impacts from the release were investigated and remediated under the direction of the DEH and the case was granted closure in 2007. A tanker truck rollover occurred at the corner of Mission Village Drive and San Diego Mission Road on June 20, 2019. The rollover reportedly resulted in 40 to 60 gallons of ethanol released onto the street and stadium parking lot on the project site (Avitabile 2019).

As discussed above, Group Delta conducted an environmental investigation in 2019. The investigation did not identify petroleum contamination in soil above DTSC HERO Note 3 or RSLs. Further, VOCs, polycyclic aromatic hydrocarbons, and pesticides were infrequently detected at low concentrations below the RSLs. However, Dudek notes that diesel detected in groundwater as reported by Group Delta was above the San Francisco Bay RWQCB RSL referenced above. However, groundwater sampling was limited to the northeast corner of the project site, near the MVT facility. It is, therefore, possible that remaining unidentified contamination may be present in groundwater beneath the project site due to historical releases, in addition to the slightly elevated groundwater contamination.

The Group Delta investigation identified arsenic in soil in one location slightly above the published background concentration of 12 milligrams per kilogram (mg/kg) for Southern California. The detection of 12.1 mg/kg was identified in surface soils in the northeastern portion of the project site.

Asbestos, Lead-Based Paint, and Universal Wastes

Aurora Industrial Hygiene conducted a survey of hazardous building materials in the stadium and outlying buildings on the project site (Appendix 4.8-4). The survey included the stadium, maintenance building, blue shed building, garage, bathroom building, front guard shack, guard shacks A and B, ACE parking building, four bunker buildings, Brazilian Futbol Academi building, and the Sprint cell phone tower and building. The survey did not include the trolley station or associated structures. Approximately 600 samples were collected of suspect asbestos-containing materials, in-situ testing was conducted for suspect lead-containing materials, and an inventory of universal waste was compiled. Multiple areas within the stadium tested positive for asbestos, as well as materials in the bunkers, the bathroom building, the ACE parking building, and the garage. Multiple areas within the stadium also tested positive for lead-based paint and lead-containing components (i.e., non-painted materials with greater than or equal to 1.0 milligram per square centimeter of lead). No outlying structures had materials that tested positive for lead. Universal wastes identified on the project site include lights, self-illuminating exit signs, fluorescent light fixtures, thermostats, TVs and monitors, fire extinguishers, air conditioning units, speakers, lit signs, emergency fire alarms and lights, and security cameras. These items were identified throughout the stadium and in the outlying buildings.

Aboveground Storage Tanks and Hazardous Materials

As described in the 2015 Phase I Environmental Site Assessment (Appendix 4.8-1), an on-site maintenance facility is located on the southwest corner of the project site. The maintenance area stores hazardous materials, petroleum products, paints, pesticides, and herbicides for use on site. The storage containers are generally 55-gallons drums or smaller. There is also a 1,500-gallon two-compartment aboveground storage tank that stores gasoline and diesel located in the maintenance area. Two generators, each with an internal diesel reservoir (200-gallon and 50-gallon),

are located on the project site. Hazardous wastes, including universal wastes and used petroleum products, are stored on the project site in the maintenance area.

Pesticides

Based on the historical use of the project site as agricultural in the early 1900s through the mid-1960s, and that the area southwest of the project site south of the San Diego River was utilized for agricultural purposes from 1985 to 2005, there is a potential for residual concentrations of pesticides to be present in shallow soil. However, soil samples collected by Group Delta did not have detected pesticides above EPA RSLs. In addition, construction of the site in the mid-1960s required fill materials to be brought in, and the site was subsequently paved. Therefore, it is unlikely that residual pesticides that may remain in shallow soils would be a concern to the project site.

4.8.1.5 Fire Hazards and Emergency Response

The northern and southern edges of the project site are located within Very High Fire Hazard Severity Zones (VHFHSZ) as mapped by the California Department of Forestry and Fire Protection and the City of San Diego Fire-Rescue Department (please see Section 4.18, Wildfire, for an analysis of the Project's relationship to VHFHSZ). The project site lies within the City of San Diego Fire-Rescue Department jurisdiction (SDFD 2009).

The City of San Diego Office of Homeland Security oversees the City's emergency prevention and protection program, mitigation and finance program, response and recovery program, and regional training program. Through these programs, the City of San Diego Office of Homeland Security supports and coordinates numerous risk management planning efforts; trains City employees; assists with the integration of emergency plans; ensures information flow to the public to assist in their emergency preparation and response; interfaces with County, state, and federal jurisdictions; maintains the City's two emergency operations centers; and secures grants from state and federal agencies related to homeland security (City of San Diego Office of Homeland Security 2017).

The City is also responsible for the development and maintenance of the emergency operational documents and guides for the existing SDCCU Stadium (City of San Diego 2018). Current SDCCU Stadium emergency response procedures and evacuation plan include procedures for evacuating the stadium as well as for emergency responses to fire, earthquake or building collapse, explosions, chemical spills, suspicious packages, bomb threats, power outages, and flooding.

4.8.1.6 Schools

No existing private or public schools serving students from pre-kindergarten through 12th grade are located within 0.25 miles of the project site. The nearest school to the project site is Juarez Elementary School at 2633 Melbourne Drive, located approximately 0.38 miles to the north. The 2019 City of San Diego Draft Mission Valley Community Plan Update shows a potential future elementary school on the project site; however, at this time, an elementary school is not proposed as part of the project.

4.8.1.7 Airports

The proposed project is located approximately 2 miles south/southeast of the Montgomery Field Airport. According to the Montgomery Field Airport Land Use Compatibility Plan (ALUCP), the project site is within the Airport Influence Area of Montgomery Field and specifically within Review Area 2 of the airport. Height limitations are the only restriction placed on land uses within Review Area 2, especially for projects located in areas of high terrain,

according to the Montgomery Field ALUCP. Elevations of the project site range from approximately 50 feet to 80 feet above mean sea level (amsl), while elevations across Montgomery Field Airport range from approximately 420 feet to 430 feet amsl. Review Area 2 also includes Airspace Protection Areas and Overflight Notification Areas (San Diego County Airport Land Use Commission 2010).

4.8.2 Relevant Plans, Policies, and Ordinances

Several federal, state, and local plans, policies, and regulations control the storage, use, handling, disposal, and transport of hazardous materials and waste in order to protect public health and the environment. Additional regulations exist to protect workers on the job, and still others serve to formulate emergency and evacuation procedures. The regulations applicable to the proposed project and the regulatory agencies that provide oversight and enforcement are discussed in this section.

Federal

U.S. Environmental Protection Agency

Title 40 U.S. Code of Federal Regulations, Chapter 1, Subchapter I, Parts 260–265 – Solid Waste Disposal Act/Federal Resource Conservation and Recovery Act of 1976

The Solid Waste Disposal Act, as amended and revised by the Resource Conservation and Recovery Act, establishes requirements for the management of solid wastes (including hazardous wastes), landfills, USTs, and certain medical wastes. The statute also addresses program administration; implementation and delegation to the states; enforcement provisions and responsibilities; and research, training, and grant funding. Provisions are established for the generation, storage, treatment, and disposal of hazardous waste, including requirements addressing generator record keeping, labeling, shipping paper management, placarding, emergency response information, training, and security plans.

Title 40 U.S. Code of Federal Regulations, Chapter 1, Subchapter I, Part 273 – Universal Waste

This regulation governs the collection and management of widely generated waste, including batteries, pesticides, mercury-containing equipment, and bulbs. This regulation streamlines the hazardous waste management standards and ensures that such waste is diverted to the appropriate treatment or recycling facility.

Title 40 U.S. Code of Federal Regulations, Chapter 1, Subchapter D, Part 112 – Oil Pollution Prevention

Oil Pollution Prevention regulations require the preparation of a spill prevention, control, and countermeasure plan if oil is stored in excess of 1,320 gallons in aboveground storage (or if there is a buried capacity of 42,000 gallons). Spill prevention, control, and countermeasure regulations place restrictions on the management of petroleum materials and, therefore, have some bearing on hazardous materials management.

Title 40 U.S. Code of Federal Regulations, Chapter 1, Subchapter C, Part 61 – National Emission Standards for Hazardous Air Pollutants, Subpart M – National Emission Standard for Asbestos

This regulation established National Emission Standards for Hazardous Air Pollutants and names asbestos-containing material (ACM) as one of these materials. ACM use, removal, and disposal are regulated by the EPA

under this law. In addition, notification of friable ACM removal prior to a proposed demolition project is required by this law.

Title 42 U.S. Code of Federal Regulations, Chapter 116 – Emergency Planning and Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act provides for public access to information about chemical hazards. This law and its regulations, included in Title 40 U.S. Code of Federal Regulations, Parts 350–372, establish four types of reporting obligations for facilities storing or managing specified chemicals: emergency planning, emergency release notification, hazardous chemical storage reporting requirements, and toxic chemical release inventory. The EPA maintains a database, termed the Toxic Release Inventory, which includes information on reportable releases to the environment.

Title 15 U.S. Code of Federal Regulations, Chapter 53, Subchapter I, Section 2601 et seq. – Toxic Substances Control Act of 1976

The Toxic Substances Control Act of 1976 empowers the EPA to require reporting, record keeping, and testing, as well as to place restrictions on the use and handling of chemical substances and mixtures. This regulation phased out the use of asbestos and ACM in new building materials and it also sets requirements for the use, handling, and disposal of ACM and lead-based paint (LBP) waste. As discussed above, the EPA has also established the National Emission Standards for Hazardous Air Pollutants, which govern the use, removal, and disposal of ACM as a hazardous air pollutant, mandate the removal of friable ACM before a building is demolished, and require notification before demolition. In addition to asbestos, ACM, and LBP requirements, this regulation also banned the manufacturing of polychlorinated biphenyls (PCBs) and sets standards for the use and disposal of existing PCB-containing equipment or materials.

Regional Screening Levels

The EPA provides regional screening levels for chemical contaminants to provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water (drinking water). RSLs are available on the EPA's website and provide a screening level calculation tool to assist risk assessors, remediation project managers, and others involved with risk assessment and decision making. RSLs are also used when a site is initially investigated to determine if potentially significant levels of contamination are present to warrant further investigation. In California, DTSC HERO incorporated the EPA RSLs into the HERO human health risk assessment. HERO created Human Health Risk Assessment Note 3, which incorporates HERO recommendations and DTSC-modified screening levels based on review of the EPA RSLs. The DTSC-modified screening level should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

U.S. Department of Labor, Occupational Safety and Health Administration

Title 29 U.S. Code of Federal Regulations, Part 1926 et seq. – Safety and Health Regulations for Construction

These standards require employee training; personal protective equipment; safety equipment; and written procedures, programs, and plans for ensuring worker safety when working with hazardous materials or in hazardous work environments during construction activities, including renovations and demolition projects and the handling, storage, and use of explosives. These standards also provide rules for the removal and disposal of asbestos, lead, LBP, and other lead materials. Although intended primarily to protect worker health and safety, these requirements also guide general facility safety. This regulation also requires that an engineering survey is prepared prior to demolition.

Title 29 U.S. Code of Federal Regulations, Part 1910 et seq. – Occupational Safety and Health Standards

Under this regulation, facilities that use, store, manufacture, handle, process, or move hazardous materials are required to conduct employee safety training, inventory safety equipment relevant to potential hazards, have knowledge on safety equipment use, prepare an illness prevention program, provide hazardous substance exposure warnings, prepare an emergency response plan, and prepare a fire prevention plan.

U.S. Department of Transportation

Title 49 U.S. Code of Federal Regulations, Part 172, Subchapter C – Shipping Papers

The U.S. Department of Transportation established standards for the transport of hazardous materials and hazardous wastes. The standards include requirements for labeling, packaging, and shipping hazardous materials and hazardous wastes, as well as training requirements for personnel completing shipping papers and manifests.

Federal Aviation Administration

Title 14 U.S. Code of Federal Regulations, Chapter 1, Subchapter E, Part 77 – Aeronautics and Space – Safe, Efficient Use, and Preservation of the Navigable Airspace

This regulation establishes requirements for notifying the Federal Aviation Administration (FAA) of certain construction activities and alterations to existing structures, in order to ensure there are no obstructions to navigable airspace. For example, projects that include construction or alteration exceeding 200 feet in height above ground level are required to notify the FAA.

Title 14 U.S. Code of Federal Regulations, Part 99, Subpart A, Section 99.7 – Aeronautics and Space – Special Security Instructions

Pursuant to this regulation, special security instructions go into effect for aircraft operations 1 hour before the time of the event until 1 hour after the end of the event. Such operations are prohibited within 3 nautical miles up to and including 3,000 feet above ground level of stadiums having a capacity of 30,000 or more people and hosting Major League Baseball, NFL, or National Collegiate Athletic Association Division 1 games, as well as National Association for Stock Car Auto Racing Sprint Cup, Indy Car, and Champ Series races.

Federal Response Plan

The Federal Response Plan of 1999, as amended in 2003 (FEMA 2003) is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency, (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act and individual agency statutory authorities, and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what measures are required to protect against structural fires. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

State

California Unified Program for Management of Hazardous Waste and Materials

California Health and Safety Code, Division 20, Chapter 6.11, Sections 25404–25404.9 – Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Under the California Environmental Protection Agency, the DTSC and Enforcement and Emergency Response Program administer the technical implementation of California’s Unified Program, which consolidates the administration, permit, inspection, and enforcement activities of several environmental and emergency management programs at the local level (DTSC 2019). Certified Unified Program Agencies (CUPAs) implement the hazardous waste and materials standards. This program was established under the amendments to the California Health and Safety Code made by Senate Bill 1082 in 1994. The following programs make up the Unified Program:

- Aboveground Petroleum Storage Act Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention (CalARP) Program
- Hazardous Materials Release Response Plans and Inventories (Hazardous Materials Business Plans [HMBPs])
- Hazardous Material Management Plans and Hazardous Material Inventory Statements
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (Tiered Permitting) Program
- Underground Storage Tank Program

The CUPA for the City of San Diego is the County DEH, Hazardous Materials Division.

Title 19 California Code of Regulations, Chapter 2, Subchapter 3, Sections 2729–2734/California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500–25520

This regulation requires the preparation of an HMBP by facility operators. The HMBP identifies the hazards, storage locations, and storage quantities for each hazardous chemical stored on site. The HMBP is submitted to the CUPA for emergency planning purposes. The project site is currently subject to these requirements and there is an HMBP in place.

Hazardous Waste Management

Title 22 California Code of Regulations, Division 4.5 – Environmental Health Standards for the Management of Hazardous Waste

In the State of California, the DTSC regulates hazardous wastes. These regulations establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the California Hazardous Waste Control Act and federal Resource Conservation and Recovery Act. As with federal requirements, waste generators must determine if their wastes are hazardous according to specified characteristics or lists of wastes. Hazardous waste generators must obtain identification numbers; prepare manifests before transporting waste off site; and use only permitted treatment, storage, and disposal facilities. Standards also include requirements for record keeping, reporting, packaging, and labeling. Additionally, while not a federal requirement, California requires that hazardous waste be transported by registered hazardous waste transporters.

In addition, Chapter 31, Waste Minimization, Article 1, Pollution Prevention, and the Hazardous Waste Source Reduction and Management Review of these regulations require that generators of 12,000 kilograms/year of typical, operational hazardous waste evaluate their waste streams every 4 years and, as applicable, select and implement viable source reduction alternatives. This act does not apply to nontypical hazardous waste, including ACM and PCBs, among others).

Title 22 California Health and Safety Code, Division 20, Chapter 6.5 – California Hazardous Waste Control Act of 1972

This legislation created the framework under which hazardous wastes must be managed in California. It provides for the development of a state hazardous waste program (regulated by DTSC) that administers and implements the provisions of the federal Resource Conservation and Recovery Act program. It also provides for the designation of California-only hazardous wastes and development of standards that are equal to or, in some cases, more stringent than, federal requirements. The CUPA is responsible for implementing some elements of the law at the local level.

Human Health Risk Assessment Note 3 – DTSC-Modified Screening Levels

Human Health Risk Assessment Note 3 presents recommended screening levels (derived from the EPA RSLs using DTSC-modified exposure and toxicity factors) for constituents in soil, tap water, and ambient air. The DTSC-modified screening level should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

Aboveground and Underground Petroleum Storage Tanks

Title 22 California Health and Safety Code, Division 20, Chapter 6.67, Sections 25270 to 25270.13 – Aboveground Petroleum Storage Act

This law applies if a facility is subject to spill prevention, control, and countermeasure regulations under Title 40 U.S. Code of Federal Regulations, Part 112, or if the facility has 10,000 gallons or more of petroleum in any or combination of aboveground storage tanks and connecting pipes. If a facility exceeds these criteria, it must prepare a spill prevention, control, and countermeasure plan.

Low-Threat Underground Storage Tank Case Closure Policy

This policy applies to petroleum UST sites subject to Chapter 6.7 of the California Health and Safety Code. This policy establishes both general and media-specific criteria. If both the general and applicable media-specific criteria are satisfied, then the LUST case is generally considered to present a low threat to human health, safety, and the environment. This policy recognizes, however, that even if all of the specified criteria in the policy are met, there may be unique attributes of the case or site-specific conditions that increase the risk associated with the residual petroleum constituents. In these cases, the regulatory agency overseeing corrective action at the site must identify the conditions that make case closure under the policy inappropriate.

Regional water boards and local agencies have been directed to review all cases in the petroleum UST cleanup program using the framework provided in this policy. These case reviews shall, at a minimum, include the following for each UST case:

1. Determination of whether or not each UST case meets the criteria in this policy or is otherwise appropriate for closure based on a site-specific analysis.
2. If the case does not satisfy the criteria in this policy or does not present a low-risk based upon a site-specific analysis, impediments to closure shall be identified.
3. Each case review shall be made publicly available on the State Water Board's GeoTracker web site in a format acceptable to the Executive Director.

Environmental Cleanup Levels

Environmental Screening Levels

ESLs provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. They are intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. The ESLs are prepared by the staff of the San Francisco Bay RWQCB. While ESLs are not intended to establish policy or regulation, they can be used as a conservative screening level for sites with contamination. Other agencies in California may elect to use the ESLs; in general, the ESLs could be used at any site in the State of California, provided all stakeholders agree (SFBRWQCB 2019). Dudek's recent experience indicates that regulatory agencies in the San Diego region use ESLs as regulatory cleanup levels. The ESLs are not generally used at sites where the contamination is solely related to an LUST; those sites are instead subject to the Low-Threat Underground Storage Tank Closure Policy.

California Integrated Waste Management Board

Title 14 California Code of Regulations, Division 7, Chapter 8.2 – Electronic Waste Recovery and Recycling Act of 2003

This regulation sets requirements regarding the use and disposal of hazardous substances in electronics. When discarded, the DTSC considers the following materials manufactured before 2006 to be hazardous waste: cathode ray tube devices, liquid-crystal display (LCD) desktop monitors, laptop computers with LCD displays, LCD televisions, plasma televisions, and portable DVD Players with LCD screens.

California Department of Transportation/California Highway Patrol

Title 13 California Code of Regulations, Division 2, Chapter 6

California regulates the transportation of hazardous waste originating or passing through the state. The California Highway Patrol (CHP) and the California Department of Transportation have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakages and spills of material in transit and provides detailed information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of CHP. CHP conducts regular inspections of licensed transporters to ensure regulatory compliance. The California Department of Transportation has emergency chemical spill identification teams at locations throughout the state. Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests.

Occupational Safety and Health

Title 8 California Code of Regulations – Safety Orders

Under the California Occupational Safety and Health Act of 1973, the California Occupational Safety and Health Administration (CalOSHA) is responsible for ensuring safe and healthful working conditions for California workers. CalOSHA assumes primary responsibility for developing and enforcing workplace safety regulations in Title 8 of the California Code of Regulations. CalOSHA hazardous substances regulations include requirements for safety training, availability of safety equipment, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. CalOSHA also enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances. The hazard communication program also requires that material safety data sheets be available to employees and that employee information and training programs be documented.

In Division 1, Chapter 4, Subchapter 4, Construction Safety Orders, construction safety orders are listed and include rules for demolition, excavation, explosives work, working around fumes and vapors, pile driving, vehicle and traffic control, crane operation, scaffolding, fall protection, and fire protection and prevention, among others.

CalOSHA Asbestos and Carcinogen Unit enforces asbestos standards in construction, shipyards, and general industry. This includes identification and removal requirements of asbestos in buildings, as well as health and safety requirements of employees performing work under the Asbestos-In-Construction regulations (8 CCR 1529). Only a CalOSHA-Certified Asbestos Consultant can provide asbestos consulting (as defined by the Business and Professions Code, 7180–7189.7, and triggered by the same size and concentration triggers as for registered contractors). These services include building inspection, abatement project design, contract administration, supervision of site surveillance technicians, sample collection, preparation of asbestos management plans, and clearance air monitoring.

Lead-Based Paint

The California Department of Public Health enforces lead laws and regulations related to the prevention of lead poisoning in children, prevention of lead poisoning in occupational workers, accreditation and training for construction-related activities, lead exposure screening and reporting, disclosures, and limitations on the amount

of lead found in products. Accredited lead specialists are required to find and abate lead hazards in construction projects and to perform lead-related construction work in an effective and safe manner.

California Building Standards Commission

Title 24 California Code of Regulations – California Building Standards Code

The California Building Standards Code is a compilation of three types of building standards from three different sources:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Among other rules, the California Building Standards Code contains requirements regarding the storage and handling of hazardous materials. The chief building official at the local government level (i.e., the City) must inspect and verify compliance with these requirements prior to issuance of an occupancy permit.

California Building Code – Chapter 7A

This chapter of the California Building Standards Code establishes minimum standards for buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire.

California Forestry and Fire Protection

2010 Strategic Fire Plan for California

California Public Resources Code, Sections 4114 and 4130, authorize the State Board of Forestry to establish a fire plan that establishes the levels of statewide fire protection services for State Responsibility Area lands. These levels of service recognize other fire protection resources at the federal and local level that collectively provide a regional and statewide emergency response capability. In addition, California's integrated mutual aid fire protection system provides fire protection services through automatic and mutual aid agreements for fire incidents across all ownerships. The California fire plan is the state's road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health.

California State Fire Marshal

Title 19 California Code of Regulations, Division 1, Chapter 10 – Explosives

This regulation addresses the sale, transportation, storage, use, and handling of explosives in California. Requirements for obtaining permits from the local fire chief having jurisdiction and blasting guidelines (such as blasting times, warning devices, and protection of adjacent structures and utilities) are also explained in Chapter 10 of Title 19.

California Emergency Services Act

Under the Emergency Services Act (California Government Code, Section 8550 et seq.), the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including the EPA, CHP, RWQCBs, air quality management districts, and county disaster response offices.

California Accidental Release Prevention Program

Similar to the EPA Risk Management Program, the CalARP Program (19 CCR 2735.1 et seq.) regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. Under the regulations, industrial facilities that handle hazardous materials above threshold quantities are required to prepare and submit an HMBP to the local CUPA via the California Environmental Reporting System. As part of the HMBP, a facility is further required to specify applicability of other state regulatory programs. The overall purpose of CalARP is to prevent accidental releases of regulated substances and reduce the severity of releases that may occur. The CalARP Program meets the requirements of the EPA Risk Management Program, which was established pursuant to the Clean Air Act amendments.

Local

Because SDSU is a component of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, SDSU has considered the following planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to federal and state agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code. However, for informational purposes, the proposed project has considered local planning documents.

Asbestos and Air Quality

Regulation XI, Subpart M – National Emission Standards for Asbestos, Rule 361.145 – Standard for Demolition and Renovation

The San Diego Air Pollution Control District requires that the proponent of a proposed demolition or renovation project submit an asbestos demolition or renovation operational plan (notice of intention) at least 10 days prior to the onset of any asbestos stripping or removal work. It should be noted that the notice of intention is required for all demolition projects, regardless of the presence of asbestos.

Airport Land Use Compatibility

Montgomery Field Airport Land Use Compatibility Plan

As further described in Section 4.10, Land Use and Planning, the County Airport Land Use Commission's ALUCPs serve to promote compatibility between airports and the land uses around them. ALUCPs are required to review land use plans, development proposals, and certain airport development plans for their consistency with the land

use compatibility plan (San Diego County Airport Land Use Commission 2010). In the case of the proposed project, the applicable plan is the Montgomery Field ALUCP.

San Diego County Emergency Services

2018 Unified San Diego County Emergency Services Organization and County of San Diego Emergency Operations Plan

The Emergency Operations Plan includes a comprehensive emergency management system that provides planned response in disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. The plan also describes tasks and overall responsibilities for protecting life and property and identifies sources of outside support. The plan is for use by the County and its cities to respond to major emergencies and disasters (Unified San Diego County Emergency Services Organization 2018).

City of San Diego Urban Development and Safety

2008 City of San Diego General Plan – Public Facilities, Services, and Safety Element

The City of San Diego General Plan includes goals and policies related to the City's disaster preparedness program, which focuses on the prevention of, response to, and recovery from natural, technological, and human-made disasters (City of San Diego 2018). The City's disaster preparedness efforts include oversight of the City's emergency operations center, and the City participates in the County's Multi-Jurisdictional Hazard Mitigation Plan, which identifies risks posed by both natural and human-made disasters. The City is also responsible for development and maintenance of emergency operational documents for the existing SDCCU Stadium.

2015 City of San Diego Land Development Manual, Project Submittal Requirements, Section 3 – Construction Permits – Grading and Public Right-of-Way

This section of the City's Land Development Manual applies to construction permit applications for grading on private property, as well as to the construction, reconstruction, or repair of improvements within the public right-of-way. City guidelines for obtaining grading permits and public right-of-way permits are incorporated into the Land Development Manual, and, depending on the characteristics of the Project and project site, the permittee may be required to provide a grading plan, construction plan, geotechnical study, drainage study, water quality study, traffic control plan, and structural calculations. In general, this review is a ministerial process whereby approval is granted if the regulations are met.

San Diego Municipal Code, Chapter 5: Public Safety, Morals, and Welfare, Article 5: Fire Protection and Prevention

Chapter 5, Article 5 of the City of San Diego Municipal Code (referred to as the Fire Code) includes portions of the California Fire Code and IFC. As of January 1, 2014, the City of San Diego adopted the 2013 California Codes and its referenced standards. However, local amendments to the 2013 edition of the California Fire Code are currently under review and have not yet been adopted.

San Diego Municipal Code, Chapter 5: Public Safety, Morals, and Welfare, Article 3: Firearms, Dangerous Weapons, Explosives, and Hazardous Trades, Sections 53.01 and 53.01.1

An explosives permit from the City fire chief is typically obtained when blasting would occur (also under California Health and Safety Code, Section 12101).

4.8.3 Significance Criteria

The significance criteria used to evaluate the Project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the Project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.8.4 Impacts Analysis

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Demolition and Construction

Hazardous materials that may be used during construction and demolition activities of the proposed project include gasoline, diesel fuel, oil, lubricants, grease, welding gases (e.g., acetylene, oxygen, and argon), solvents, paints, and explosives. These materials would be used and stored in designated construction staging areas within the boundaries of the project site and would be transported, handled, and disposed of in accordance with all applicable federal, state, and local laws and regulations. The use of these materials for their intended purpose would not pose a significant risk to the public or environment. Hazardous wastes accumulated during Project construction may include unused or off-specification paint and primer, paint thinner, solvents, and vehicle- and equipment maintenance-related materials, many of which can be recycled. Empty containers for such materials (e.g., drums and totes) may also be returned to vendors, if possible. Hazardous waste that cannot be recycled would be transported by a licensed hazardous waste hauler using a Uniform Hazardous Waste Manifest and disposed of at an appropriately permitted facility. The use of these substances is subject to applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with hazardous materials.

Given the age of the current stadium (built in 1967) and information provided in the Asbestos, Lead-Based Paint, and Universal Waste Survey report prepared for the proposed project (Appendix 4.8-4), ACM, LBP, and universal

wastes (some potentially containing PCBs) are present in the existing stadium and associated structures, and would be disturbed during the demolition process. In addition, as discussed in the Hazardous Materials Technical Report (Appendix 4.8-2), it is also possible that PCB-containing materials are present in existing electrical equipment in several electrical rooms in the stadium. Additionally, remaining hazardous materials and hazardous wastes associated with site maintenance, including aboveground storage tanks, would be disturbed during the demolition process if not removed. Due to the potential to encounter asbestos, ACM, LBP, universal wastes, hazardous materials, and PCB-containing items during the demolition process, the proposed project has the potential to create a significant hazard to the public or the environment through the routine transport or disposal of hazardous materials (**Impact HAZ-1**).

Demolition would include abatement of the existing stadium and outlying buildings for positive asbestos- and lead-containing materials, PCB-containing items, universal wastes, and other hazardous materials in accordance with mitigation measure (**MM**) **HAZ-1**. Once abated, the existing stadium would be prepared for demolition, which may include implosion. Implosion would be initiated through the detonation of explosive materials in one coordinated event. Implosion methods use highly specialized explosives to undermine the supports of a structure so it collapses either within its own footprint or in a predetermined path. The use of explosives on the project site would create a significant hazard to the public due to noise, dust, and potential debris impacts (**Impact HAZ-2**). Demolition and implosion of the existing stadium would follow a demolition plan in accordance with **MM-HAZ-2**. After demolition, the remaining materials would be sorted for reuse, recycling, and landfill disposal. Materials to be hauled off the project site would be transported in accordance with local, state, and federal laws and regulations. Identification, management, and disposal of previously unidentified hazardous materials, wastes, and tanks, should they be encountered, would be discussed in a hazardous materials contingency plan (HMCP), which would be developed prior to demolition and construction in accordance with **MM-HAZ-3**.

The Group Delta environmental investigation identified arsenic in soil in one location slightly above the published background concentration of 12 mg/kg for Southern California (Chernoff et al. n.d.). The detection of 12.1 mg/kg was identified in surface soils in the northeastern portion of the project site. Out of 12 samples collected, 10 had detections of arsenic, and 1 had an arsenic concentration above background. The average arsenic concentration in the soil samples was 5.2 mg/kg, and the 95% upper confidence limit of the detected concentrations was also below the background concentration of 12 mg/kg, indicating that the prevalence of arsenic in soil above background concentrations is low (Appendix 4.8-3). Due to regional concentrations of arsenic, applicable regulatory screening levels are almost always exceeded. Therefore, regulators have generally accepted background levels of arsenic as appropriate screening criteria (Duverge 2011). Based on Group Delta's analysis and conclusions, the arsenic detected on the project site is likely representative of background concentrations. As the detected arsenic is representative of background concentrations, no arsenic-focused remediation is required to remove arsenic from the project site; therefore, no impact would occur.

Operation

The operational phase of the proposed project would not be expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Hazardous materials would be limited to use of commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available substances. Proposed Project campus facilities could necessitate the routine transport, use, storage or disposal of hazardous materials associated with scientific research and would be guided by SDSU's current environmental health and safety protocol and procedures to ensure safe handling, storage, and disposal of such materials and chemicals. Although the Project would introduce commercially available potentially hazardous materials to future residents, employees, and visitors of the project site, the use of these substances would be subject to

applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with hazardous materials. Therefore, impacts would be **less than significant**.

As discussed in the previous section above, arsenic in the soil is likely representative of background concentrations which is common in the San Diego area and not regarded as a hazard necessitating specific attention or remediation. Therefore, once operational, any exposure of residents, employees or visitors to the site to arsenic-laden soil would be **less than significant**.

Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Demolition and Construction

As discussed above, the proposed project has the potential to expose the public and the environment to hazards associated with on-site releases of hazardous materials including ACM, LBP, PCB-containing items, universal wastes, and other hazardous materials and wastes present in the existing SDCCU Stadium and outlying buildings (**Impact HAZ-1**). Management of hazardous materials and waste during pre-demolition surveys and abatement activities would be addressed by **MM-HAZ-1**.

During construction, excavation for a below-grade parking structure and grading of surface soils would occur. Based on the findings of previous environmental investigations, as discussed in Section 4.8.1.4, there is a potential that contaminated soil, groundwater, and soil vapor is present on the project site. In the event that these contaminated media are disturbed during construction, a significant hazard to the public or environment could occur should these materials be released (**Impact HAZ-3**). To avoid upset and accident conditions by disturbance and release of contaminated media, an HMCP would be completed and followed in accordance with **MM-HAZ-3**.

The remaining ethanol contamination caused by the April 2013 tanker rollover was closed by the County DEH, stating “the present land use for the site is commercial. Changes to this land use may require reassessment of the property to determine if the revised land use could result in a risk to public health” (DEH 2014). This condition potentially requires additional assessment to determine public health risks if the project site is developed for residential land use. The HMCP that will be completed and followed in accordance with **MM-HAZ-3** would address potential impacts in soil, soil vapor, and groundwater from releases on or near the project site.

As discussed in Section 4.8.1.4, numerous environmental wells were installed on the project site for the purpose of investigating, remediating, and monitoring impacts from the MVT facility. Most of these wells were authorized to be decommissioned and destroyed by the RWQCB. Five wells, four of which remain on the project site, were ordered to remain in order to continue to evaluate the effectiveness of remedial methods under Addendum No. 8 of CAO 92-01. These four wells, as shown on Figure 4.8-1, are not to be removed or disturbed without authorization of RWQCB. Removal, damage, or disturbance of these or any other remaining wells could create an upset or accident condition (**Impact HAZ-4**). A decommissioning and destruction plan for the four sentinel wells would be prepared and approved by RWQCB, which may also require protection or replacement of the wells, and the plan would be followed, in accordance with **MM-HAZ-4**, prior to construction activities which could disturb the wells. As to all additional wells identified on site, decommissioning and destruction or transfer of these wells is assumed to be approved by RWQCB under Addendum No. 8 of CAO 92-01; a similar decommissioning and destruction plan would be prepared and approved in accordance with **MM-HAZ-5**, and wells would be properly decommissioned and destroyed or abandoned in accordance with applicable laws and regulations.

A 10-inch-diameter underground pipeline used to transmit fuel products from the MVT facility to the San Diego Harbor traverses the eastern portion of the project site from north to south. This active pipeline is located along the eastern boundary of the project site. Excavation and construction activities in the area near this pipeline have the potential to damage the pipeline, creating an accident condition that would release hazardous materials to the environment (**Impact HAZ-5**). Kinder Morgan Energy Partners would be consulted prior to commencement of construction, demolition, and implosion activities in accordance with **MM-HAZ-6** to ensure that a plan and necessary precautions are developed and implemented to avoid damage to the pipeline. Thus, any potential hazardous materials encountered on site during demolition and construction activities would be **less than significant with mitigation incorporated**.

Operation

Once operational, the proposed project would not be expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The Project involves a new stadium, campus, housing, commercial, and recreational facilities, with associated landscape and facility maintenance. Hazardous materials would be limited to use of commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available substances. Although the Project would introduce residential units to the project site, resulting in an increased use of commercially available potentially hazardous materials, the use of these substances is subject to applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with hazardous materials.

As discussed in Section 4.8.1.4, the Group Delta investigation identified the presence of VOCs and gasoline range hydrocarbons in soil gas; Benzene, ethylbenzene, and methyl tert-butyl ether were detected in soil gas at concentrations above EPA VISLs. As operation of the proposed project would introduce residential housing and public use spaces onto the project site, the presence of this soil vapor contamination would create a potential release of hazardous materials to the environment, specifically indoor air (**Impact HAZ-6**). Construction and operation of the new buildings would include vapor mitigation measures in accordance with **MM-HAZ-7**. In addition, the Group Delta investigation collected three groundwater samples and identified diesel contamination in one of the samples at a maximum concentration of 240 µg/L. The report stated “there are no State or Federal maximum contaminant levels for TPH-DRO.” However, this concentration is slightly above the Tier 1 ESL of 100 µg/L for residential use. The ESLs are commonly used screening levels for petroleum hydrocarbons in groundwater in the State of California. Dudek’s recent experience indicates that ESLs are used by the San Diego DEH for screening level–evaluation of impacts to soil and groundwater. Therefore, the diesel contamination identified on site is higher than the San Francisco Bay RWQCB Tier 1 RSL, therefore a **significant impact would occur (Impact HAZ-7)**. Further assessment and evaluation of the diesel contamination in groundwater would be required in accordance with **MM-HAZ-3**.

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No existing private or public schools serving students from pre-kindergarten through 12th grade are located within 0.25 miles of the project site. The closest school in close proximity to the project site is Juarez Elementary School at 2633 Melbourne Drive, located approximately 0.38 miles to the north. The Draft Mission Valley Community Plan Update shows a potential future elementary school on the project site; however, at this time, an elementary school is not proposed as part of the Project. Therefore, there are **no impacts**.

Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Construction and Operation

The project site is not listed on a Cortese List database pursuant to Government Code Section 65962.5. However, as a result of the environmental releases discussed in Section 4.8.1.4, and summarized in the previous reports (Appendices 4.8-1 through 4.8-3), the project site and adjoining properties have been identified on other environmental databases that identify contamination on the project site (e.g., conditionally closed LUST, RWQCB groundwater cleanup). These specific listings are discussed in the referenced appendices. As discussed in Section 4.8.1.4, the following impacts on the project site are associated with these hazardous materials sites:

- There is potential for contaminated soil, groundwater, and soil vapor to be present on the project site due to multiple former release incidents; this could be disturbed during construction activities (**Impact HAZ-3**).
- Five groundwater monitoring wells, four of which are on the project site, are under order to remain in place in order to continue to evaluate the effectiveness of remedial methods under Addendum No. 8 of CAO 92-01. Additionally, other wells on the project site associated with off-site impacts have been ordered to be destroyed under Addendum No. 8 of CAO 92-01, but have not yet been decommissioned and/or destroyed. Removal, damage, or disturbance of these monitoring wells could create an upset or accident condition (**Impact HAZ-4**).
- Soil vapor contamination, specifically gasoline range hydrocarbons and VOCs, is present on the project site above EPA VISLs. As operation of the proposed project would introduce residential housing and public use spaces onto the project site, the presence of this soil vapor contamination would create a potential release of hazardous materials to indoor air (**Impact HAZ-6**).
- Diesel contamination was found in one of three groundwater samples above the residential Tier 1 ESL of 100 µg/L. As operation of the proposed project would introduce residential housing onto the project site, the presence of this groundwater contamination would create a potential exposure of the public to hazardous materials (**Impact HAZ-7**).

As discussed in Section 4.8.6, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-7** would be followed, and these hazards would be reduced to **less than significant with mitigation incorporated**.

For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Construction and Operation

The proposed project is located approximately 2 miles south/southeast of the Montgomery Field Airport. According to the Montgomery Field ALUCP, the project site is within the Airport Influence Area of Montgomery Field and specifically within Review Area 2 of the airport. The Montgomery Field ALUCP places height limitations on land uses within Review Area 2, especially for projects located in areas of high terrain. Elevations of the project site range from approximately 50 feet to 80 feet amsl, while elevations across Montgomery Field Airport range from approximately 420 feet to 430 feet amsl. Although the project site is within the Montgomery Field Airport Influence Area, the project's proposed land

uses would be compatible with the Montgomery Field ALUCP, as discussed in Section 4.10. Additionally, the proposed project is located outside of the noise contour boundaries for Montgomery Field.

Review Area 2 includes Airspace Protection Areas and Overflight Notification Areas. A portion of the project site is located within the Overflight Notification Area, and because the project would entail a residential component, CSU/SDSU or its designee is required to file an overflight notification document with the FAA. Further, the ALUCP for Montgomery Field Airport includes two types of Airspace Protection Surfaces: the FAA Height Notification Boundary and Part 77 Airspace Surfaces (discussed previously in the Section 4.8.2, Regulatory Framework portion of this EIR section). The proposed project is located within both zones. CSU/SDSU or its designee is required to file notifications with the FAA when construction or alteration exceeds 200 feet above ground level and/or exceeds an imaginary surface extending outward and upward at defined slopes.

Because the project could result in buildings in excess of 200 feet in height, a **significant impact would occur**. SDSU would be required to notify the FAA of both the new residential buildings (some of which are anticipated to reach heights in excess of 200 feet above ground level) and the anticipated temporary use of construction cranes, which may be used during construction of the stadium and campus/residential buildings. In addition to FAA notifications of the proposed project, the FAA restricts aircraft operations within the vicinity of stadiums exceeding a capacity of 30,000 people during National Collegiate Athletic Association Division I football games (NCAA 2019).

Upon filing with the FAA, the proposed project would be required to receive a Determination of No Hazard to Air Navigation to comply with the applicable FAA regulations. In the event the FAA does not issue their approval via this determination (**Impact HAZ-8**), an alternative plan for the proposed project and/or alternative construction equipment should be considered, and notifications with the FAA should be refiled (**MM-HAZ-8**).

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction

Demolition of the existing SDCCU Stadium and construction of the new stadium and other buildings and facilities would be performed in accordance with the applicable standards, codes, and regulations pertaining to emergency response and evacuation planning, including the Office of Homeland Security Emergency Operations Plan. Therefore, there would be no interference with an adopted emergency response plan or evacuation plan, and **no impacts** would occur.

Operation

Due to the proposed change in land use from an existing stadium facility to a campus, including innovation and residential districts and stadium uses, the proposed project would have the potential to conflict with existing emergency response and evacuation plans. Inconsistencies between existing emergency response and evacuation plans and the proposed project would represent a **significant impact (Impact HAZ-9)**. As required by mitigation measure **MM-HAZ-9**, CSU/SDSU or its designee shall coordinate with the City and County to update plans pertaining to emergency response and evacuation procedures to reflect the new location and design of the new stadium and addition of other proposed project buildings and facilities. See also Section 4.18 for discussion of emergency evacuation plans.

Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Official City of San Diego Fire-Rescue Department mapping of VHFHSZ throughout the City indicates that portions of the northern and southern areas of the project site would be located in a VHFHSZ (see Figure 4.18-2, Fire Hazard Severity Zones, in Section 4.18). A full discussion of the project's relationship to wildland fire hazards is outlined in Section 4.18.

Would the project result in a cumulative impact to hazards and hazardous materials?

For cumulative analysis, the hazardous materials geographic scope is generally restricted to the area immediately surrounding the project site as the potential for risk is limited to the area immediately surrounding an affected hazardous material site or risk generator. However, other topics associated with human health and safety such as transportation of hazardous materials, wildfire, or airport safety can expand through the surrounding region.

As described above, there are a variety of hazardous material and public health and safety issues that are relevant and applicable to the project site and proposed project. Many potential impacts related to hazardous materials and public health and safety risks would be minimized due to compliance with federal, state, and local regulatory requirements. These legal requirements and regulations, as detailed in Section 4.8.2, minimize potential for health and safety risks.

Cumulative projects would also be subject to federal, state, and local regulations related to hazardous materials and other public health and safety issues. In a manner similar to the proposed project, adherence to these regulatory requirements would reduce incremental impacts associated with public exposure to health and safety hazards in each of the affected project areas. For example, the Union Tribune Mixed Use Project EIR (City of San Diego 2015) and Camino Del Rio Mixed Use Project EIR (City of San Diego 2014) both identified no impacts or less-than-significant impacts to health and safety with the adherence to regulatory requirements. Additionally, most hazardous material and safety-related risks are localized, generally affecting a specific site and immediate surrounding area, thus minimizing the potential for an impact to combine with another project to create a cumulative scenario.

As the proposed project would be in a VHFHSZ, the Project would be subject to construction requirements for buildings within these zones. (Refer to EIR Section 4.18, Wildfire, for additional information.) Cumulative projects would be subject to these same requirements, on both a state and local level. As adherence to these requirements makes the proposed project impacts less than significant, these same requirements would reduce the risk on a cumulative level, thereby reducing cumulative impacts.

Because cumulative projects would be fully regulated, thus reducing potential for public safety risks, cumulative impacts associated with exposure to hazards and hazardous materials would be less than significant. Through mitigation and compliance with regulatory requirements, the construction or operation of the proposed project itself would not create significant human or environmental health or safety risks that could combine with other project impacts to create a significant and cumulatively considerable impact. For these reasons, the proposed project **would not result in cumulatively considerable impacts** related to hazards and hazardous materials.

4.8.5 Summary of Impacts Prior to Mitigation

- Impact HAZ-1** Demolition, implosion, and construction activities have the potential to disturb ACM, LBP, PCB-containing items, universal wastes, and remaining hazardous materials and hazardous wastes in existing building materials on the project site. A significant impact to the public or the environment due to routine disposal, transport, and/or release of hazardous materials would occur. Therefore, mitigation is provided (Section 4.8.6, Mitigation Measures, **MM-HAZ-1**).
- Impact HAZ-2** The use of explosives during demolition and implosion activities on the project site would create noise, dust, and potential debris. A significant impact to the public or environment would occur due to routine use of hazardous materials. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-2**).
- Impact HAZ-3** Contaminated soil, groundwater, and soil vapor may be present on the project site. Construction and operation activities would potentially disturb these materials. A significant impact to the public or the environment due to accidental release of hazardous material would occur. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-3**).
- Impact HAZ-4** Environmental monitoring wells are located on the project site which were installed and monitored under RWQCB CAO 92-01. Damage, destruction, or removal without proper procedure or authorization would violate CAO 92-01 and potentially release hazardous materials to the environment. A significant impact to the public or the environment due to accidental release of hazardous materials would occur. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-4** and **MM-HAZ-5**).
- Impact HAZ-5** A 10-inch-diameter active underground fuel transportation pipeline traverses the eastern portion of the project site. Excavation and construction activities in the area near this pipeline have the potential to damage the pipeline. A significant impact to the public or environment due to a release of hazardous materials would occur. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-6**).
- Impact HAZ-6** Soil vapor contamination, specifically benzene, ethylbenzene, and methyl tert-butyl ether, is present on the project site above EPA VISLs. As operation of the proposed project would introduce residential housing and public use spaces onto the project site, a significant impact to the public due to the presence of this soil vapor contamination would occur. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-7**).
- Impact HAZ-7** Diesel contamination was identified in groundwater that is above the Tier 1 ESL for residential use. As operation of the proposed project would introduce residential housing onto the project site, a significant impact to the public due to the presence of this contamination would occur. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-3**).
- Impact HAZ-8** In the event the FAA does not issue their Determination of No Hazard to Air Navigation, the proposed project would be in violation of applicable FAA regulations. A significant impact due to a safety hazard or excessive noise for people residing or working in the project area would occur. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-8**).
- Impact HAZ-9** The proposed project would conflict with existing emergency response and evacuation plans. A significant impact to implementation of an emergency response plan or emergency evacuation plan would occur. Therefore, mitigation is provided (Section 4.8.6, **MM-HAZ-9**).

4.8.6 Mitigation Measures

The following mitigation measures would be implemented to reduce all impacts described in Section 4.8.5 to levels below significance.

- MM-HAZ-1 Pre-Demolition Hazardous Materials Abatement.** Demolition or renovation plans and contract specifications shall incorporate abatement procedures for the removal of materials containing asbestos, lead, polychlorinated biphenyls, hazardous material, hazardous wastes, and universal waste items, including decommissioning and removal of aboveground storage tanks and drums. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the U.S. Environmental Protection Agency (which regulates disposal), Occupational Safety and Health Administration, U.S. Department of Housing and Urban Development, California Occupational Safety and Health Administration (which regulates employee exposure), and the South Coast Air Quality Management District.
- MM-HAZ-2 Demolition and Implosion Plan.** Prior to demolition of the existing San Diego County Credit Union Stadium, a Demolition (and Implosion) Plan shall be prepared and submitted to City of San Diego Fire-Rescue Department Fire Prevention Bureau for review. The plan shall include the following, at a minimum:
- Project-specific demolition methods and explosives.
 - Dust mitigation and monitoring.
 - Noise mitigation.
 - Enforcement of a human safety standoff distance of approximately 1,000 feet during the implosion.
- MM-HAZ-3 Hazardous Materials Contingency Plan.** Prior to commencement of any demolition or construction activities, a Hazardous Materials Contingency Plan (HMCP) shall be developed that addresses potential impacts in soil, soil vapor, and groundwater from releases on or near the project site, as well as the potential for existing hazardous materials on site (e.g., drums and tanks). The HMCP shall include training procedures for identification of contamination. The HMCP shall describe procedures for assessment, characterization, management, and disposal of hazardous constituents, materials, and wastes, and notification and decommissioning procedures for tanks, in accordance with all applicable state and local regulations. Contaminated soils and/or groundwater shall be managed and disposed of in accordance with local and state regulations. The HMCP shall include health and safety measures, which may include but are not limited to periodic work breathing zone monitoring and monitoring for volatile organic compounds using a handheld organic vapor analyzer in the event impacted soils are encountered during excavation activities. California State University/San Diego State University or its designee shall implement the HMCP during construction activities for the proposed project. The HMCP shall be submitted to the County of San Diego Department of Environmental Health for review.
- MM-HAZ-4 Sentinel Well Decommissioning/Protection.** The four sentinel wells on the project site ordered to remain under Addendum No. 8 of CAO 92-01 may require removal, protection, or replacement. A well decommissioning and destruction plan shall be prepared for the management of the monitoring wells. The decommissioning and destruction plan, which may also include protection and/or replacement, would be written in accordance with applicable state and local laws and

submitted to the Regional Water Quality Control Board for approval. The approved plan shall be followed and on-site wells would be removed or protection measures emplaced prior to construction in accordance with applicable laws and regulations.

- MM-HAZ-5** **Well Decommissioning, Other Wells.** Other wells identified on the project site related to the former Mission Valley Terminal contamination plume are assumed approved for removal or transfer by the Regional Water Quality Control Board under Addendum No. 8 of CAO 92-01. A well decommissioning and destruction plan shall be prepared for the removal or abandonment of on-site environmental wells, groundwater monitoring wells, remediation wells, and associated piping. The decommissioning and destruction plan shall be written in accordance with applicable regulations and submitted to the Regional Water Quality Control Board for approval. The approved plan shall be followed and on-site wells would be removed, transferred, or abandoned prior to construction in accordance with applicable laws and regulations.
- MM-HAZ-6** **Safety of Fuel Pipeline.** Kinder Morgan Energy Partners shall be consulted prior to commencement of construction, demolition, and implosion activities to ensure safety and to avoid damage of the 10-inch-diameter fuel pipeline. San Diego State University and Kinder Morgan Energy Partners shall determine appropriate setbacks, safety measures, and procedures that will be put in place to avoid conflict with the fuel pipeline in accordance with all applicable state and local regulations.
- MM-HAZ-7** **Vapor Mitigation.** Prior to commencement of vertical construction of each residential, educational, and commercial building at the project site, San Diego State University or its designee shall conduct a soil vapor investigation within the proposed building footprint. If soil vapor is detected within the footprint of a proposed building or enclosed structure, vapor mitigation measures shall be implemented in accordance with the Department of Toxic Substances Control Vapor Intrusion Mitigation Advisory for all such future buildings and enclosed structures. The construction contractor shall develop vapor mitigation measures that adequately mitigate potential vapor intrusion in buildings and enclosed structures on the project site. Typical vapor mitigation systems comprise of a sub-slab geomembrane or vapor barrier installed throughout the entire footprint of the building. Sub-slab ventilation piping is installed below the geomembrane layer for capturing VOCs in the soil gas and discharging them above the building roof through vent stacks. Optional blowers can be connected to the vent piping at the roofline for conversion of a passive venting system into an active system, if necessary. Operation of the project shall maintain functionality of these features as required to continue protection from vapor intrusion.
- MM-HAZ-8** **Obtain FAA Determination of No Hazard to Air Navigation.** Upon finalization of the proposed project design and site and grading plans, Notices of Proposed Construction or Alteration with the FAA (FAA Form 7460-1) shall be filed due to the proposed project's proximity to Montgomery Field Airport, the policies of the Montgomery Field Airport Land Use Compatibility Plan, and the anticipated maximum heights of the proposed stadium and construction equipment. Proposed Project development shall not proceed until a Determination of No Hazard to Air Navigation is made by the FAA.
- MM-HAZ-9** **Emergency Response and Evacuation Planning.** Plans and policies pertaining to emergency response and evacuation procedures shall be updated to reflect the location and design of the new stadium, new buildings, and other proposed project features. San Diego State University or its designee shall submit plans to the City of San Diego Fire-Rescue Department Fire Prevention Bureau and Unified San Diego County Emergency Services Organization for review. Plans shall

include, but not be limited to, maps of evacuation routes for both pedestrians and vehicle traffic; locations of hospitals, fire stations, and police stations; locations of fire extinguishers; and designation of responsible personnel and agencies. To the extent feasible, California State University/San Diego State University or its designee shall consult the U.S. Department of Homeland Security's Evacuation Planning Guide for Stadiums and implement measures recommended therein, as necessary.

4.8.7 Level of Significance After Mitigation

4.8.7.1 Routine Transport, Use, or Disposal of Hazardous Materials

The abatement of hazardous materials identified on the project site would remove the potential for exposure of the public and the environment to accidental release of hazardous materials (**MM-HAZ-1**). Additionally, these materials would be removed, handled, and transported in accordance with applicable laws and regulations, removing the potential for exposure due to routine handling and transport. Demolition plans and contract specifications would incorporate any necessary abatement measures in compliance with all applicable federal and state regulations, and would be submitted to the City of San Diego Fire-Rescue Department Fire Prevention Bureau for review (**MM-HAZ-2**). Therefore, with the implementation of **MM-HAZ-1** and **MM-HAZ-2**, impacts associated with the transport, use, or disposal of hazardous waste and materials during demolition and construction would be mitigated to a **less-than-significant** level.

4.8.7.2 Upset and Accident Conditions

Construction and demolition activities would be completed in accordance with the HMCP (**MM-HAZ-3**), which would put procedures in place to identify, manage, properly transport, and dispose of hazardous substances and materials identified on site as a result of environmental contamination. A well decommissioning and destruction plan, which may include procedures for protection and/or replacement of the four wells to remain under Addendum No. 8 of CAO 92-01, would be in place, as approved by RWQCB, to properly manage, decommission, and/or destroy these four on-site monitoring wells (**MM-HAZ-4**), and a separate plan would be developed for any other environmental wells identified on the project site (**MM-HAZ-5**). Kinder Morgan Energy Partners will be consulted as to the proper safety techniques to avoid damage to the fuel pipeline (**MM-HAZ-6**). With implementation of **MM-HAZ-3** through **MM-HAZ-6**, impacts associated with the foreseeable accident and upset conditions involving a release of hazardous materials to the environment during construction would be mitigated to a **less-than-significant** level.

Implementation of vapor mitigation measures would be required by **MM-HAZ-7** for future residential, educational, and commercial buildings and enclosed structures in accordance with DTSC vapor intrusion protection guidelines (DTSC 2011). Implementation of **MM-HAZ-7** would mitigate the foreseeable accident and upset conditions involving a release of hazardous materials to the environment during operation to a **less-than-significant** level.

4.8.7.3 Safety Hazard or Excessive Noise from Airport

Receipt of a Determination of No Hazard to Air Navigation would be required by **MM-HAZ-8** to ensure compliance with FAA regulations. Upon receiving this determination, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area and impacts would be **less than significant**.

4.8.7.4 Evacuation Plans

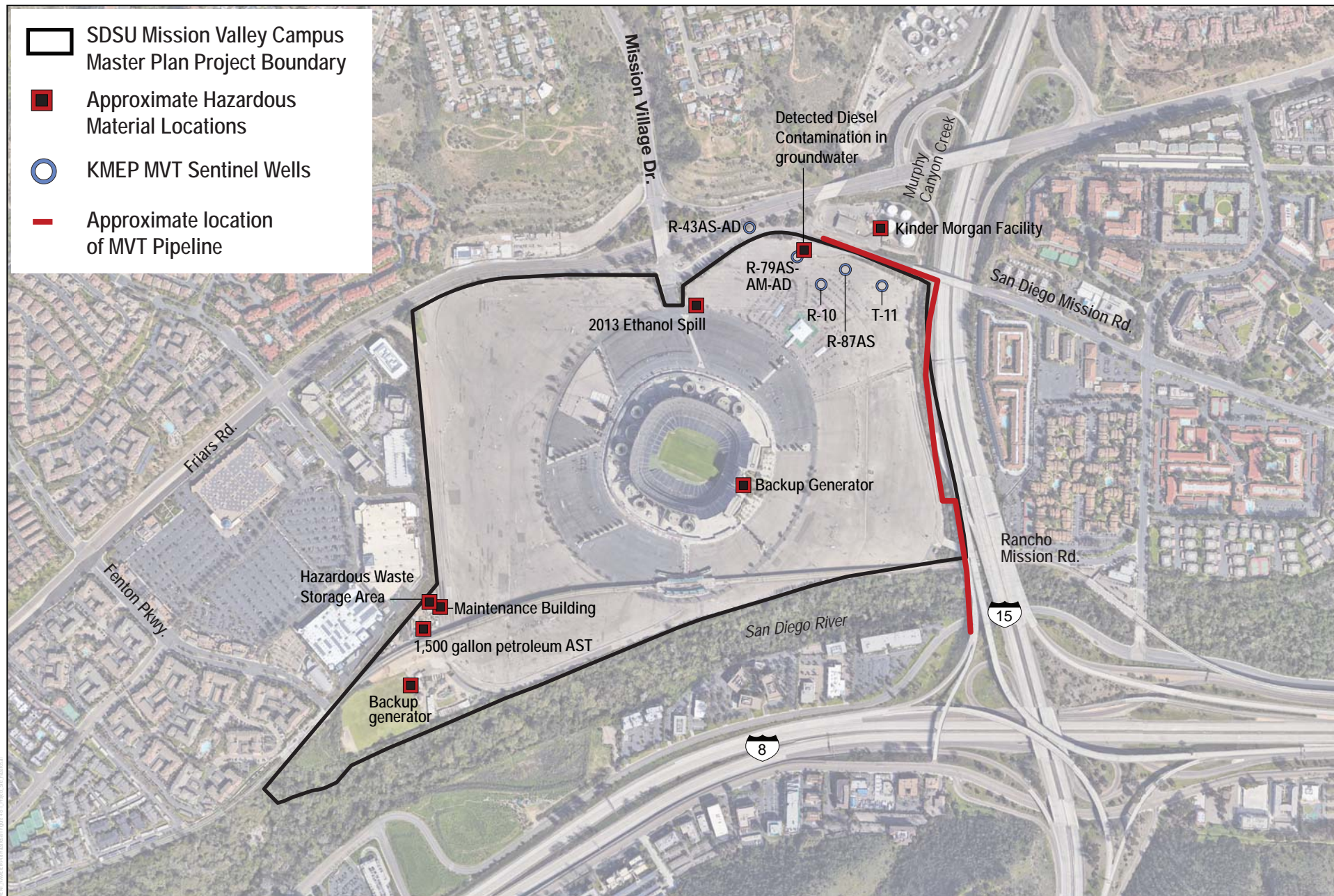
As required by **MM-HAZ-9**, CSU/SDSU or its designee shall coordinate with the City and County to update plans pertaining to emergency response and evacuation procedures to reflect the new location and design of the new stadium and addition of other proposed project buildings and facilities. Upon review of updated plans by the City of San Diego Fire-Rescue Department Fire Prevention Bureau and Unified San Diego County Emergency Services Organization, potential impacts would be mitigated to a level that is **less than significant**.

4.8.7.5 Wildfire Hazards

Anticipated impacts to wildfire risk during project construction would be potentially significant because project construction activities have the potential to generate heat or sparks that could result in wildfire ignition within a VHFHSZ (Impact WLD-2). Mitigation Measures **MM-WLD-2** and **MM-WLD-3** would ensure that emergency vehicles and evacuation traffic have adequate access in the event that fire suppression is needed during project construction, therefore reducing impacts to **less than significant**. See also Section 4.18 for further discussion.

4.8.7.6 Cumulative Impacts

Because cumulative projects would be fully regulated, thus reducing potential for public safety risks, cumulative impacts associated with exposure to hazards and hazardous materials would be less than significant. Through mitigation and compliance with regulatory requirements, the construction or operation of the proposed project itself would not create significant human or environmental health or safety risks that could combine with other project impacts to create a significant and cumulatively considerable impact. For these reasons, the proposed project **would not result in cumulatively considerable impacts** related to hazards and hazardous materials.



SOURCES: AECOM 2015, ARCADIS 2015, SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD. 2016

SDSU Mission Valley Campus Master Plan EIR



Figure 4.8-1
Project Site Hazards

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4.9 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies project design features (as presented in the proposed project technical studies, Appendices 4.9-1 through 4.9-6) related to implementation of the San Diego State University (SDSU) Mission Valley Master Plan Project (proposed project).

Methods for Analysis

Potential impacts related to water quality and hydrology are evaluated based on the anticipated changes in topography, land cover, drainage infrastructure, and water pollutant sources associated with the proposed project. The assessment considers the sensitivity of the surrounding environment and downstream waters to project-related impacts, as well as the effectiveness of standard industry practice with regard to hydrology and hydraulics, including required compliance with applicable permits, laws, and regulations. Accordingly, this section provides a review of the proposed project's regulatory context, development standards pertaining to water quality, and their applicability to campus improvements. Drainage designs, stormwater runoff calculations, and the selection/sizing of low impact design features included herein is based on the following reports:

- Water Quality Technical Report (Appendix 4.9-1), prepared by Geosyntec;
- Hydrology Technical Report (Appendix 4.9-2), prepared by Geosyntec;
- Drainage Study For SDSU Mission Valley Campus (Onsite Improvements) (Appendix 4.9-3), prepared by Rick Engineering;
- Water Quality Report For SDSU Mission Valley Campus (Onsite Improvements) (Appendix 4.9-4), prepared by Rick Engineering;
- Hydraulic Analyses for SDSU Mission Valley Campus (Appendix 4.9-5), prepared by Chang Consultants; and
- SDSU Mission Valley Campus Project Construction Excavation Impacts on Groundwater Storage Memorandum (Appendix 4.9-6), prepared by Geosyntec.

This section is supported by data, publications, and resources provided by public agencies such as the U.S. Geological Survey, the State Water Resources Control Board (SWRCB), the San Diego Regional Water Quality Control Board (RWQCB), and the City of San Diego (City) Stormwater Division.

The analysis contained in this section is based on design information provided by SDSU. As the engineering and design of the proposed project proceed to final stages, the project engineer will perform the calculations necessary to refine the location, design, and size of stormwater and water quality features, if necessary, to remain compliant with applicable stormwater standards. While exact details regarding the stormwater drainage design may be further refined as the design process moves forward, the project's proposed uses, overall footprint, and stormwater discharge locations will not change. Therefore, the conclusions reached in this report would be unaffected by any changes in stormwater drainage design specifics.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. Comments received related to hydrology and water quality included a request for evaluation of the effects on surface flows of the San Diego River from construction activities and operational

uses such as chemistry labs; evaluation of effects on groundwater quality and storage due to construction excavation and past contamination at the Mission Valley Terminal; and Pueblo water rights.

4.9.1 Existing Conditions

4.9.1.1 Environmental Setting

The proposed project is located at 9449 Friars Road, in the City of San Diego, California. The proposed project is situated south of Friars Road, west of Interstate (I) 15, north of the San Diego River and I-8, and east of the existing Fenton Marketplace shopping center. The project site is approximately 5.25 miles from downtown San Diego and approximately 2.75 miles west of the existing SDSU main campus. The project site is surrounded by major roadways, interstate freeways, existing development, and two surface water features. Existing higher-density, multifamily residential land uses are located to the northwest, southwest, and east of the project site, across I-15. The San Diego River, which flows east to west, is located along the south border of the project site (Figure 4.9-1, Existing Hydrology Features). South of the San Diego River are additional office uses and I-8. To the north of Friars Road is San Diego Fire-Rescue Department Fire Station 45, undeveloped hillsides, and single-family residences, which are located atop the mesa. Fenton Marketplace is located west of the project site and consists of large commercial and retail uses and office uses. Murphy Canyon Creek, a partially earthen and concrete-lined channel that conveys flow into the San Diego River, is within the eastern boundary of the project site. Multifamily residential uses dominate the landscape to the east of the project site, east of I-15.

4.9.1.2 Climate

The climate of San Diego County (County) is characterized by warm, dry summers and mild, wet winters. The average rainfall is about 10 to 13 inches per year, most of which falls between November and March. The average mean temperature for the area is approximately 65° Fahrenheit (°F) in the coastal zone and 57°F in the surrounding foothills (San Diego RWQCB 2016). The proposed project is located in a Mediterranean climate region with seasonally influenced precipitation. Seasons consist of hot, dry summers and cooler, wetter winters, although San Diego is more arid than most areas with a similar climate classification (Appendix 4.9-1). Global climate change is expected to cause a future warming trend in southern California even under moderate emissions scenarios; however, there is no clear trend in annual precipitation. Current climate projections suggest an increase in extreme events in the San Diego region in the future with 16% fewer rainy days and 8% more rainfall during the biggest rainstorms (San Diego Foundation 2014; Appendix 4.9-1).

4.9.1.3 Watershed Hydrology

The U.S. Geological Survey Watershed Boundary Dataset delineates watersheds according to hydrologic units, which are nested within one another according to the scale of interest. The U.S. Geological Survey identifies hydrologic units by name and by hydrologic unit code (HUC). For example, at a statewide scale, hydrologic units consist of large regions and sub-regions draining to a common outlet. At a statewide scale, the proposed project is within the 11,100-square-mile “Southern California Coastal” subregion (HUC 1807), which identifies areas that eventually drain to the Pacific Ocean versus those that drain to the interior deserts of California. At the highest level of detail for the Watershed Boundary Dataset, the proposed project would be located within the San Diego River Watershed Management Area (WMA), which encompasses approximately 434 square miles. The proposed project’s receiving waters include the San Diego River and Murphy Canyon Creek (Figure 4.9-1, Existing Hydrology Features). Streams within the watershed

include 55 miles of the San Diego River, Boulder Creek, Cedar Creek, Conejos Creek, Chocolate Creek, Los Coches Creek, San Vicente Creek, Foster Creek, and several unnamed tributaries (Appendix 4.9-1).

The San Diego River watershed contains the Lower San Diego, San Vicente, El Capitan, and Boulder Creek Hydrologic Areas. The project site is located in the Mission San Diego Hydrologic Subarea in the lower San Diego Hydrologic Area within the San Diego River Hydrologic Unit. The San Diego River headwaters are located 50 miles east of the project site in the Cuyamaca Mountains. River flows into the Pacific Ocean 5 miles west of the project site in the Ocean Beach community of the City of San Diego (Appendix 4.9-1).

Murphy Canyon Creek is tributary to the San Diego River at the proposed project location. The creek originates in multiple headwaters in the foothills, southeast of Marine Corps Air Station Miramar and discharges to the San Diego River at the southeast corner of the project site. Murphy Canyon Creek is a partially earthen and concrete-lined channel with intermittent segments above and below ground. The creek is a narrow channel west of I-15 and becomes a covered, lined channel for approximately 0.5 miles as it approaches the Kinder Morgan Energy Partners (KMEP) Mission Valley Terminal (MVT). The creek provides wetland and riparian vegetation along its banks with minimal vegetation along the creek bed (Appendix 4.9-1).

4.9.1.4 Topography and Drainage

The project site is characterized by a gentle to moderate slope toward the San Diego River, south of the proposed project. Existing site elevations range from approximately 75 feet above mean sea level (AMSL) on the northeast side of the project site to 55 feet AMSL along the margin of the San Diego River at the southern edge of the project site. The steepest slopes occur at the northeast portion of the project site (Figure 4.9-1, Existing Hydrology Features).

The project site currently consists of the San Diego County Credit Union (SDCCU) Stadium and associated parking lot. The parking lot covers most of the approximately 172-acre site. There are currently eight major outfalls from the project site, including six that discharge south into the San Diego River and two that discharge east into the Murphy Canyon Channel. However, only four of those outfalls, including Drainage Systems A, B, C, and D (Figure 4.9-2, Existing Drainage System), would be affected by the proposed project. The site is approximately 90% impervious and includes the Stadium, buildings, and surrounding parking lot (Appendices 4.9-1 and 4.9-2).

Drainage systems A and C collect runoff from and drain the parking lot area, while drainage system B drains the Stadium. Drainage system D drains the practice fields and building area in the southwest corner of the site. Minor areas of off-site run-on from the adjacent road and hillside discharge onto the parking lot on the north and west sides of the site. The area surrounding the Stadium is predominantly asphalt parking lot. Inside the Stadium the turf is assumed to be lined, and therefore all precipitation is collected in drainage system B rather than infiltrating into the ground.

Prior to discharging, the existing storm drains penetrate through an 84- to 96-inch-diameter sanitary sewer main paralleling the north bank of the San Diego River. Drainage systems A, B, and C discharge into the San Diego River via 36-inch reinforced concrete pipes. The storm drain lines are reduced to 34-inch steel pipes to pass through the sewer main and are cased in polyethylene to prevent comingling of sewer and stormwater flows. Because of this design, the outfalls cannot be modified. Drainage system D discharges into an earthen channel that discharges into the San Diego River (Appendix 4.9-2).

4.9.1.5 Flood Hazards

Portions of the project site are located within a Federal Emergency Management Agency (FEMA) 100-year and 500-year floodplain, as shown on Flood Insurance Rate Map Panels 06073C1636H, 06073C1638H, and 06073C1636H, dated May 16, 2012 (FEMA 2012), with a designation of “Zone A” along the eastern perimeter adjacent to Murphy Canyon Creek and “Zone AE” along the southern perimeter adjacent to the San Diego River (Figure 4.9-3, Existing Flood Zones). SDCCU Stadium was constructed on fill above the 100-year floodplain on a raised earthen mound, while the parking lot was constructed within the 100-year floodplain. Flooding of the project site has been observed during winter events and occasionally in the summer during monsoonal moisture from equatorial tropical storms. Currently, Murphy Canyon Creek in the project area is contained in a flood control channel, and a berm exists between the channel and the parking lot. However, during moderate storm events, water overtops the berm and floods the existing parking area (City of San Diego 2015).

4.9.1.6 Water Quality

The Water Quality Control Plan for the San Diego Basin (Basin Plan; San Diego RWQCB 2016, as amended) lists beneficial uses of major water bodies within the region. San Diego River and Murphy Canyon Creek are inland surface water bodies with designated beneficial uses in the Basin Plan. Existing beneficial uses for both water bodies are summarized in Table 4.9-1, and descriptions of the beneficial use categories are as follows:

- AGR: Agricultural supply waters used for farming, horticulture, or ranching.
- COLD: Freshwater Habitat that support cold water ecosystems including the preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, and invertebrates.
- IND: Industrial activities that do not depend primarily on water quality.
- MUN: Community, military, or individual water supply systems including, but not limited to, drinking water supply.
- PROC: Industrial process supplies that includes the use of water for industrial activities that depend primarily on water quality.
- RARE: Waters that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.
- REC1: Water contact recreation involving body contact with water and ingestion is reasonably possible.
- REC2: Non-contact water recreation for activities in proximity to water, but not involving body contact.
- WARM: Warm freshwater habitat to support water ecosystems.
- WILD: Wildlife habitat water that support terrestrial or wetland ecosystems.

Table 4.9-1. Basin Plan Beneficial Uses

Water Body	Beneficial Uses									
	MUN	AGR	IND	PROC	REC1	REC2	WARM	COLD	WILD	RARE
San Diego River	X	X	X	X	X	X	X	X	X	X
Murphy Canyon Creek		X	X		X	X	X		X	X

Source: Table 2-2 of the Water Quality Control Plan for the San Diego Basin (Basin Plan) (San Diego RWQCB 2016, as amended).

Water quality data was collected along the lower San Diego River, from 2004 through 2018, for several pollutants of concern including conventional parameters, nutrients, metals, pathogen indicators, and municipal supply

constituents. The selected general constituents examined include dissolved oxygen (DO), turbidity, total dissolved solids (TDS), total suspended solids (TSS), and oil and grease. DO is a measure of the amount of gaseous oxygen dissolved in the water. Turbidity is a measure of suspended matter that interferes with the passage of light through the water or in which visual depth is restricted. TDS measures the dissolved cations and anions in water, primarily inorganic salts (calcium, magnesium, potassium, sodium, chlorides, and sulfates). High TDS levels can impair agricultural, municipal supply, and groundwater recharge beneficial uses. TSS measures the particulate matter suspended in water. Oil and grease is a measure of fats, oils, waxes, and other related constituents in water.

The data collected along the lower San Diego River in the vicinity of the facility indicate that the lower San Diego River may not currently be meeting water quality standards for DO over the study period (2004-2018) during the dry season. The Basin Plan objective states that the annual mean DO concentration should not be less than 7 milligrams per liter (mg/L) more than 10% over the time. All of the DO measurements collected were less than 7 mg/L; however, only six measurements were collected over the 11-year span. Water quality data for turbidity indicate that the Basin Plan standard of 20 Nephelometric Turbidity Units (NTU) is being met along the lower San Diego River for the wet season and the dry season. Average turbidity measures during the wet season and the dry season are 4.63 NTU and 3.72 NTU, respectively. The Basin Plan does not identify a numeric standard for TSS, and the available TSS data does not indicate that TSS is a cause of “nuisance or adverse effects to beneficial waters.” Oil and grease data were collected on four occasions between 2013 and 2014 at the San Diego River TWAS station upstream of the project site. All oil and grease results were below the reporting limit, indicating that concentrations are not at levels that would “cause nuisance or which otherwise adversely affect beneficial uses” (Appendix 4.9-1).

Wastewater collection and treatment services are provided by the Wastewater Branch of the City of San Diego Public Utilities Department (City of San Diego 2015). The City’s wastewater facilities include the Point Loma Wastewater Treatment Plant, the North City Water Reclamation Plant, the South Bay Water Reclamation Plant, and the Metro Biosolids Center. The current wastewater system serves the existing SDCCU Stadium demand (City of San Diego 2015). Seven 6-inch and 8-inch laterals exit the SDCCU Stadium. An 8-inch vitrified clay pipe that was constructed in 1966 circles the outside of SDCCU Stadium collecting wastewater from these seven locations (City of San Diego 2015). This pipe feeds into an 18-inch connector pipeline on the western side of Stadium, which in turn connects to an 8-inch connector line that resides northwest of the Stadium. The 8-inch line connects to another 18-inch line along the western side of the Stadium. The capacity of the 18-inch line is approximately 4.3 million gallons per day and connects to an 84-inch trunk. The 84-inch trunk sewer, North Mission Valley Interceptor, runs easterly along the southern property line (Figure 4.9-2, Existing Drainage System), and connects to a 108-inch North Metro Interceptor that directs wastewater to Pump Station Number 2, where it is then pumped to the Point Loma Wastewater Treatment Plant for treatment (City of San Diego 2015). Please also refer to Section 4.17, Utilities and Service Systems, for further information.

4.9.1.7 Groundwater

All major watersheds in the San Diego region contain groundwater basins, which are defined as a hydrogeologic unit containing one large aquifer, as well as several connected and interrelated aquifers. The San Diego River WMA contains three groundwater basins: Mission Valley, San Diego River Valley, and El Cajon Valley. The proposed project site overlies the Mission Valley Groundwater Basin. Groundwater resources are limited in the downstream portions of the San Diego River WMA because of high concentrations of TDS and groundwater contamination in the Mission Valley groundwater basin (City of San Diego 2015). The Mission Valley groundwater aquifer is described in Table 4.9-2.

Table 4.9-2. Mission Valley Groundwater Aquifer

Aquifer	Description	Thickness
Shallow Alluvium	Quaternary age medium to coarse-grained sand and gravel	Approximately 80–100 feet
San Diego Formation	Thick accumulation of older, semi-consolidated alluvial sediments	Generally less than 100 feet

Source: DWR 2004.

The Mission Valley Groundwater Basin is a narrow alluvial aquifer extending horizontally along the San Diego River from the bottom of Mission Gorge downstream to the river's tidal estuary beginning approximately at I-5 (City of San Diego 2018). Currently no significant withdrawals are conducted due to the petroleum plume from the KMEP MVT (City of San Diego 2015). In June 2016, the City of San Diego and KMEP signed a settlement agreement specifying conditions and arrangements for future development of the Stadium area and Mission Valley groundwater (City of San Diego, 2018).

The Basin Plan designates existing or potential beneficial uses (as shown in Table 4.9-3 below) for the Mission Valley groundwater basin beneath the project site and specifies groundwater quality objectives in the Basin Plan.

Table 4.9-3. Existing Beneficial Uses of Project Groundwater Basin

Groundwater	Hydrologic Unit Basin Number	Beneficial Uses					
		MUN	AGR	IND	PROC	FRESH	GWR
Lower San Diego Hydrologic Area	7.10						
Mission San Diego Hydrologic Subarea ¹	7.11	○	●	●	●		

Notes:

- Potential Beneficial Use
- Existing Beneficial Use

¹ These beneficial uses do not apply west of the eastern boundary of the I-5 right-of-way, and the area is excepted from sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

Group Delta Consultants performed a geotechnical investigation at the site consisting of 32 borings and several Cone Penetration Tests (Appendices 4.6-1 and 4.6-2). Three of the shallow borings (B-19, B-29, and B-32) were converted to infiltration test holes (I-1, I-2, and I-3). Groundwater was encountered at depths ranging from about 7 to 9 feet below ground surface (where measured) within the borings at the River Park area of the site (Appendix 4.9-1). In addition, groundwater was measured in the vicinity of the SDCCU Stadium at elevations ranging from 37 to 49 feet AMSL (Appendix 4.9-6), corresponding to a maximum depth of about 38 feet below ground surface.

4.9.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

The Clean Water Act (CWA), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality (33 U.S.C. 1251 et seq.). The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA establishes basic guidelines for regulating discharges of both point and non-point sources of pollutants into the waters of the United States. The CWA requires that states

adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA. Relevant sections of the CWA are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines. Under Section 303(d) of the CWA, the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. California is required to establish total maximum daily loads (TMDLs) for each pollutant/stressor. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. Once a water body is placed on the Section 303(d) List of Water Quality Limited Segments, it remains on the list until a TMDL is adopted and the water quality standards are attained, or there is sufficient data to demonstrate that water quality standards have been met, and delisting from the Section 303(d) list should take place.
- Section 401 (Water Quality Certification) requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the CWA. This process is known as the Water Quality Certification/Waste Discharge Requirements process.
- Section 402 (National Pollutant Discharge Elimination System) establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the SWRCB and the nine RWQCBs, which have several programs that implement individual and general permits related to construction activities, stormwater runoff quality, and various kinds of non-stormwater discharges.
- Section 404 (Discharge of Dredged or Fill Material into Waters of the United States) establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency (EPA).

Numerous agencies have responsibilities for administration and enforcement of the CWA. At the federal level this includes the EPA, the U.S. Army Corps of Engineers, the Bureau of Reclamation, and the major federal land management agencies such as the U.S. Forest Service and the Bureau of Land Management. At the state level, with the exception of tribal lands, the California Environmental Protection Agency and its sub-agencies, including the SWRCB, have been delegated primary responsibility for administering and enforcing the certain provisions of the CWA in California. At the local level, the San Diego RWQCB, municipalities, and special districts have implementation and enforcement responsibilities under the CWA.

CWA Section 303(d) - TMDLs

When designated beneficial uses of a particular receiving water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as “impaired.” Once a water body has been deemed impaired, a TMDL must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a “factor of safety” included). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. Water quality impairments at the project site and downstream of the project site were considered when selecting the pollutants of concern for the water quality impact analysis in this section.

The proposed project’s runoff will discharge into the San Diego River. The San Diego River (Lower) is currently listed on the 2014/2016 303(d) list for indicator bacteria, benthic community effects, cadmium, DO, TDS, nitrogen, phosphorus, and toxicity. The San Diego River (Lower) is designated a Category 5 reach, which means there are

water segments where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment. Table 4.9-4 lists the water quality impairments for the San Diego River (Lower) from the 2014/2016 CWA Section 303(d) list.

Table 4.9-4. 2014/2016 CWA Section 303(d) Listings for the San Diego River (Lower)

Pollutant	TMDL Completion	Potential Sources
Indicator Bacteria	2011	Unknown sources
Benthic Community Effects	2025	Hydromodification Illicit Connections/illegal hook-ups/ dry weather flows Unknown non-point source Unknown point source Urban runoff/storm sewers
Cadmium	2029	Unknown sources
Dissolved Oxygen	2019	Unknown sources
Total Dissolved Solids	2019	Unknown sources
Total Nitrogen as N	2029	Unknown sources
Total Phosphorus	2019	Unknown sources
Toxicity	2025	Unknown sources

Revised TMDL for Indicator Bacteria

Indicator bacteria is a common impairment for water bodies of the San Diego Region, including the Lower San Diego River. Indicator bacteria such as fecal coliform and enterococcus originate in the intestines of warm-blooded animals. Sources of such bacteria include leaking sewer pipes, wildlife, pet wastes, municipal wastewater treatment plants, and homeless encampments, among other sources. When present in surface water, indicator bacteria may cause gastrointestinal illnesses.

In February of 2010, the San Diego RWQCB adopted Resolution No. R9-2010-0001, an amendment incorporating Revised Bacterial TMDLs Project I into the San Diego Basin Plan. After being approved by the SWRCB, the Office of Administrative Law, and the SEPA, this TMDL Basin Plan Amendment became fully effective in April 2011.

Bacteria TMDLs have been established under the TMDL Basin Plan Amendment for the lower 6 miles of the San Diego River, among 20 other water bodies listed on the 2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments. Bacteria densities in the waters of the Lower San Diego River unreasonably impair and/or threaten to impair the water quality needed to support the beneficial use of waters designated for Contact Recreation (REC-1). Different REC-1 Water Quality Objectives were used as the basis for wet weather and dry weather allowable load because the bacteria transport mechanisms to receiving waters are different under wet and dry weather conditions. Wet weather days are defined as days with rainfall events of 0.2 inches or greater and the following 72 hours. Table 4.9-5 below summarizes the total allowable loads for fecal coliform, total coliform, and enterococcus in the Lower San Diego River. These TMDLs also apply to the Pacific Ocean Shoreline.

Table 4.9-5. TMDLs for San Diego River (Lower)

Indicator Bacteria	Wet Weather: Total Allowable Load or TMDL (billion MPN/year)	Dry Weather: Total Allowable Load or TMDL (billion MPN/year)
Fecal Coliform	4,680,838	1,506
Total Coliform	66,105,222	7,529
Enterococcus ¹	6,590,966	248
	6,595,208	N/A

Notes:

TMDL = total maximum daily load; MPN/year = Most Probable Number per year.

¹ The Wet Weather TMDL is calculated using an enterococcus numeric target of 61 MPN/mL that is conservatively protective of the REC-1 “designated beach” usage frequency for freshwater creeks and downstream beaches. If the usage frequency of the freshwater creeks can be established as “moderately to lightly used” in the Basin Plan, alternative TMDLs calculated using an enterococcus numeric target of 104 MPN/mL may be used, for a TMDL of 6,595,208 billion MPN/year.

Federal Antidegradation Policy

The federal Antidegradation Policy (40 CFR 131.12) is designed to protect water quality and water resources. The policy requires states to develop statewide antidegradation policies and identify methods for implementing them. State antidegradation policies and implementation measures must include the following provisions: (1) existing instream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. State permitting actions must be consistent with the federal Antidegradation Policy.

California Toxics Rule

The California Toxics Rule (CTR) is a federal regulation issued by the EPA providing water quality criteria for potentially toxic constituents in receiving waters with human health or aquatic life designated uses in the State of California (EPA 2000). The EPA adopted the CTR in 2000 to create legally applicable water quality criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries to protect human health and the environment for all purposes and programs under the CWA. The CTR aquatic life criterion were derived using a CWA Section 304(a) method that produces an estimate of the highest concentration of a substance in water which does not present a significant risk to the aquatic organisms in the water and their uses (EPA 2000). The CTR water quality criteria provide a reasonable and adequate amount of protection with only a small possibility of substantial overprotection or under protection. In this document, the CTR criteria are used as one type of benchmark to evaluate the potential impacts of the proposed project on water quality of the receiving waters.

The CTR’s numerical aquatic life criteria are expressed as short-term (acute) and long-term (chronic) averages, rather than one number, in order that the criterion more accurately reflect toxicological and practical realities (EPA 2000). Due to the intermittent nature of stormwater runoff, especially in Southern California, the acute criteria are considered to be more applicable to stormwater conditions than chronic criteria and therefore are used in assessing project impacts. Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (1 hour) without deleterious effects; chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects.

State

Porter-Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (codified in the California Water Code, Section 13000 et seq.) is the primary water quality control law for California. Whereas the CWA applies to all waters of the United States, the Porter–Cologne Act applies to waters of the state,¹ which includes isolated wetlands and groundwater in addition to federal waters. The Porter-Cologne Act grants the SWRCB and the nine RWQCBs power to protect water quality and is the primary vehicle for implementation of California’s responsibilities under the federal CWA. The Porter-Cologne Act also grants the SWRCB and the nine RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges of waste to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. Further, the Porter–Cologne Act establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

The act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. California Water Code Section 13260 subdivision (a) requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the state, to file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States), an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as groundwater and isolated wetlands), Waste Discharge Requirements (WDRs) are required and are issued exclusively under state law. WDRs typically require many of the same Best Management Practices (BMPs) and pollution control technologies as required by NPDES-derived permits.

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the federal Antidegradation Policy, the California Anti-Degradation Policy applies to all waters of the state, not just surface waters. The policy requires that, with limited exceptions, whenever the existing quality of a water body is better than the quality established in individual Basin Plans (see description below), such high quality must be maintained, and discharges to that water body must not unreasonably affect any present or anticipated beneficial use of the water resource.

Water Quality Control Plan for the San Diego Basin

The California legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality, including the Porter–Cologne Act and portions of the CWA, to the SWRCB and its nine RWQCBs. The San Diego RWQCB implements the Water Quality Control Plan for the San Diego Basin (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code Sections 13240–13247). The Porter–Cologne Act also provides the RWQCBs with authority to include within their Basin Plan water discharge prohibitions applicable to particular conditions, areas,

¹ “Waters of the state” are defined in the Porter–Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Section 13050(e)).

or types of waste. The Basin Plan is continually updated to include amendments related to implementation of TMDLs, revisions of programs and policies within the San Diego RWQCB region, and changes to beneficial use designations and associated water quality objectives. The Basin Plan is the guiding document that establishes water quality standards for the region.

The Basin Plan for each region provides quantitative and narrative criteria for a range of water quality constituents applicable to certain receiving water bodies and groundwater basins within the San Diego Basin. Specific criteria are provided for the larger, designated water bodies within the region, as well as general criteria or guidelines for ocean waters, bays, and estuaries; inland surface waters; and groundwaters. In general, the narrative criteria require that degradation of water quality not occur due to increases in pollutant loads that will adversely impact the designated beneficial uses of a water body.

Statewide Trash Control Requirements

On April 7, 2015, the SWRCB adopted statewide requirements, referred to as the Trash Amendments, for the implementation of trash controls in priority land uses.² The Trash Amendments do the following: (1) establish a narrative water quality objective for trash, (2) establish corresponding applicability, (3) establish a prohibition on the discharge of trash, (4) provide implementation requirements for permitted stormwater and other discharges, (5) set a time schedule for compliance, and (6) provide a framework for monitoring and reporting requirements (SWRCB 2015).

Two compliance tracks are offered, and each municipality may select either compliance track at its discretion. Track 1 requires municipalities to install and maintain full trash capture systems³ in storm drains that receive runoff from priority land uses (which include commercial development). Track 2 requires the municipality to implement a plan with a combination of full capture systems, multi-benefit projects, institutional controls, and/or other treatment controls to achieve full capture system equivalency. Any new development within the Municipal Separate Storm Sewer System (MS4) permittee's jurisdiction must be built to immediately comply with the compliance track selected by the municipality.

Upon reissuance or amendment, SWRCB and RWQCB MS4 permits will contain trash control implementation requirements and compliance milestones to demonstrate progress towards 100% compliance with the Trash Amendments. The General Permits for Stormwater Discharges Associated with Industrial and Construction Activities will also contain the prohibition of trash in stormwater and non-stormwater discharges when those permits are reissued.

Construction General Permit

For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit [CGP]) to avoid and minimize water quality impacts attributable to such activities. The CGP applies to all projects in which construction activity disturbs 1 acre or more of soil. Construction activity subject

² On April 7, 2015, the SWRCB adopted (1) an Amendment to the Water Quality Control Plan for the Ocean Waters of California (Ocean Plan) to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, collectively referred to as the "Trash Amendments," and (2) approval of the Final Staff Report, including the Substitute Environmental Documentation. Priority land uses include commercial areas.

³ Full capture systems for storm drains are defined in the Trash Amendments as treatment controls (either a single device or a series of devices) that traps all particles that are 5 millimeters or greater, and has a design treatment capacity that is either: (a) of not less than the peak flow rate, Q, resulting from a 1-year, 1-hour, storm in the subdrainage area, or (b) appropriately sized to and designed to carry at least the same flows as the corresponding storm drain.

to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The CGP requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would specify water quality BMPs designed to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site. Routine inspection of all BMPs is required under the provisions of the CGP, and the SWPPP must be prepared and implemented by qualified individuals as defined by the SWRCB.

To receive coverage under the CGP, a project applicant must submit a Notice of Intent and permit registration documents to the SWRCB. Permit registration documents include completing a construction site risk assessment to determine appropriate coverage level; detailed site maps showing disturbance area, drainage area, and BMP types/locations; the SWPPP; and where applicable, post-construction water balance calculations and active treatment systems design documentation.

Phase II Small MS4 Permit

To enable efficient permitting under both the CWA and the Porter–Cologne Act, the SWRCB and the RWQCBs administer permit programs that group similar types of activities with similar threats to water quality. These “general permit” programs include the Phase II Small MS4 Permit,⁴ the CGP, and other general permits for low-threat discharges. SDSU is considered a non-traditional permittee under the Small (Phase II) MS4 Permit. The surrounding municipalities (i.e., the City of San Diego) and California Department of Transportation are subject to a separate Phase I MS4 Permits (Order No. R9-2013-0001, as amended and Water Quality Order No. 2012-0011-DWQ, as amended, respectively).

The Small MS4 Permit consists of several program elements: Program Management, Public Involvement/Participation, Illicit Discharge Detection and Elimination, Construction Site Storm Water Runoff Control, Pollution Prevention/Good Housekeeping for Permittee Operations, Post Construction Storm Water Management for New Development and Re-development, Water Quality Monitoring Requirements, Program Effectiveness Assessment, and Annual Reporting. Besides requiring implementation of construction site BMPs and performance criteria and design guidelines for development within the Small MS4s service area, the Small MS4 Permit also requires operators to map their outfalls, properly maintain the storm drain system, educate the public on pollution prevention, and monitor and report on the quality of MS4 discharges to receiving waters so that the effectiveness of the program can be evaluated. Collectively, the program elements are designed to ensure discharges from the storm drain system do not contain pollutant loads at levels that violate water quality standards and Basin Plan objectives and policies (such as a TMDL for a CWA Section 303(d) impaired water body). Implementation of the program elements are the responsibility of the Small MS4 operator, in this case, SDSU.

Of particular relevance to the proposed project is that the Small MS4 Permit requires Regulated Projects⁵ to implement post-construction measures in the form of site design, source control, stormwater treatment measures,

⁴ A Small MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that serve populations of less than 100,000 persons.

⁵ Regulated Projects are defined in Section E.12.c of Water Quality Order 2013-0001-DWQ, and include all projects that create and/or replace 5,000 square feet or more of impervious surface, not including detached single-family home projects that are not part of a larger plan of development, interior remodels, routine maintenance or repair within the existing footprint, or linear underground/overhead projects.

and baseline hydromodification management measures to reduce the discharge of pollutants in storm-water to the maximum extent practicable. Examples include:

- **Source Control Measures:** Source control measures seek to avoid introduction of water quality pollution/degradation in the first instance. Source control strategies include things like covering refuse/trash areas, properly managing outdoor storage of equipment/materials, minimizing use of pesticides and fertilizers in landscaping, using sumps or special area drains to send non-stormwater discharges to the sewer, ensuring regular grounds maintenance, etc.
- **Site Design Measures:** Site design measures require early assessment and evaluation of how site conditions, such as soils, vegetation, and flow paths will influence the placement of buildings and paved surfaces. The evaluation is used to meet the goals of capturing and treating runoff and maximizing opportunities to mimic natural hydrology. Options for site design measures include preserving trees, buffering natural water features, disconnecting impervious surfaces, and using green roofs or porous pavement.
- **Treatment Control Measures:** Treatment control measures retain, treat and/or infiltrate the site runoff produced under normal circumstances, controlling both the quality and quantity of stormwater released to the stormwater conveyance system and natural receiving waters. In most situations, this means implementing structural BMPs (e.g., infiltration, bioretention and/or rainfall harvest and re-use) to address the volume and rate of runoff produced by 85th percentile storm⁶ (i.e., design capture volume). The Small MS4 Permit requires regulated projects to prioritize stormwater capture (e.g., infiltration and/or harvest and re-use) unless site conditions (e.g., low-permeability soils) make it infeasible
- **Hydromodification Measures:** Hydromodification measures are required for projects that create or replace 1 or more acres of impervious surfacing so that post-project runoff shall not exceed the estimated pre-project flow rate for the 2-year, 24-hour storm. If the project creates or replaces less than 1 acre of impervious surfaces, and the project demonstrates that post-project flows from the site are less than pre-project flows, then no hydromodification measures from Section E.12.e.(ii)(f) from the Phase II Small MS4 General Permit are required.
- **Operation and Maintenance Requirements:** The Small MS4 Permit requires that maintenance agreements stay in place with each property to ensure permanent treatment control measures developed on site are properly maintained and/or repaired in accordance with the stormwater quality control plan.

The aforementioned site design, treatment control, and hydromodification measures are often collectively referred to as “Low Impact Development” standards (or LID design). The proposed project meets the criteria as a Regulated Project and, thus, is required to comply with the stormwater management requirements of the Small MS4 Permit.

The Small MS4 Permit is administered by the SWRCB, while other general WDRs are administered by the San Diego RWQCB. Point source discharges or other activities that threaten water quality that are not covered under a general permit must seek individual NPDES permits and/or WDRs, depending on the type, location, and destination of the discharge. For these type of discharges, the initial step in the process is to submit a “Report of Waste Discharge” to the San Diego RWQCB, which then determines the appropriate permitting pathway.

SDSU Stormwater Management Plan

Pursuant to Phase II stormwater regulations promulgated under the federal CWA, in 2005 SDSU completed preparation of a Stormwater Management Plan (SWMP). The purpose of the SWMP is to (1) identify pollutant

⁶ The 85th percentile storm represents a value of rainfall, in inches, such that 85% of the observed 24-hour rainfall totals within the historical record will be less than that value.

sources potentially affecting the quality and quantity of stormwater discharges, (2) provide BMPs for municipal and small construction activities implemented by SDSU staff and contractors, and (3) provide measureable goals for implementation of the SWMP to reduce the discharge of the identified pollutants into the storm drain system and associated waterways.

The goal of the SWMP is to reduce the discharge of pollutants to the maximum extent practicable, as defined by the EPA, and to identify activities or structural improvements that help reduce the quantity and improve the quality of the stormwater runoff. BMPs, which include treatment controls, operating procedures, and practices to control site runoff, have been developed for the SWMP to reduce the discharge of pollutants to the storm drain system to the maximum extent practicable. The BMPs described in the SWMP are to be implemented by SDSU employees and outside contractors. Whenever employees or contractors perform work on the campus, steps outlined in each relevant BMP, or other proven technique that reaches the same goal, must be used in order to ensure compliance with stormwater discharge regulations.

The SWMP addresses both construction and post-construction activities. Construction projects that encompass an area greater than 1 acre must submit a site-specific SWPPP to the San Diego RWQCB. Post-construction stormwater management controls include permanent structural and non-structural BMPs (such as conservation of natural and permeable areas, permeable pavers, rooftop runoff infiltration galleries, and mechanical storm drain filters) that remain in place after the proposed project is completed and prevent pollution from the new development in the long-run.

California Green Building Standards Code (CALGreen)

The 2016 California Green Building Standards Code (CALGreen) as Part 11 of the California Building Standards Code (Title 24), became effective on January 1, 2017. CALGreen measures are designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and encourage sustainable construction practices.

CALGreen provides mandatory direction to developers of all new construction and renovations of residential and nonresidential structures with regard to all aspects of design and construction, including but not limited to site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards that are designed to encourage developers and cities to aim for a higher standard of development.

Under CALGreen, all residential and nonresidential sites are required to be planned and developed to keep surface water from entering buildings and to incorporate efficient outdoor water use measures. Construction plans are required to show appropriate grading and surface water management methods such as swales, water collection and disposal systems, French drains, water retention gardens, and other water measures that keep surface water away from buildings and aid in groundwater recharge. Plans should also include outdoor water use plans that utilize weather or soil moisture-controlled irrigation systems. In addition to the above requirements, nonresidential structures are also required to develop an irrigation water budget for landscapes greater than 2,500 square feet that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources (DWR) Model Water Efficient Landscape Ordinance where no local ordinance is applicable.

Dewatering General Permit

The San Diego RWQCB issued a General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region (Order No. R9-2015-0013, NPDES No. CAG919003) (effective October 1, 2015). The General Order regulates groundwater extraction discharges to surface water including construction

dewatering, foundation drains, and groundwater extraction related to groundwater remediation cleanup projects. The General Order does not cover groundwater extraction discharges to land due to construction dewatering, which is regulated under a statewide general order, Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (No. 2003-003-DWQ).

The General Order states for groundwater extraction discharges to surface waters, pollutant concentrations in the discharge shall not cause, have a reasonable potential to cause, or contribute to an excursion above any applicable water quality criterion established by the EPA pursuant to CWA Section 303 or adopted by the SWRCB or RWQCBs. In no case shall waste be discharged to areas designated as being of special biological significance. Pollutant concentrations in the discharge must comply with the specifications in the General Order. Effluent limitations for groundwater extraction waste discharges vary based on the receiving water type; the four categories are: freshwater inland surface waters, saltwater inland surface waters, bays and estuaries including San Diego Bay, and the surf zone of the Pacific Ocean. As part of obtaining the Notice of Intent, dischargers must include an initial sampling and monitoring report.

Lake or Streambed Alteration Agreement

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires the proponent of a project that may impact a river, stream, or lake to notify the CDFW before beginning the proposed project. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 of the Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or use materials from a streambed, to notify the CDFW before beginning the proposed project. Similarly, under Fish and Game Code Section 1602, before any state or local governmental agency or public utility begins a construction project that will: 1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; 2) use materials from a streambed; or 3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the CDFW of the proposed project. If the CDFW determines that the proposed project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) was signed into law in 2014, from a three-bill legislative package, composed of Assembly Bill 1739 (Dickinson), Senate Bill 1168 (Pavley), and Senate Bill 1319 (Pavley). Its purpose is to ensure better local and regional management of groundwater use. The SGMA empowers local agencies to form groundwater sustainability agencies to manage basins sustainably and requires those groundwater sustainability agencies to adopt groundwater sustainability plans for crucial groundwater basins in California. The SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under the SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline.

Local

Because SDSU is a component of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code. However, for informational purposes, SDSU has considered the following regulations and plans.

City of San Diego Storm Water Runoff Control and Drainage Regulations

The City of San Diego Storm Water Runoff Control and Drainage Regulations are enforced through issuance of permits for projects under its jurisdictional control. The City's Storm Water Standards Manual is intended to help a project applicant, in coordination with City stormwater program staff, develop a stormwater quality management plan for a development project (public or private) that complies with local and MS4 Permit requirements (City of San Diego 2016a). As a state agency, CSU/SDSU is not subject to local planning regulations, including those issued by the City of San Diego. Additionally, because SDSU would not obtain building or grading permits from the City, the guidance is not applicable to the proposed project. It should be noted, however, that permits through the Development Services Department may be necessary for any work that is to be done within the City's public right-of-way, such as the replacement of existing corrugated metal pipes.

As CSU/SDSU seeks to conform with local regulations whenever it is feasible to do so, compliance with the water quality and stormwater standards for state-sponsored projects, such as those on the SDSU campus—particularly with respect to the general permit for Small MS4s described above—achieve a similar result to compliance with local development standards.

San Diego River Watershed Management Area Water Quality Improvement Plan

The MS4 Permit requires development of water quality improvement plans (WQIPs) that guide the co-permittees' jurisdictional runoff management programs toward achieving improved water quality in MS4 discharges and receiving waters. A San Diego River WQIP was developed by the Cities of El Cajon, La Mesa, San Diego, and Santee; the County of San Diego; and the California Department of Transportation (Project Clean Water 2019). The San Diego River WQIP assesses the impacts of storm drain discharges on receiving water quality and identifies a list of priority water quality conditions for the watershed. The highest priority water quality condition identified for the San Diego River watershed is bacteria, in both dry and wet weather conditions. Other priority water quality conditions are nitrogen and phosphorus, TDS, eutrophic conditions, and an index of biological integrity in dry weather conditions. Implementation of the WQIP furthers the CWA's objectives to protect, preserve, enhance, and restore the water quality and designated beneficial uses of waters of the state. The requirement sets forth a collaborative and adaptive planning and management process that identifies the highest priority water quality conditions within a WMA and implements strategies through the jurisdictional runoff management programs of the respective jurisdictions.

Model Water Efficient Landscape Ordinance

The City adopted the DWR Model Water Efficient Landscape Ordinance (MWEL0; effective September 2009), which became effective in the City in June 2010. Codified in the California Code of Regulations, Title 23 (Waters) Division 2, the DWR Model Ordinance establishes a structure for planning, designing, installing, maintaining, and managing water-efficient landscapes in new construction and remodel projects, in accordance with the Water Conservation in Landscaping Act of 2006. In 2015, Executive Order B-29-15 tasked DWR with revising the 2010 updated MWEL0

to increase water efficiency standards for new and retrofitted landscapes through encouraging the use of more efficient irrigation systems, graywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

MWELo requires plans for on-site water management practices and waste prevention strategies that include a calculated annual “Maximum Applied Water Allowance,” geared to reduce water use and maximize on-site efficiency. The ordinance is applicable to:

- New construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check, or design review.
- Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review.
- Existing landscapes (following a local agency or water purveyor audit).
- Cemeteries (in a limited capacity).

Prior to construction, the ordinance requires property owners and developers to submit a Landscape Documentation Package to their local agency that includes general project information, a water efficient landscape worksheet, soil management report, landscape design plan, irrigation design plan, and a grading plan. Following construction, property owners and developers are required to submit a certificate of completion and additional maintenance forms if there have been changes to the original plans.

4.9.3 Significance Criteria

The significance criteria used to evaluate the project impacts to hydrology and water quality are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality would occur if the project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - a. result in substantial erosion or siltation on or off site;
 - b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;
 - c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - d. impede or redirect flood flows
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

4.9.4 Impacts Analysis

Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Grading would include approximately 913,000 cubic yards of cut and 1,062,000 cubic yards of fill, which would require off-site import to balance the grading quantities.

The analysis of potential impacts of construction activities, construction materials, and non-stormwater runoff on water quality during the demolition and construction phase focuses primarily on sediment (TSS and turbidity) and certain non-sediment-related pollutants. Construction-related activities that primarily result in sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities include removal of vegetation from the site, grading of the site, and trenching for infrastructure improvements. Environmental factors that affect erosion include topographic, soil, and rainfall characteristics. Erosion and sedimentation affects water quality and interferes with photosynthesis; oxygen exchange; and the respiration, growth, and reproduction of aquatic species. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported downstream, which could contribute to degradation of water quality.

Non-sediment-related pollutants that are also of concern during construction relate to construction materials and non-stormwater flows and include construction materials (e.g., paint, stucco); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants are also of concern during construction.

Demolition and construction impacts from project development would be minimized through compliance with the SWRCB's CGP, which is the NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002). Because the proposed project is greater than 1 acre in size, the applicant would be required to submit a Notice of Intent to the State Water Resources Control Board in order to obtain approval to complete demolition and construction activities under the CGP. This permit requires the discharger to perform a risk assessment for the proposed development (with differing requirements based upon the determined level) and to prepare and implement a SWPPP. A Construction Site Monitoring Program that identifies monitoring and sampling requirements during construction is a required component of the SWPPP. The SWPPP is also required to include construction-phase BMPs to be implemented. Typical BMPs that would be implemented during demolition, grading, and construction of the proposed project that would minimize degradation of surface water quality include the following.

Erosion Control

- Physical soil stabilization through hydraulic mulch, soil binders, straw mulch, bonded and stabilized fiber matrices, compost blankets, and erosion control blankets.
- Contain and securely protect stockpiled materials from wind and rain at all times, unless actively being used.
- Soil roughening of graded areas to slow runoff, enhance infiltration, and reduce erosion.
- Vegetative stabilization through temporary seeding and mulching to establish interim vegetation.
- Wind erosion (dust) control through the application of water or other dust palliatives as necessary to prevent and alleviate dust nuisance.

Sediment Control

- Perimeter protection to prevent sediment discharges (e.g., silt fences, fiber rolls, gravel bag berms, sand bag barriers, and compost socks).
- Storm drain inlet protection.
- Sediment capture and drainage control through sediment traps and sediment basins.
- Velocity reduction through check dams, sediment basins, and outlet protection/velocity dissipation devices.
- Reduction in off-site sediment tracking through stabilized construction entrance/exit, construction road stabilization, and/or entrance/exit tire wash.
- Slope interruption at prescribed intervals (e.g., fiber rolls, gravel bag berms, sand bag berms, compost socks, biofilter bags).

Waste and Materials Management

- Management of the following types of materials, products, and wastes: solid, liquid, sanitary, concrete, hazardous, and equipment-related wastes. Management measures include covered storage and secondary containment for material storage areas, secondary containment for portable toilets, covered dumpsters, dedicated and lined concrete washout/waste areas, proper application of chemicals, and proper disposal of all wastes.
- A spill response and prevention program will be incorporated as part of the SWPPP and spill response materials will be available and conspicuously located at all times on site.

Non-stormwater Management

- BMPs or good housekeeping practices to reduce or limit pollutants at their source before they are exposed to stormwater, including such measures as water conservation practices, vehicle and equipment cleaning and fueling practices, illicit connection/discharge elimination, and concrete curing and finishing. All such measures will be recorded and maintained as part of the project SWPPP.

Training and Education

- Inclusion of CGP defined “Qualified SWPPP Developers” (QSD) and “Qualified SWPPP Practitioners” (QSP). QSDs and QSPs shall have required certifications and shall attend State Board sponsored training.
- Training of individuals responsible for SWPPP implementation and permit compliance, including contractors and subcontractors.
- Signage (bilingual, if appropriate) to address SWPPP-related issues (such as site cleanup policies, BMP protection, washout locations, etc.).

Inspections, Maintenance, Monitoring, and Sampling

- Performing routine site inspections and inspections before, during (for storm events > 0.5 inches), and after storm events.
- Where applicable, preparing and implementing Rain Event Action Plans (REAPs) prior to any storm event with 50% probability of producing 0.5 inches of rainfall, including performing required preparatory procedures and site inspections.

- Implementing maintenance and repairs of BMPs as indicated by routine, storm-event, and REAP inspections.
- Implementation of the Construction Site Monitoring Plan for non-visible pollutants, if a leak or spill is detected.
- Where applicable, sampling of discharge points for turbidity and pH, at minimum, three times per qualifying storm event and recording and retention of results.

In addition, in compliance with the CGP, temporary sediment traps would be constructed for areas less than 5 acres each that would remain in a mass graded condition for a temporary period of time. For areas greater than 5 acres, but less than 75 acres, temporary sediment basins would be constructed (Appendix 4.9-3).

Construction of the proposed project may require dewatering. For example, dewatering of captured stormwater may be needed if water has been standing on site and needs to be removed for construction, vector control, or other reasons. Further, dewatering may be necessary if groundwater is encountered during excavations, or to allow discharges associated with testing of water lines, sprinkler systems, and other facilities. However, dewatering of groundwater is generally not allowed under the CGP. If groundwater is encountered and displaced, the pumped groundwater cannot be discharged into surface waters unless the owner applies for a separate Groundwater Dewatering Permit with the Regional Water Quality Control Board (RWQCB) (Order R9-2015-0013, Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region). In general, the CGP authorizes other construction-related non-stormwater discharges as long as they (a) comply with Section III.C of the General Permit, (b) do not cause or contribute to violation of any water quality standards, (c) do not violate any other provisions of the General Permit, (d) do not require a non-stormwater permit as issued by some Regional Water Boards, and (e) are not prohibited by a Basin Plan provision. Through implementation of the requirements outlined in the CGP, construction-related impacts to surface water and groundwater would be minimized and impacts would be **less than significant**.

Operation

Surface Water Quality

Methodology

Any increases in pollutant concentrations resulting from project development are considered an indication of a potentially significant adverse water quality impact. If pollutant loads and concentrations resulting from development are predicted to remain the same or to be reduced when compared with existing conditions, it is concluded that the proposed project would not cause a significant adverse impact to the ambient water quality of the receiving waters for that pollutant (Appendix 4.9-1).

If pollutant loads or concentrations are expected to increase for the operational phase of the proposed project, potential impacts have been assessed by evaluating compliance of the proposed project with applicable regulatory requirements of the Small MS4 Permit. Further, post-development increases in pollutant loads and concentrations have been evaluated by comparing the magnitude of the increase to relevant benchmarks, including receiving water quality objectives and criteria from the San Diego RWQCB Basin Plan and CTR. However, water quality criteria are considered benchmarks for comparison purposes only, as such criteria apply within receiving waters, as opposed to applying directly to runoff discharges. Narrative and numeric water quality objectives contained in the Basin Plan apply to the proposed project receiving waters, including the Lower San Diego River and Murphy Canyon Creek (Appendix 4.9-1).

Water quality criteria contained in the CTR provide concentrations that are not to be exceeded in receiving waters more than once in a 3-year period for those waters designated with aquatic life or human health related uses. Projections of runoff water quality have been compared to the acute form of the CTR criteria, as stormwater runoff is associated with episodic events of limited duration, whereas chronic criteria apply to four-day exposures, which do not describe typical storm events in the project area, which last seven hours on average. If pollutant levels in runoff are not predicted to exceed receiving water benchmarks, it is one indication that no significant impacts would result from project development (Appendix 4.9-1).

Project Impacts

In addition to parks, recreation, and open space areas, including the River Park, the proposed project would include a new multipurpose Stadium, campus structures, campus residential units, campus hospitality, retail space, trolley/transit infrastructure enhancements, parking garages, surface parking, and associated utilities. Based on the 2014 and 2016 Clean Water Act Section 303(d) List of Water Quality Limited Segments, the major sources of pollution in on-site runoff would be contaminants such as oil/grease, other petroleum hydrocarbons, pesticides, trace metals, trash/debris, and pathogens (e.g., bacteria), which that have accumulated on rooftops and other impervious surfaces, such as driveways, parking lots, and pedestrian walkways (Appendices 4.9-1 and 4.9-4).

The proposed project would result in a substantial increase in turf/landscape areas, with a decrease in impervious surfaces from approximately 90% to 57% of the project site. While this increase in vegetation would provide substantial benefits with respect to decreased runoff and increased filtration of incidental contaminant concentrations, contaminants that may be present in runoff include nitrogen and phosphorous from fertilizers applied to landscaping and turf. Excess fertilizers can impact water quality by promoting excessive and/or a rapid growth of aquatic vegetation, which reduces water clarity and results in oxygen depletion. The San Diego RWQCB Basin Plan includes a water quality objective for biostimulatory substances, which states: “Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth” (San Diego RWQCB 2016). The Basin Plan provides specific total phosphorus concentrations allowable in creeks. The Lower San Diego River is listed as impaired for total nitrogen and total phosphorus in the 2014/2016 Clean Water Act Section 303(d) list (Appendix 4.9-1; San Diego RWQCB 2016).

Pesticides can also enter urban runoff after application on landscaped areas, can be toxic to aquatic organisms, and can bioaccumulate in larger species, such as birds and fish. Oil and grease can enter dry-weather and stormwater runoff from vehicle leaks, traffic, and maintenance activities. Metals can enter runoff as surfaces corrode, decay, or leach. Potential gross pollutants associated with operational activities include clippings associated with landscape maintenance, street litter, and pathogens (bacteria). Pathogens (from sanitary sewer overflows, spills and leaks from portable toilets, pets, and human activities) and other potential surface water contaminants could impact downstream beneficial uses, as listed in Table 4.9-1.

Low Impact Development Features

As previously discussed and indicated in Table 2-2, Existing and Proposed Conditions Summary, in Chapter 2, the proposed project would result in a substantial increase in turf/landscape areas, with a decrease in impervious surfaces from 90% (existing) to 57% (post-construction) of the project site. As indicated in Section 2.3.4.3, Parks, Recreational, and Open Space Uses, of Chapter 2, the proposed project would include a River Park, walking paths and trails, and associated open space (Figure 2-9D). Landscaping features, such as paseos, malls, greens, and

green space would be interspersed throughout the campus land uses. Implementation of these project features would be consistent with Small MS4 Permit regulations and the SDSU SWMP.

In accordance with the Small (Phase II) MS4 Permit, the proposed project will implement LID standards designed to reduce runoff, treat stormwater, treat dry weather runoff, and provide baseline hydromodification management to the extent feasible to meet the numeric sizing criteria identified in the permit. As described in Chapter 2, Project Description, and as specified in the proposed project hydrology and water quality technical reports (Appendices 4.9-1 through 4.9-4), BMPs incorporated into the proposed project to address surface water quality and hydromodification impacts include LID site design, source control, and stormwater treatment/baseline hydromodification control BMPs. Source control BMPs refer to land use or site planning practices, or structures that aim to prevent urban runoff pollution, by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. Stormwater treatment/baseline hydromodification control BMPs are features such as bioswales, infiltration basins, or bioretention basins, which are designed to infiltrate, filter, and/or treat runoff from the proposed project footprint (Appendices 4.9-1 and 4.9-4).

As indicated in Section 2.3.1, Site Constraints (Drainage); Section 2.3.4.6, Utilities and Public Services (Stormwater); and Section 2.3.6, Construction Activities and Phasing, the proposed storm drain system would collect and retain runoff and direct drainage to bio-retention basins, in compliance with MS4 requirements (Figure 4.9-4, LID BMP Drainage Areas). As indicated in this figure, the project site has been divided into nine Drainage Management Areas (DMAs), all of which contain impervious surfaces. The proposed bioretention basins would capture runoff from these areas. A conceptual drawing of a bioretention basin is provided in Figure 4.9-5, Conceptual Bioretention Basin. In addition to the bioretention basins, lined biofiltration planter boxes would be used throughout the campus (Figure 4.9-6, Conceptual Biofiltration Planter Box) (Appendix 4.9-1).

Based on existing soil conditions, stormwater infiltration has preliminarily been assumed to be infeasible in these bioretention basins. Any potential overflow of the proposed bioretention basins and biofiltration planters, such as that generated during larger storms, would be directed to catchment basins near the southern edge of the project site, which would flow into the existing storm drain outlets located at the southern project boundary (Figure 4.9-7, Proposed Drainage). During the final engineering phase of the proposed project, infiltration feasibility would be assessed based on the City of San Diego Storm Water Standards Manual. If the final design incorporates partial or full infiltration, runoff volumes and pollutant loads would decrease in the post-development condition compared to no infiltration (Appendix 4.9-1).

Biofiltration BMPs, consisting of partial retention and lined bioretention facilities, achieve water quality treatment by filtering captured stormwater through vegetation and layers of treatment media and drainage rock prior to controlled releases through an underdrain and surface outlet structure. Some retention may occur due to incidental evapotranspiration, but the primary means of water quality treatment is through filtration, sedimentation, and biological treatment processes. Bioretention with an underdrain is a volume-based biofiltration BMP that is characterized by a treatment media layer, drainage layer, underdrain at the bottom of the drainage layer, inflow and outflow control structures, vegetation, and an impermeable liner when warranted by site conditions. Flow-through biofiltration BMPs include green roofs, planter boxes, tree well filters, and other types of proprietary bio-filters (Appendix 4.9-1).

The biofiltration BMPs 1A, 1B, 1C, 3, and 5C (Figure 4.9-4, LID BMP Drainage Areas) would be designed to treat the full runoff design control volume, or water quality design volume, providing water quality treatment for the 85th percentile, 24-hour, 2-year storm event, to the maximum extent feasible, based on the maximum feasible footprint for DMA 1A, 1B, 1C, 3, and 5C, respectively. The biofiltration BMPs would not be intended to provide water quality

benefit for larger and less frequent storms. The biofiltration BMPs 4 and 5B would use the design control volume reduction gained by implementing street trees in their respective DMAs 4 and 5B to satisfy the design control volume requirements, as determined by the San Diego Storm Water Standards Manual. Furthermore, the excess volume provided in BMP 5C would be used to offset the remaining required volume in BMP 5B. DMA 2 consists of the lower bowl of seating and field of the proposed Stadium. For DMA 2, due to the flow line of the storm drain, the finished grade of the field, and the fixed tie-in point downstream, the proposed project would include a proprietary compact biofiltration system (Appendices 4.9-1 and Appendix 4.9-4).

The drainage design of the proposed project would include routing on-site runoff from the DMAs via the proposed storm drains designed to convey the peak flow rates toward the proposed River Park, where low flow structures would divert runoff for the small and more frequently occurring storms through these permanent pollutant control stormwater BMPs for water quality purposes, then would discharge runoff through each of the three existing storm drain outfalls along the San Diego River (Figure 4.9-7, Proposed Drainage). The proposed project structural LID BMPs would also incorporate full trash capture (Appendices 4.9-1 and 4.9-4).

The bioretention facilities in the proposed River Park would be designed to create and increase habitat to the extent feasible while treating the proposed project stormwater runoff. Consultation would occur with the San Diego Management and Monitoring Program staff or the U.S. Geological Survey staff regarding selection of vegetation materials for the bioretention facilities to maximize habitat and biofiltration. The upper slopes of the project site would be planted with appropriate native or non-native/non-invasive, drought-tolerant vegetation, and the lower portions of the bioretention facilities would be planted with plant materials that support habitat and are suitable for inundation as part of the biofiltration process (Appendix 4.9-1).

Although the proposed project is only subject to the requirements of the Small (Phase II) MS4 Permit and would not be subject to the requirements of the San Diego Regional MS4 Permit (Order R9-2013-0001), the LID features described above would be consistent with the latter permit requirements, as well as the 2018 City of San Diego Storm Water Standards Manual, where feasible to the maximum extent practicable. SDSU would be responsible ensuring implementation and funding of maintenance of the permanent BMPs, as described in Section 4.0, Operation and Maintenance Plan, of Appendix 4.9-4. In addition, the water quality design for the proposed roadway improvements adjacent to the proposed project would rely on the use of biofiltration facilities, where feasible, or the use of proprietary biofiltration units (Appendices 4.9-1 and 4.9-4).

Surface Water Quality Modelling

A water quality model was used to estimate pollutant loads and concentrations in project stormwater runoff for certain pollutants of concern for pre-development and post-development conditions, including incorporation of the proposed project LID design, as described above. The water quality model is one the few models that considers the observed variability in stormwater hydrology and water quality by characterizing the probability distribution of observed rainfall event depths, the probability distribution of event mean concentrations, and the probability distribution of the number of storm events per year. These distributions are then sampled randomly to develop estimates of mean annual loads and concentrations. The pollutants of concern for which there are sufficient flow composite sampling data in the databases used for modeling are:

- TSS
- TDS
- Total phosphorus

- Nitrate-nitrogen, nitrate-nitrogen, and ammonia
- Total copper
- Dissolved copper
- Total lead
- Total zinc
- Dissolved zinc (Appendix 4.9-1)

The model incorporates project BMPs, including LID site design, source control, and LID structural BMPs (as previously described), consistent with the Small MS4 Permit requirements. In addition, the model conservatively assumes that the LID structural BMPs would not provide any volume reduction via infiltration and evapotranspiration. Based on the modelling:

- 1) The Basin Plan objective for TDS in the San Diego River at the project site is 1,500 mg/L. The predicted concentration in project runoff is 0.08 mg/l, which is well below the water quality objective.
- 2) The Basin Plan water quality objective indicates that total phosphorus concentrations shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water. Although the developed condition has a predicted total phosphorus concentration of 0.22 mg/L, this concentration is more than a 40% decrease in concentration from the existing condition concentration of 0.37 mg/L. The modeling results are also conservative because it does not consider source control BMPs that target nutrients, which would further reduce concentrations and loads of total phosphorous. As a result, the proposed project would decrease the discharge of total phosphorus into Lower San Diego River.
- 3) All nitrogen compound loads and concentrations are predicted to decrease with project development, except for the concentration of nitrate, which is predicted to increase slightly. There is no specific water quality objective for nitrate listed in the Basin Plan. The Drinking Water Standards Maximum Contaminant Level for nitrate is 10 mg/L as nitrogen. The predicted nitrate concentration in treated stormwater of 0.62 mg/l is well below this Maximum Contaminant Level.
- 4) Loads and concentrations for all metals are predicted to decrease with project development. Although metals concentrations in project discharges are predicted to be greater than the average observed concentrations in the Lower San Diego River, project discharges for all metals are predicted to be less than the CTR criteria (Appendix 4.9-1).

Additional Qualitative Water Quality Analysis

In addition, post-development stormwater runoff water quality impacts associated with the following pollutants of concern were addressed, based on literature information and professional judgement, as available data were not deemed sufficient for modeling:

- Turbidity
- Pathogens (bacteria, viruses, and protozoa)
- Pesticides
- Petroleum hydrocarbons (oil and grease, polycyclic aromatic hydrocarbons) (Appendix 4.9-1)

The following qualitative conclusions were reached:

- 1) Stormwater discharges from the project site could potentially exceed the Basin Plan Fecal Indicator Bacteria objectives for the San Diego River in the absence of BMPs. However, the Fecal Indicator Bacteria concentrations in runoff from the proposed project would be reduced, through the implementation of source control and LID structural BMPs, in comparison to existing conditions. The proposed project sewers would be designed to current standards, which would minimize the potential for leaks. In addition, the proposed project LID structural BMPs selected to manage pollutants of concern would not result in substantial changes in pathogen indicator levels compared to the existing condition that would cause a violation of the water quality objectives or waste discharge requirements, or otherwise substantially degrade water quality in the receiving waters.
- 2) Given that many pesticides exhibit toxicity at very low concentrations, the most effective control strategy is source control and compliance with regulations limiting outdoor applications. Structural treatment controls are less practical because of the variety of pesticides and wide range of chemical properties that affect their ability to treat these compounds. However, most pesticides are relatively insoluble in water and therefore tend to adsorb to the surfaces of sediment, which would be stabilized with development. In addition, biofiltration media contains sorption sites that would promote the removal of pesticides. Thus, treatment in the LID structural BMPs would achieve some removal of pesticides from stormwater as TSS is reduced and stormwater is biofiltered.
- 3) Petroleum hydrocarbons in urban runoff are primarily associated with transportation activities. Source control BMPs that address petroleum hydrocarbons include educational materials on oil disposal and recycling programs. Supplemental to this strategy would be utilization of LID structural BMPs that will further reduce petroleum hydrocarbons in runoff, as these compounds tend to be adsorbed to particulates and therefore amenable to LID structural BMPs that incorporate processes such as settlement, filtration, and/or adsorption (Appendix 4.9-1).

Conclusion

Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. LID design and source control BMPs are practices designed to minimize runoff and the introduction of pollutants into runoff. LID treatment control/baseline hydromodification control BMPs are designed to remove pollutants following mobilization by rainfall and runoff and to reduce changes to runoff volume to the extent practicable. Based on the quantitative (i.e., modeled) and qualitative water quality analysis, in combination with incorporation of proposed LID design, source control BMPs, and structural BMPs, as described above, water quality impacts during project operations would be **less than significant**.

Groundwater Quality

Discharge from the proposed project's developed areas to groundwater may occur in two ways: (1) through infiltration of urban runoff in the proposed LID BMPs after treatment; and (2) infiltration of urban runoff, after treatment in the proposed project BMPs, in the Lower San Diego River. Research conducted on the effects on groundwater from stormwater infiltration indicate that the potential for contamination is dependent on a number of factors, including the local hydrogeology and the chemical characteristics of the pollutants of concern. Pollutant characteristics that influence the potential for groundwater impacts include high mobility (low absorption potential), high solubility fractions, and abundance in runoff, including dry weather flows. As a class of constituents, trace

metals tend to absorb onto soil particles and are filtered out by soils. This has been confirmed by extensive data collection beneath stormwater detention/retention ponds that showed that trace metals tend to be adsorbed in the upper few feet in the bottom sediments. Bacteria are also filtered out by soils. More mobile constituents such as chloride and nitrate would have a greater potential for groundwater impacts due to infiltration (Appendix 4.9-1).

As a result, nitrate is the primary pollutant of concern with respect to groundwater quality during project operations. High nitrate levels in drinking water can cause health problems in humans, including methemoglobinemia (blue-baby syndrome) in infants. Human activities and land use practices can influence nitrogen concentrations in groundwater. For example, irrigation water containing fertilizers can increase levels of nitrogen in groundwater. The Basin Plan objective for nitrate in groundwater in the project area is 10 mg/L, as nitrogen. As previously discussed, the predicted nitrate concentration in runoff after treatment in the BMPs is 0.62 mg/L as nitrogen, which is well below the groundwater quality objective (Appendix 4.9-1). Therefore, infiltration of post development stormwater runoff would not cause significant adverse groundwater quality impacts. As such, project operational impacts to groundwater quality would be **less than significant**.

Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Construction

Groundwater is present at a depth of 7 to 9 feet in the vicinity of the proposed River Park and as deep as 38 feet in the vicinity of the existing SDCCU Stadium. Groundwater would not likely be encountered during proposed Stadium excavations, as final finished subgrades of the proposed Stadium would be at an elevation of 56 to 60 feet AMSL, with groundwater elevations of 37 to 49 feet. As a result, groundwater levels would be 7 to 23 feet below finished stadium Subgrade levels; see Table 4.9-6, Proposed Stadium Distance to Groundwater (Appendix 4.9-6).

Table 4.9-6. Proposed Stadium Distance to Groundwater

Stadium Level	Finished Subgrade Elevation (feet)	Measured Elevation of Groundwater (feet)	Distance between Finished Subgrade and Groundwater Level (feet)
Field Level	56 (cut)	37 – 49	7 – 19
Service Level: Loading Dock	56 (cut)	37 – 49	7 – 19
Service Level: Locker Room	60 (cut)	37 – 49	11 – 23
Main Concourse	87 (fill)	37 – 49	38 – 50

Note: The distance between finished subgrade and groundwater level is an approximate range specific to the Development Areas.

Source: Appendix 4.9-6.

Within the proposed campus office, research, and innovation area, buildings would have up to two levels of garage parking. Average finished subgrades of the proposed garages would be at an elevation of 56 to 70 feet AMSL, with groundwater elevations of 38 to 52 feet. As a result, groundwater levels would be 15 to 30 feet below finished garage subgrade levels; see Table 4.9-7, Project Components Distance to Groundwater (Appendix 4.9-6).

Table 4.9-7. Project Components Distance to Groundwater

Campus Component	Average Finished Subgrade Elevation (feet)	Measured Elevation of Groundwater (feet)	Distance between Finished Subgrade and Groundwater Level (feet)
Education, research, entrepreneurial zone (with parking garage)	55 (cut)	38 – 40	15 – 17
Stadium zone (with garage parking)	75 (cut)	45 – 48	27 – 30
Hotel and conference center	85 (fill)	43 – 49	36 – 42
Residential – North (R1 to R9)	70 (cut)	44 – 47	23 – 26
Residential – South (R10 to R15)	65 (cut)	44 – 52	13 – 21

Note: The distance between finished subgrade and groundwater level is an approximate range specific to the Development Areas.

Source: Appendix 4.9-6.

However, it is possible that groundwater could be encountered during excavations, due to seasonal variations in shallow groundwater levels, necessitating dewatering. In addition, groundwater management may be necessary during pile driving for the Stadium and to allow discharges associated with testing of water lines, sprinkler systems and other facilities (Appendices 4.9-1 and 4.9-6). Prior to construction, further site-specific testing will occur to further determine groundwater levels, soil conditions, and the need for dewatering. Dewatering BMPs, such as dewatering tanks or weir tanks that will hold the excavated groundwater, may be used during the construction phase (Appendix 4.9-6). All dewatering would be conducted in compliance with the California NPDES CGP (Order No. 2009-009-DWQ, as amended by Order 2010-0014-DWQ and 2012-006-DWQ) and the San Diego RWQCB's General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region (Order No. R9-2015-0013, NPDES No. CAG919003). The CGP authorizes construction dewatering activities and other construction-related non-stormwater discharges as long as they (a) comply with Section III.C of the General Permit,; (b) do not cause or contribute to violation of any water quality standards, (c) do not violate any other provisions of the General Permit, (d) do not require a non-stormwater permit as issued by some Regional Water Boards, and (e) are not prohibited by a Basin Plan provision.

In addition, any construction dewatering would be temporary and would represent negligible quantities with respect to available groundwater beneath the site. As a result, dewatering would not substantially decrease groundwater supplies such that the proposed project would impede sustainable groundwater management of the basin. Impacts would be **less than significant**.

Operation

The project site is largely dominated by paved surface parking and is largely impervious. Implementation of the proposed project would reduce the impervious surfaces from approximately 90% (existing) to 57% (post-construction) of the total project area and would result in greater opportunity for groundwater recharge, resulting in beneficial impacts. No direct dewatering discharges are expected during operations, as finished subgrades would be designed to be above the groundwater table. If needed, permanent dewatering discharges would be managed to prevent impacts to the San Diego River by recharging the dewatering back to groundwater at a suitable location on the project site (Appendix 4.9-6). Further, structural LID BMPs would be lined to prevent impacts to groundwater unless it is determined in the design phase of the proposed project that infiltration is desirable at the specific BMP locations. As a result, project operations would not substantially interfere with groundwater recharge such that the proposed project would impede sustainable groundwater management of the basin. Impacts would be **less than significant**.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

a. result in substantial erosion or siltation on or off site;

Although the internal drainage patterns would be somewhat altered as a result of project development, the proposed project would maintain the existing outfall structures in the post-construction condition (Figure 4.9-2, Existing Drainage System, and Figure 4.9-7, Proposed Drainage). The proposed project would entail minor alterations to the existing stormwater drainage system so this system can better filter and convey the site's runoff to the San Diego River. The project site consists almost entirely of paved surfaces. Once under construction, these paved surfaces would be removed, which will help to encourage natural, on-site percolation and will have an immediate effect of reducing runoff from the site. No part of the construction effort would alter the course of a stream or river, or result in substantial erosion or siltation.

In the post-development conditions, placement of impervious surfaces will serve to stabilize soils and to reduce the amount of erosion that may occur from the proposed project during storm events and will therefore decrease turbidity in runoff from the proposed project. Project BMPs, including source controls (such as common area landscape management and common area litter control) and LID structural BMPs in compliance with the Small MS4 Permit, would prevent or reduce the release of organic materials and nutrients (which might contribute to algal blooms) to receiving waters. Based on implementation of post-construction project BMPs, runoff discharges from the proposed project will not cause a substantial increase in erosion, and therefore, the proposed project would not result in substantial erosion or siltation on or off site. Impacts would be **less than significant**.

b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

Construction

Because the proposed project would entail an overall reduction in impervious surface throughout construction, no portion of project construction would result in increased runoff that could cause flooding on or off site. Construction would not necessitate or result in any alterations to Murphy Canyon Creek, the San Diego River, or other unnamed drainages that traverse the site. By systematically taking out the impervious surface that is currently on the proposed project site, the site will serve to attenuate more water on site and may reduce run-off quantities leaving the site throughout construction. Therefore, even during construction, the proposed project will help reduce off-site flooding due to the immediate infiltration effect of removal of impervious surfaces. The proposed project would have a positive impact on flooding issues when compared to the existing conditions; therefore, impacts would be **less than significant**.

Operation

Based on hydrologic analyses completed for the proposed project (Appendices 4.9-2 and 4.9-3), peak stormwater flows were estimated for on-site runoff associated with the 50- and 100-year frequency storm event, in the existing and proposed condition, to assess changes in peak runoff as a result of the proposed project. Post-construction, the proposed River Park would serve as a floodplain buffer between the San Diego River and the developed portions of the proposed project, which would be constructed on building pads elevated above the floodplain levels. As previously discussed, the drainage design for the proposed

project includes routing on-site runoff through permanent stormwater quality basins (Figure 4.9-4, LID BMP Drainage Areas), followed by conveyance through proposed pipe drainage systems and discharge through the existing storm drain outfalls. Water quality basins are designed to treat a “low-flow” storm event to address pollutant loads. Flows in excess of the “low-flow” would bypass the basin and be conveyed directly to the storm drain outlets. Therefore, for the purpose of flood condition modeling, the water quality basins were assumed to be full/clogged, and the storage capacity of the basins was excluded from the model (Appendix 4.9-2).

As previously discussed, the existing outfalls for drainage systems A, B, and C penetrate through an 84- to 96-inch diameter sanitary sewer main paralleling the north bank of the San Diego River (Figure 4.9-7, Proposed Drainage). These outfalls would not be modified. The proposed drainage system would similarly tie into these existing outfalls. Flow in excess of the capacity of Outfalls B and C are designed to pond aboveground before discharge, similar to the existing condition. Flow in excess of the capacity of Outfall A would be conveyed in a constructed channel to Outfall D. Similar to the existing condition, the diameter of the three proposed major storm drain outfalls to the San Diego River will be the limiting factor of the drainage systems’ discharge capacity in the proposed condition (Appendix 4.9-2). The on-site improvements along with the adjacent improvements associated with Street ‘A,’ portions of Mission Village Drive/Street ‘F,’ and portions of Street ‘I’ would comingle and discharge south to the San Diego River. The adjacent improvements associated with Friars Road, San Diego Mission Road, and portions of Street “I” will be conveyed by separate, existing storm drain systems to the two Murphy Canyon Channel outfalls. (Appendix 4.9-1).

The proposed project would result in a substantial increase in turf/landscape areas, with a decrease in impervious surfaces from approximately 90% to 57% of the project site. Pervious surfaces allow infiltration of stormwater runoff into on-site soils, thus reducing runoff volumes and discharge rates. The increased pervious surfaces would consist of the planned River Park and biofiltration BMPs, which would retain the volume of stormwater runoff produced from the 85th percentile, 24-hour storm event (water quality design volume), to the maximum extent feasible. The water quality model previously described (Appendix 4.9-1) incorporates project BMPs, including LID site design, source control, and LID structural BMPs, consistent with the Small MS4 Permit requirements. Site design BMPs would further reduce stormwater runoff volume. However, the model conservatively assumes that the LID structural BMPs would not provide any volume reduction via infiltration and evapotranspiration. Implementing partially or fully infiltrating BMPs, which may occur as part of the buildout of the proposed project if site conditions are favorable, would result in even more runoff volume reduction from the proposed project compared to the pre-development condition (Appendices 4.9-1 and 4.9-4).

Regardless of the lack of stormwater runoff volume reduction as a result of the biofiltration basins, the total post-project peak flow would be substantially lower than the total pre-project peak flow, resulting in a net decrease in peak flow rates and volume of runoff (Appendix 4.9-2). Because the proposed project would reduce the peak flow rate from the area and volume of runoff, the proposed project would result in beneficial impacts with respect to stormwater runoff and associated flooding. Impacts are considered **less than significant**.

- c. *create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.*

As discussed for (b), above, because the proposed project would reduce the peak flow rate from the area and volume of runoff, the proposed project would result in beneficial impacts with respect to stormwater runoff. As a result, the proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional source of polluted runoff. Impacts are considered **less than significant**.

- d. *impede or redirect flood flows?*

The proposed project site is designated as FEMA “Zone A” along the eastern perimeter adjacent to Murphy Canyon Creek and FEMA “Zone AE” along the southern perimeter adjacent to the San Diego River. Development regulations differ for a watercourse with a Zone AE designation compared to a Zone A designation. For a Zone AE floodplain and floodway, development in the floodway is generally discouraged and must preclude a rise in the 100-year water surface elevation. Development in the flood fringe (area within the floodplain, but outside the floodway) is allowed subject to San Diego Municipal Code Section 143.0145(f). Proposed project development would avoid encroachment into the floodway that would increase water surface elevations, and would also meet the San Diego Municipal Code floodplain and floodway regulations. Since the San Diego River floodplain and floodway are defined based on detailed engineering methods, project development would adhere to applicable floodplain and floodway regulations associated with the San Diego River. Additional hydraulic analyses are not required at the current design development stage to assist in understanding development constraints guided by the regulations (Appendix 4.9-5).

A triangular portion of the San Diego River floodway currently encroaches into the Stadium parking lot (Figure 4.9-3, Existing Flood Zones). Development in the triangular area would not be allowed to increase the 100-year water surface elevation. During final engineering, map revisions may be processed through FEMA in an attempt to remove the triangular floodway area and eliminate the associated restrictions (Appendix 4.9-5).

For Zone A, the floodplain along the San Diego River has been delineated based on detailed engineering analysis. However, the Murphy Canyon Creek floodplain is based on approximate information, since detailed engineering has not been performed. The Flood Insurance Rate Map indicates that the 100-year flood flow overflows the banks of Murphy Canyon Creek, approximately 0.5 miles north of Friars Road. The spillover becomes surface runoff that re-enters the project site near the KMEP MVT access road. The runoff then continues south across the stadium parking lot to the San Diego River. The proposed project would convey the spillover flow within the proposed River Park (Figure 4.9-8, Post Development Flood Zones). Under proposed conditions, the model shows that flows would spill out of the approaching open channel at the upstream end of the box culverts. The spill would occur at flows above 2,600 cubic feet per second (cfs). Since the 100-year flow approaching the culverts is 3,500 cfs, the spillover is approximately 900 cfs (Appendix 4.9-5).

No structures would be built within this floodway or within any other portion of the 100-year flood zone. The River Park will serve as a floodplain buffer between the San Diego River and the developed portions of the proposed project, which will be constructed on pads elevated above the floodplain depths. Therefore, all structures would be set back from the natural floodplain. As a result, the proposed project would not impede or redirect flood flows at the site. Impacts are considered **less than significant**.

In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Construction and Operation

Seiches are oscillations in an enclosed body of water caused by seismic shaking. Because no structures would be located in proximity to the San Diego River, the closest body of water, the proposed project would not be susceptible to damage by seiches. Similarly, considering the project site's elevation ranges from approximately 50 feet to 80 feet, and is approximately 7 miles east of the Pacific Ocean, the proposed project would not be susceptible to inundation by a tsunami.

As previously discussed, the project site is designated as FEMA "Zone A" along the eastern perimeter adjacent to Murphy Canyon Creek and FEMA "Zone AE" along the southern perimeter adjacent to the San Diego River. No structures would be built within this floodway or within any other portion of the 100-year flood zone. The River Park will serve as a floodplain buffer between the San Diego River and the developed portions of the proposed project, which will be constructed on pads elevated above the floodplain depths. Therefore, all structures would be set back from the natural floodplain. In addition, with the exception of storage of minor quantities of petroleum products and hazardous materials, the proposed project would not include industrial facilities that typically store large quantities of such materials. As a result, the proposed project would not risk release of pollutants due to project inundation. Impacts are considered **less than significant**.

Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Construction

Construction activities such as demolition of existing structures (e.g., existing Stadium) and grading, excavation, and trenching for construction of proposed facilities would expose soils, slopes, and construction equipment/materials to stormwater runoff. Construction site runoff can contain soil particles and sediments from these activities. Dust from construction sites also can be transported to other nearby locations where the dust can enter runoff or water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites also can enter runoff. Typical pollutants could include petroleum products and heavy metals from equipment, as well as products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of construction materials could result in water quality degradation if runoff containing the sediment entered receiving waters in sufficient quantities to exceed Basin Plan water quality objectives.

As CSU/SDSU seeks to conform with local regulations whenever it is feasible to do so, compliance with the water quality and stormwater standards for state-sponsored projects, such as those on the SDSU campus—particularly with respect to the general permit for Small MS4s described above—achieve a similar result to compliance with local development standards. The proposed project would be required to prepare a SWPPP, in accordance with the NDPES CGP, which will include a risk determination and list the appropriate water quality BMPs that will be used to protect stormwater quality throughout the construction phase. Additionally, the SWPPP must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to monitor the effectiveness of the selected BMPs. The SWPPP will be required to demonstrate that the construction activities will not violate discharge prohibitions, effluent limitations, and water quality standards as outlined in the CGP. As such, with implementation of the SWPPP, construction of the proposed project would not conflict with or obstruct the Basin Plan.

As discussed in Section 4.9.1.7, Groundwater, the proposed project overlies the Mission Valley Groundwater Basin. Currently no significant withdrawals are conducted due to the petroleum plume from the KMEP MVT (Appendix 4.9-1). The groundwater plume spread to approximately 50% of the area below the SDCCU Stadium parking lot. (Refer to EIR Section 4.8, Hazards and Hazardous Materials.) In San Diego County, the state has designated four of the County's basins as medium-priority and subject to the SGMA: Borrego Valley, San Diego River Valley, San Luis Rey Valley, and San Pasqual Valley (County of San Diego 2018). As such there is no Groundwater Sustainability Plan for the Mission Valley Groundwater Basin at this time. Thus, the Mission Valley Groundwater Basin would not be subject to a sustainable groundwater management plan, mandated by the SGMA for DWR basins determined to be of medium to high priority. As noted above, the proposed project is not expected to violate any water quality standards and with measures that would be taken during construction, including implementation of a SWPPP in compliance with the NPDES CGP. The proposed project would not conflict with or obstruct implementation of the Basin Plan; **no impact** would occur.

Operation

Changes in impervious areas created and non-point source pollutants associated with proposed land uses could alter the types and levels of pollutants that could be present in project site runoff. Runoff from building rooftops, driveways, and landscaped areas can contain non-point source pollutants such as sediment, trash, oil, grease, heavy metals, pesticides, herbicides, and/or fertilizers. In compliance with the Small MS4 Permit, the proposed project campus development must implement stormwater quality control and flow control BMPs. Project BMPs, including source controls (such as common area landscape management and common area litter control) and LID structural BMPs in compliance with the Small MS4 Permit, will prevent or reduce the release of organic materials and nutrients (which might contribute to algal blooms) to receiving waters. As such, the proposed stormwater treatment devices would be sufficient to avoid substantial polluted runoff from the site. Furthermore, any pollutant sources would be limited to non-point sources such as trash/debris and sediment. As such, the proposed project is not expected to violate any water quality standards and measures would be taken such that the proposed project would not conflict with or obstruct implementation of the Basin Plan; **no impact** would occur.

The project site itself is approximately 90% impervious in the existing condition; therefore, there are no natural drainage pathways to maintain. The proposed project would implement LID retention BMPs to retain the volume of stormwater runoff to the maximum extent feasible. Further, although the proposed project would alter the existing drainage of the parking lot, the intent is to more closely mimic the conditions that existed at the project site prior to development of the current SDCCU Stadium and parking lot. Stormwater runoff will discharge through the same outfalls to the San Diego River as in the existing condition, so potential recharge through the San Diego River channel will also increase. Considering the Mission Valley Groundwater Basin is not subject to a sustainable groundwater management plan or GSP mandated by the SGMA for DWR basins, and the proposed project would implement LID retention BMPs, the proposed project would not conflict with or obstruct a water quality control plan or sustainable groundwater management plan; **no impact** would occur.

Would the project result in a cumulative impact to hydrology and water quality?

Construction and Operation

The proposed project, along with other projects occurring in the area, would be required to comply with applicable federal, state, and local water quality regulations. The proposed project, along with other projects of greater than 1 acre (which includes most of the projects in the cumulative scenario), would be required to obtain coverage under the NPDES CGP, which requires project proponents to identify and implement stormwater BMPs that effectively

control erosion and sedimentation and other construction-related pollutants. Further, nearly all projects identified in the cumulative scenario would meet the definition of “new development and redevelopment projects” under the San Diego County MS4 Permit. Such projects are required to implement site design; source control; and, in some cases, treatment control BMPs to control the volume, rate, and water quality of stormwater runoff from the proposed project during long-term operations. Because adverse water quality and major hydrologic alterations are linked to large-scale development projects and industrial and agricultural land uses, the provisions within the various NPDES permits seek to address cumulative conditions.

The anticipated quality of effluent from the proposed project BMPs will not contribute concentrations of pollutants of concern that would be expected to cause or contribute to a violation of the water quality objectives for the proposed project’s surface receiving waters. In addition, the proposed project’s LID BMPs would control stormwater discharges in accordance with the Small MS4 Permit and Phase II Permit requirements for hydromodification control. Therefore, the proposed project’s incremental effects on surface water quality and hydromodification would be less than significant, and not cumulatively considerable.

Cumulative impacts to water quality and hydromodification resulting from the proposed project and any future development similar to the proposed project in the watershed are addressed through compliance with the MS4 PermitsCGP; and benchmark Basin Plan water quality objectives, CTR criteria, and CWA 303(d) listings, which are intended to be protective of beneficial uses of the receiving waters. Based on compliance with these requirements designed to protect beneficial uses, the cumulative water quality and hydromodification impacts would be **less than significant** and thus **not cumulatively considerable**.

4.9.5 Summary of Impacts Prior to Mitigation

Impacts to hydrology and water quality would be **less than significant**.

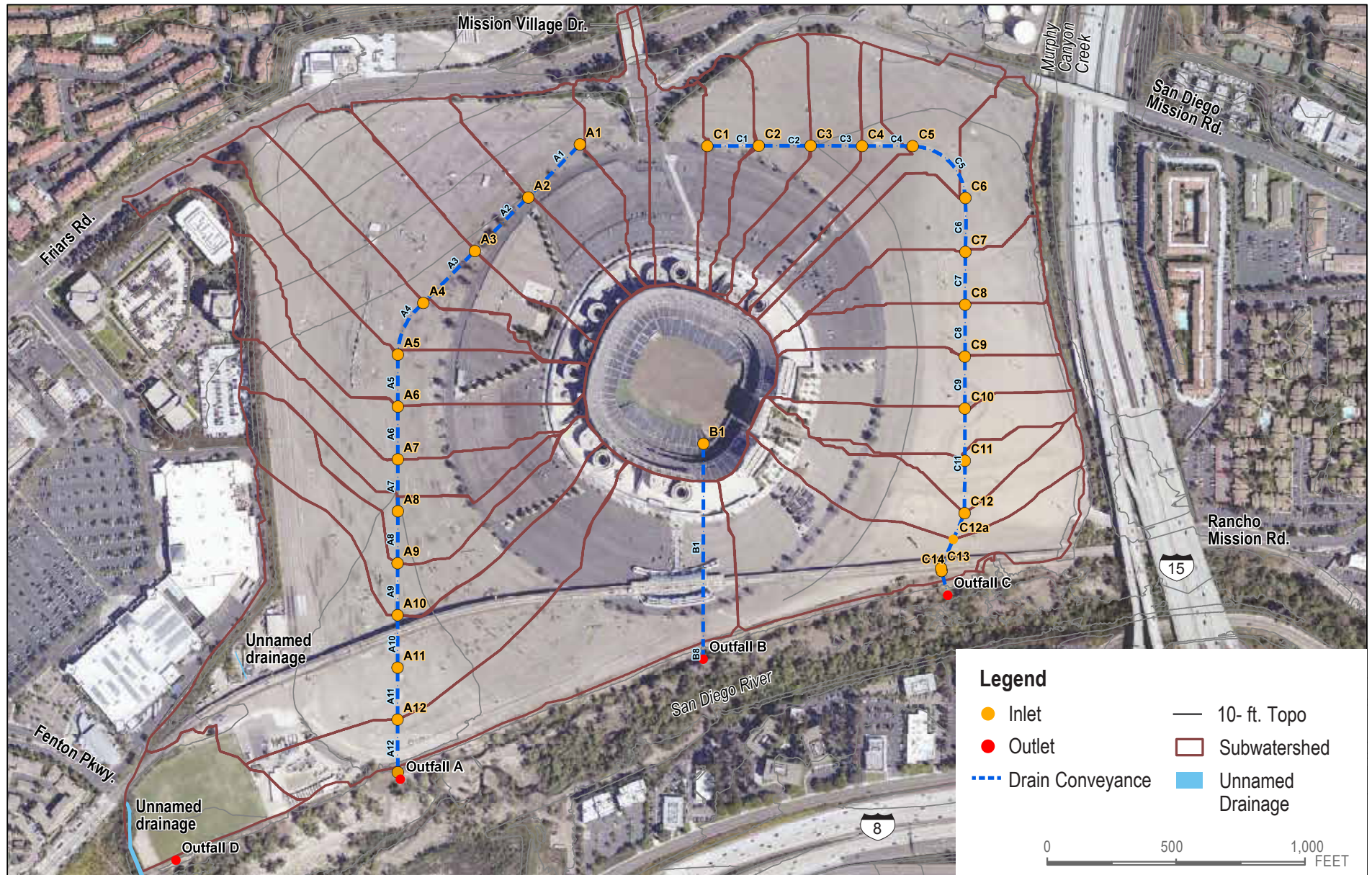
4.9.6 Mitigation Measures

Because all potential impacts of the proposed project would be less than significant as a result of compliance with applicable laws and regulations and the implementation of corresponding project design features and BMPs, no mitigation measures are required.

4.9.7 Level of Significance After Mitigation

The combination of source control, site design features (e.g., landscaping and green rooftops), and biofiltration BMPs to be incorporated into the proposed project are adequate to avoid or substantially reduce potential impacts associated with increases in the rate, volume, and/or pollutant load of surface runoff to the San Diego River. There are no mitigation measures required; therefore, project impacts related to hydrology and water quality would remain **less than significant**.

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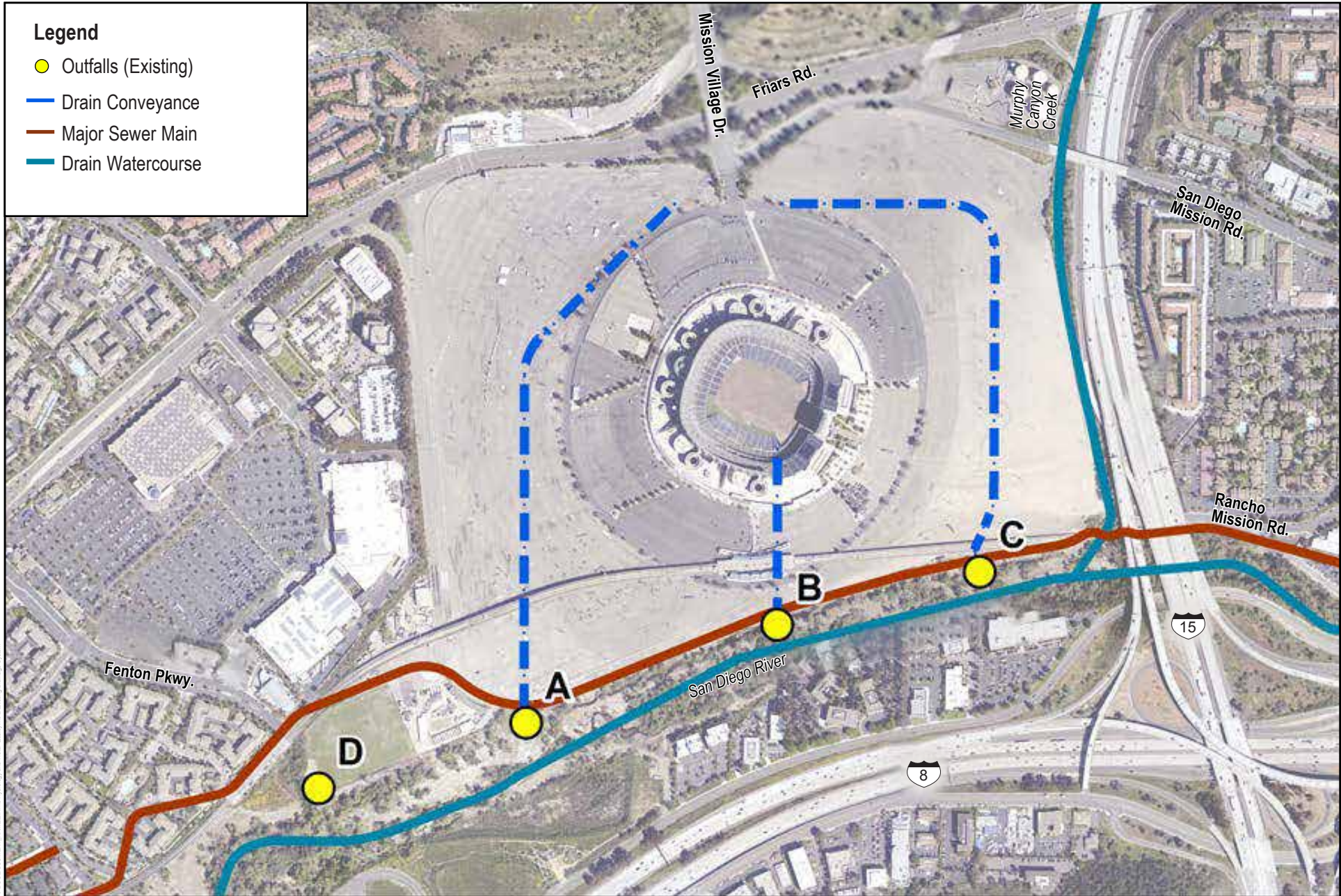
SOURCE: GEOSYNTEC CONSULTANTS 5/21/2019

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Figure 4.9-1
Existing Hydrology Features

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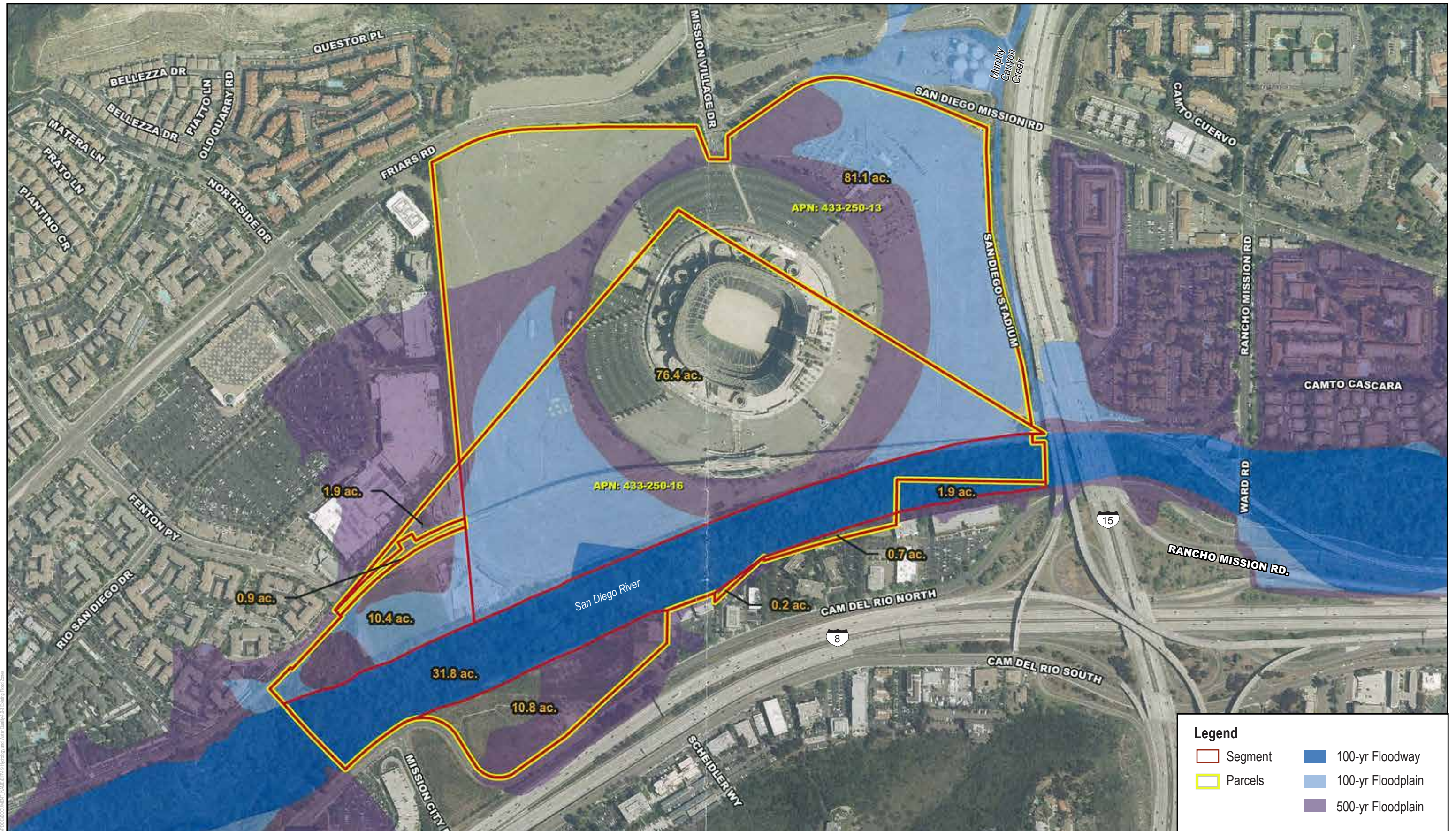
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Figure 4.9-2
Existing Drainage System

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SOURCE: RICK ENGINEERING 4/8/2015

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0 500 1,000 FEET

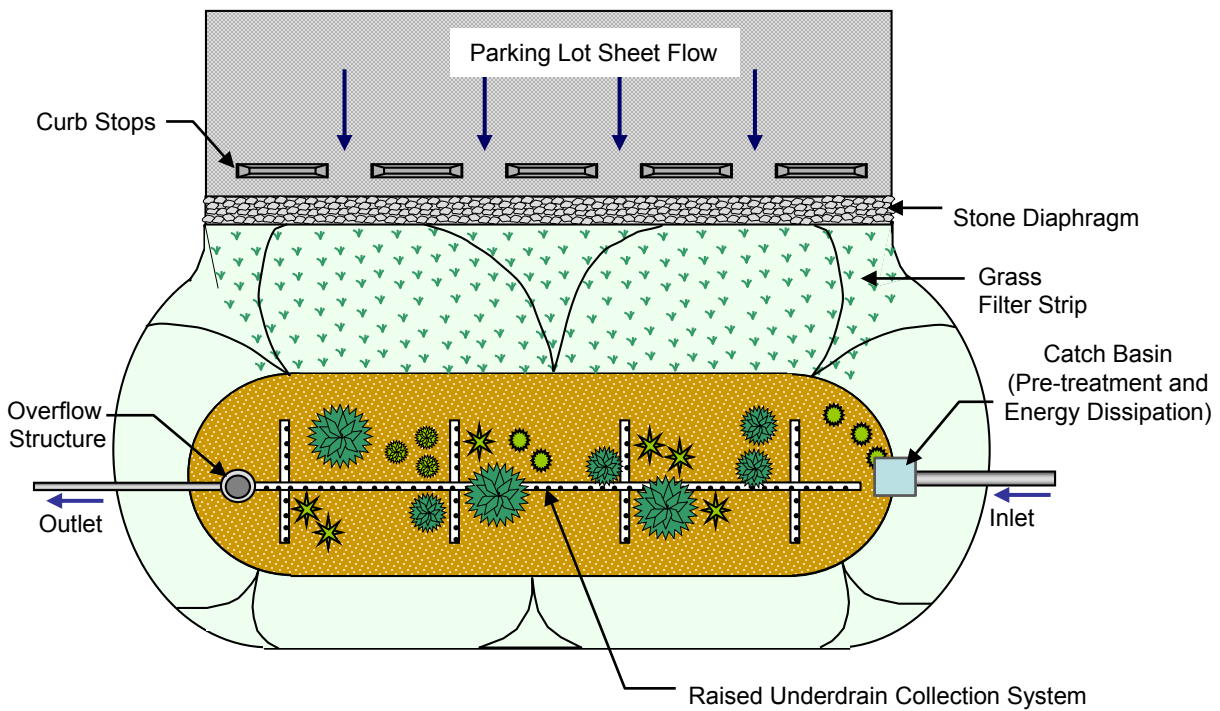


Figure 4.9-3
Existing Flood Zones

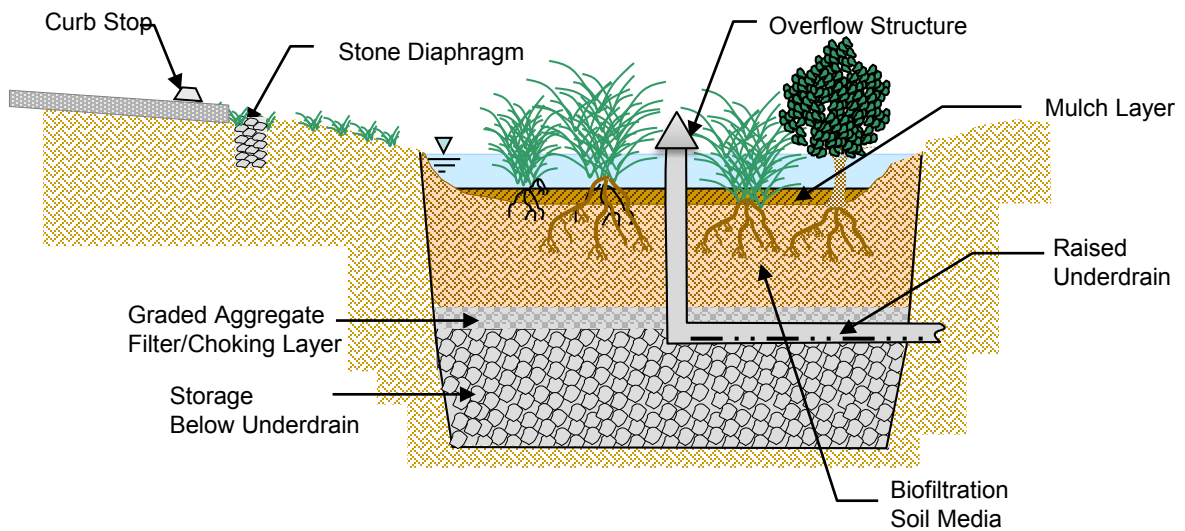
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Plan View



Profile



SOURCE: GEOSYNTEC CONSULTANTS 5/21/2019

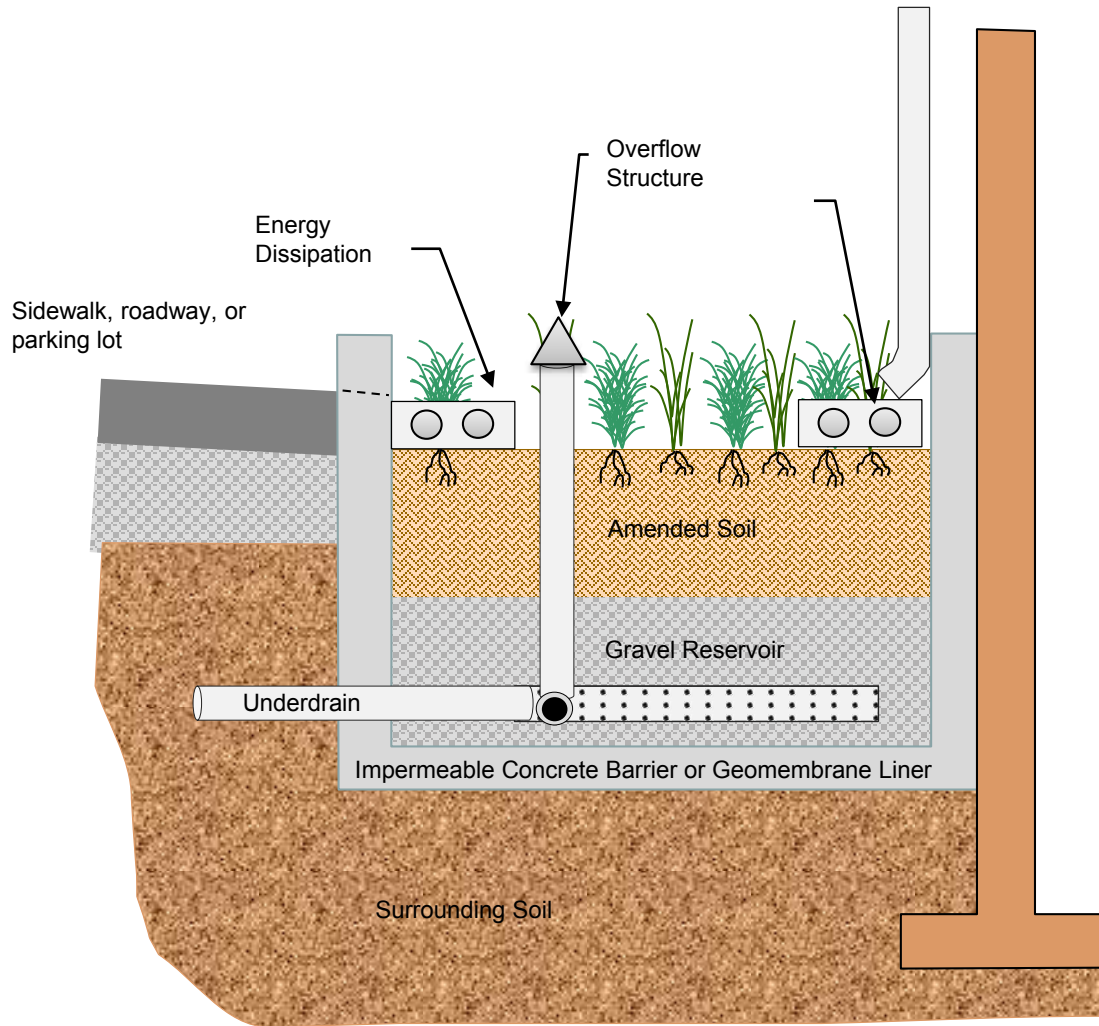
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Figure 4.9-5
Conceptual Bio Retention Basin

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Profile



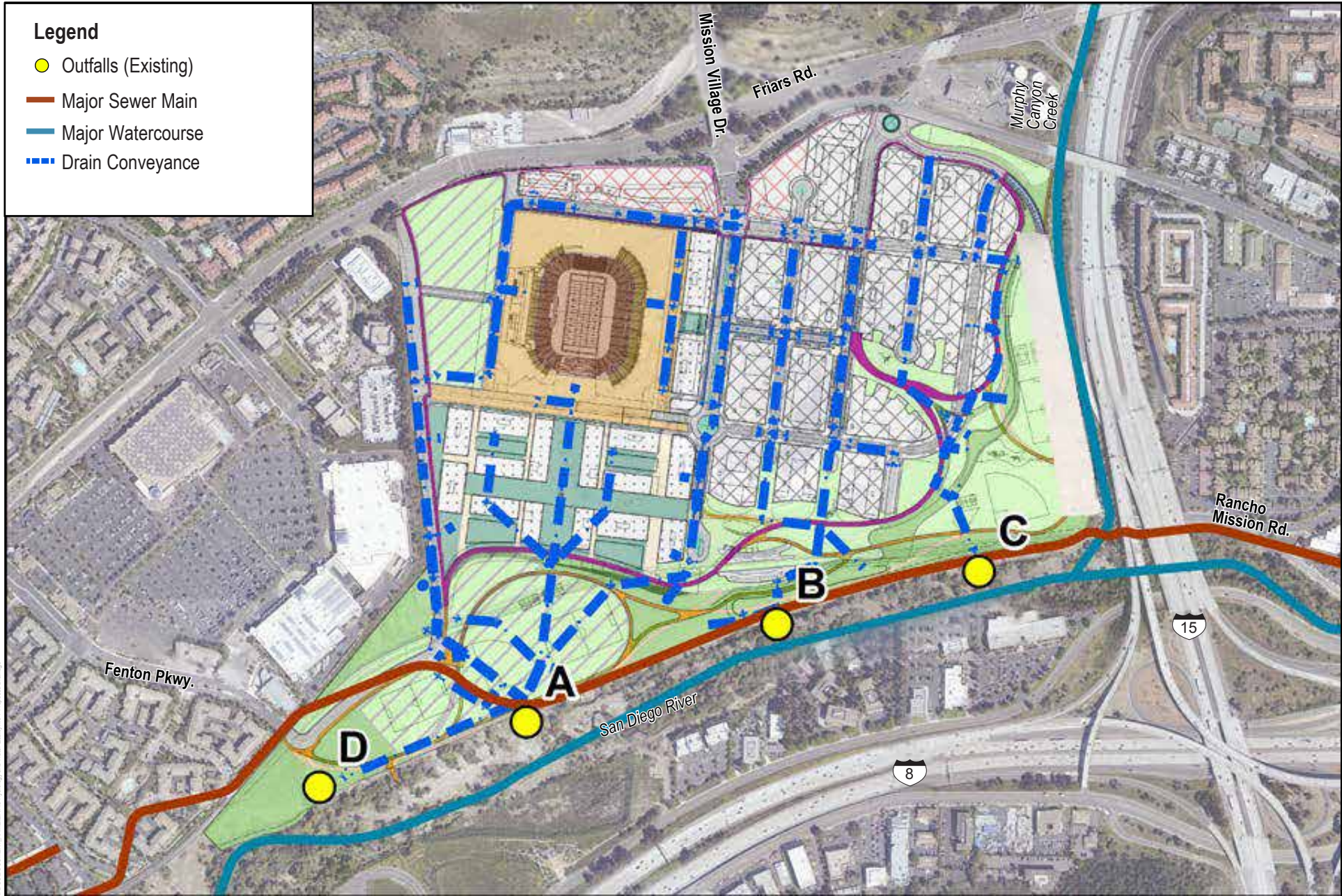
SOURCE: GEOSYNTEC CONSULTANTS 5/21/2019

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Figure 4.9-6
Conceptual Bio Filtration Planter Box

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SOURCE: GEOSYNTEC CONSULTANTS 5/21/2019

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Figure 4.9-7
Proposed Drainage

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SOURCE: RICK ENGINEERING / JULY 2019

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**Figure 4.9-8
Post Development Flood Zones**

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4.10 Land Use and Planning

This section describes the existing land use and planning conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of approximately 150 letters were received during this comment period. Comments received related to land use and planning addressed smart growth, regional trails planning, compliance with existing zoning and land use plans, and impacts to established communities. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.10.1 Existing Conditions

4.10.1.1 On Site

As described in Chapter 2, the project site includes four existing uses as shown on Figure 2-4, Project Site and Surrounding Land Uses Master Plan: (1) a multipurpose stadium—San Diego County Credit Union (SDCCU) Stadium—with an existing capacity of approximately 71,000 seats for football and other events; (2) an associated surface parking lot with approximately 18,870 parking spaces; (3) the existing San Diego Metropolitan Transit System (MTS) Stadium Trolley Station, accessible via the MTS Trolley Green Line traversing the project site and running toward downtown San Diego to the west and Santee to the east; and (4) Murphy Canyon Creek.

SDCCU Stadium holds a variety of sporting and non-sporting events, including San Diego State University (SDSU) football games, the San Diego County Credit Union Holiday Bowl NCAA Collegiate football game, and several parking lot events, as described in Table 1-1, Existing SDCCU Stadium Use (2018), in Section 1.3. SDCCU Stadium is surrounded by a surface parking lot which provides approximately 18,870 parking spaces (City of San Diego 2015a). During most days, the parking lot is vacant with the exception of approximately 60 cars (see the Traffic Impact Analysis, Appendix 4.15-1) which are parked daily at the Stadium Trolley Station to access the MTS Green Line (described below). Several re-occurring events take place in the parking lot, including vehicle sales. The parking lot is within the 100-year and 500-year FEMA floodplain as shown further in Figure 1-4.

The San Diego MTS Trolley Green Line is 23.6 miles long, with 27 stations, and operates from the Santee Transit Center through Mission Valley to the 12th and Imperial Transit Center (MTS 2013). The Green Line runs seven days a week from 4:29 a.m. until midnight (City of San Diego 2018). The Green Line runs through the southern stadium parking lot and is elevated throughout the project site. The Stadium Station is located south of SDCCU Stadium and was constructed in 2005 (City of San Diego 2015a). Murphy Canyon Creek is a partially earthen and concrete-lined channel that conveys flow into the San Diego River.

4.10.1.2 Off Site

The project area is surrounded by major freeways, roadways, existing urban development, and the San Diego River. Higher density multifamily residential land uses are located to the northwest, southwest, and east, across Interstate

(I) 15. Friars Road, Mission Village Road, and San Diego Mission Road are located to the north. The San Diego River, which is part of the City of San Diego's Multiple Species Conservation Program (MSCP; described in Section 4.10.2, below, and Section 4.3, Biological Resources), is located immediately south of the project site. South of the river are additional office uses and I-8. To the north of Friars Road is San Diego Fire-Rescue Department Fire Station 45, undeveloped hillsides, and single-family residences situated atop the mesa, within the Serra Mesa planning area. To the west are office and large commercial retail uses. I-15 is located east of Murphy Canyon Creek.

4.10.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Aviation Administration Height Notification Boundary

The Montgomery Field Airport Land Use Compatibility Plan (ALUCP) identifies the Federal Aviation Administration (FAA) Height Notification Boundary and Federal Aviation Regulation Part 77 Airspace Surfaces (discussed in Section 4.6 of this EIR). Title 14 United States Code 1, Chapter 1, Subchapter E, Part 77 – Aeronautics and Space – Safe, Efficient Use, and Preservation of the Navigable Airspace, establishes requirements for notifying the FAA of certain construction activities and alterations to existing structures, to ensure there are no obstructions to navigable airspace. The boundary extends 20,000 feet from the runway. Within the boundary, Part 77 requires that the FAA be notified of any proposed construction or alteration having a height greater than an imaginary surface extending 100 feet outward and 1 foot upward (slope of 100:1) from the runway. Outside the boundary, projects that include construction or alteration exceeding 200 feet in height above ground level are required to notify the FAA.

State

SDSU Campus Master Plan (College Area)

In November 2007, the California State University (CSU) Board of Trustees approved the 2007 SDSU Campus Master Plan Revision and certified the EIR prepared for the Camus Mater Plan project as adequate under CEQA. The 2007 Campus Master Plan Revision provided the framework for implementing SDSU's long-term goals and programs for the campus by identifying needed buildings, facilities, improvements, and services to support campus growth and development from 25,000 full-time equivalent students (FTES) to a new enrollment of 35,000 FTES by the 2024–2025 academic year. To accommodate the projected student increase, the 2007 Campus Master Plan Revision included the near-term and long-term development of classroom, student housing, faculty/staff housing, and research and student support facilities on land located throughout the SDSU central campus, Alvarado, and Adobe Falls areas. Following project approval, litigation ensued, and the certified EIR for the 2007 Campus Master Plan Revision project was ultimately upheld, except with regard to the following three issues: (i) traffic-related mitigation payments for off-campus impacts; (ii) bus and transit system impacts; and (iii) Traffic Demand Management (TDM) plan preparation (see further description below).

In May 2011, the Board of Trustees approved the Plaza Linda Verde (now South Campus Plaza) development project along with related revisions to the Campus Master Plan. The South Campus Plaza is SDSU's most recent large-scale campus project.

In September 2017, the Board of Trustees approved the planning, funding, and development of a new freshman residence hall to provide on-campus housing for 850 students. The new student housing on the west side of campus, east of the existing Chapultepec Hall (near the athletic fields and the Recreation Center), has recently

completed construction and will open to students in fall 2019. The existing SDSU Campus Master Plan for the College Area does not anticipate nor include the project site.

In 2018, SDSU prepared additional environmental analysis to address the three legal issues (cited above) regarding the 2007 Campus Master Plan Revision and related Board-certified EIR. The additional analysis included revised traffic mitigation requiring SDSU to implement recommended road improvements, where applicable. The analysis also included a quantitative analysis of the project's impacts on the trolley and bus system, and a mitigation measure requiring that SDSU implement a Traffic Demand Management program that includes a TDM coordinator, increased rideshare opportunities, facilities to increase bicycle and pedestrian travel, and incentives to ride transit. At the May 2018 meeting, the CSU Board of Trustees re-approved the 2007 Campus Master Plan Revision and recertified the corresponding Final EIR, as amended by the final additional environmental analysis.

The proposed project would entail Board of Trustees' approval of an SDSU Mission Valley Campus Master Plan. The proposed SDSU Mission Valley Campus Master Plan is shown on Figure 2-8, Proposed Mission Valley Campus Master Plan.

SDSU Climate Action Plan (College Area)

In April 2017, SDSU approved its Climate Action Plan (CAP), which was prepared by the university's Climate Action Planning Council and describes the university's commitment to achieving specified GHG reductions (SDSU 2017). The SDSU CAP provides a framework for the SDSU main campus located in the College Area to reach operational carbon neutrality by 2040 and a carbon neutrality by 2050. The plan also addresses other sustainability issues, including water, waste and food. The SDSU CAP provides a set of interim goals and strategies in order to achieve carbon neutrality and to improve sustainability efforts at the SDSU College Area campus.

Regional

Montgomery Field Airport Land Use Compatibility Plan

Public Utilities Code Section 21675 requires each airport land use commission to formulate an ALUCP. The basic function of ALUCPs is to promote compatibility between airports and the land uses that surround them "to the extent that these areas are not already devoted to incompatible uses" (Pub. Util. Code Section 21674(a)). With limited exception, California law requires preparation of ALUCPs for each public-use and military airport in the state. California Government Code Section 65302.3 further requires that general plans and any applicable specific plan be consistent with ALUCPs. In addition, general plans and applicable specific plans must be amended to reflect amendments to the ALUCP. Most counties have established an Airport Land Use Commission (ALUC), as provided for by law, to prepare ALUCPs for the airports in that county and to review land use plans, development proposals, and certain airport development plans for consistency with the compatibility plans. In San Diego County, the ALUC function rests with the Board of the San Diego County Regional Airport Authority, in accordance with Section 21670.3 of the California Public Utilities Code.

The project site is located approximately 2 miles south/southeast of Montgomery Field. The Montgomery Field ALUCP was adopted in January 2010 and amended in December 2010.

Montgomery Field ALUCP is based on the FAA approved Airport Layout Plan, as amended by the updated November 2007 airport diagram, and as accepted for airport compatibility planning purposes by the California Department of

Transportation, Division of Aeronautics (Division of Aeronautics) in July 2005, and June 2008, respectively. The Montgomery ALUCP references and identifies the FAA Part 77 requirements.

Regional Transportation Plan/Sustainable Communities Strategy

By way of background, Senate Bill (SB) 375 (Steinberg, 2008), the Sustainable Communities and Climate Protection Act, coordinates land use planning, regional transportation plans, and funding priorities to reduce greenhouse gas (GHG) emissions from passenger vehicles through better-integrated regional transportation, land use, and housing planning that provides easier access to jobs, services, public transit, and active transportation options. SB 375 specifically requires the Metropolitan Planning Organization relevant to the project area (here, the San Diego Association of Governments [SANDAG]) to include a Sustainable Communities Strategy in its Regional Transportation Plan (RTP) that, if implemented, will achieve GHG emission reduction targets set by the California Air Resources Board (CARB) by reducing vehicle miles traveled (VMT) from light-duty vehicles through the development of more compact, complete, and efficient communities.

For the area under SANDAG's jurisdiction, including the project site, CARB originally adopted regional targets for reduction of mobile source-related GHG emissions of 7% for 2020 and 13% for 2035. The targets are expressed as a percentage change in per-capita passenger vehicle GHG emissions relative to 2005 emissions levels. These original targets were in place through September 30, 2018. In March 2018, CARB approved updated regional targets of 15% for 2020 and 19% for 2035 for SANDAG, which will apply to future Regional Transportation Plan/Sustainability Action Plan (RTP/SCS) planning cycles beginning October 1, 2018.

Pursuant to Government Code Section 65080(b)(2)(K), a Sustainable Communities Strategy does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it.

SANDAG's Sustainable Communities Strategy was first included in the 2050 Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS), which was adopted by SANDAG in October 2011. The original plan has since been superseded by the RTP/SCS adopted by SANDAG's Board in 2015, titled San Diego Forward: The Regional Plan.

SANDAG's San Diego Forward plan (the current RTP/SCS for the region) contains five basic strategies (SANDAG 2015):

1. Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.
2. Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.
3. Invest in a transportation network that gives people transportation choices and reduces GHG emissions.
4. Address the housing needs of all economic segments of the population.
5. Implement the Regional Plan through incentives and collaboration.

The project site is shown as a potential "Town Center" on the SANDAG Smart Growth Concept Map, which is included in the RTP/SCS and also updated from time to time. The most recent version of the Smart Growth Concept Map is dated May 2016 (SANDAG 2016). For SANDAG's planning purposes, Town Centers are defined as follows:

Town Center

- Suburban downtowns within the region
- Low- and midrise residential, office, and commercial buildings
- Some employment
- Draws people from the immediate area
- Served by corridor/regional transit lines and local services or shuttle services

In general, the goals and policies of the Sustainable Communities Strategy (SCS) that reduce VMT (and result in corresponding GHG emission reductions) focus on transportation and land use planning that include locating residents closer to where they work and play, and designing communities so there is access to high quality transit service and non-vehicular modes of transportation. The SCS adopted by SANDAG is expected to reduce per capita transportation emissions by 15% by 2020 and by 21% by 2035, as compared to 2005 baseline levels.

In December 2015, CARB accepted SANDAG's determination that the SCS would meet the region's GHG reduction targets per Government Code Section 65080(b)(2)(J)(ii), as memorialized in CARB's Executive Order G-15-075.

Multiple Species Conservation Program

The MSCP, a comprehensive, regional long-term habitat conservation program designed to provide permit issuance authority for take of covered species to the local regulatory agencies. The MSCP addresses habitat and species conservation within approximately 900 square miles in the southwestern portion of San Diego County (County of San Diego 1998). It serves as an approved habitat conservation plan (HCP) pursuant to an approved natural communities conservation plan in accordance with the state Natural Communities Conservation Planning Act (County of San Diego 1998).

The MSCP establishes a preserve system designed to conserve large blocks of interconnected habitat having high biological value that are delineated as the Multi-Habitat Planning Area (MHPA). The City's MHPA is an area within which a "hard line" preserve will be established in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997).

The MSCP identifies 85 plants and animals to be "covered" under the plan ("Covered Species"). Many of these Covered Species are subject to one or more protective designations under state and/or federal law and some are endemic to San Diego. The MSCP seeks to provide adequate habitat in the preserve to maintain ecosystem functions and persistence of extant populations of the 85 Covered Species, while also allowing participating landowners "take" of Covered Species on lands located outside of the preserve. The purpose of the MSCP is to address species conservation on a regional level and thereby avoid project-by-project biological mitigation, which tends to fragment habitat.

Within the City of San Diego, the MSCP is implemented through the City of San Diego MSCP Subarea Plan (Subarea Plan) (City of San Diego 1997) as described below.

SDSU was not involved with the preparation of the MSCP program in the mid-1990s. SDSU is not signatory to the San Diego MSCP and is therefore not a "permittee" under this HCP. Because SDSU is not a Permittee of this HCP and because SDSU does not need to obtain any entitlements that would constitute a discretionary action by the

City, adherence to the restrictions typically placed on land within the MHPA as per the City's Biological Resource Guidelines does not apply to SDSU or SDSU-owned land.

Local

Because SDSU is a component of the CSU, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

San Diego General Plan - City of Villages

A comprehensive update of the General Plan was adopted in 2008, incorporating the City of Villages strategy, which in turn was developed and adopted as part of the Strategic Framework Element in 2002. The Strategic Framework Element represented the City's new approach for shaping how the City will grow while attempting to preserve the character of its communities and its most treasured natural resources and amenities. It was developed to provide the overall structure to guide the General Plan update and future Community Plan Updates and amendments, as well as the implementation of an action plan.

Under the City of Villages strategy, the General Plan aims to direct new development projects away from natural undeveloped lands into already urbanized areas and/or areas where conditions allow the integration of housing, employment, civic, and transit uses, mirroring regional planning and smart growth principles intended to preserve remaining open space and natural habitat and focus development in areas with available public infrastructure.

The General Plan includes 10 elements intended to provide guidance for future development: (1) Land Use and Community Planning Element; (2) Mobility Element; (3) Urban Design Element; (4) Economic Prosperity Element; (5) Public Facilities, Services, and Safety Element; (6) Recreation Element; (7) Conservation Element; (8) Noise Element; (9) Historic Preservation Element; and (10) Housing Element.

The Housing Element, which must be updated every 8 years under state law, was last updated in 2013. It is required to be consistent with the General Plan goals and City of Villages strategy.

Recreation Element

The Recreation Element of the General Plan seeks to acquire, develop, operate/maintain, increase, and enhance public recreation opportunities and facilities throughout the City. The element contains population-based guidelines for parks and recreation facilities and presents alternative strategies to meet those guidelines. Per Policy RE-A.8, the City's standard for population-based parks is 2.8 usable acres per 1,000 residents, which can be achieved through a combination of population-based parks and park equivalencies, which are established in Policy RE-A.9.

*City of San Diego San Diego Municipal Code***Section 22.0908 – Sale of Real Property to SDSU**

San Diego Municipal Code (SDMC) Section 22.0908 was approved by City of San Diego voters on November 6, 2018, directing the sale of real property to SDSU. As contemplated by SDMC Section 22.0908, the sale of the property is required to provide for certain uses, including the following:

- (1) A new Joint Use Stadium for SDSU Division 1 collegiate football and other Potential Sports Partners including but not limited to professional, premier, or MLS [Major League Soccer] soccer and adaptable for the NFL [National Football League];
- (2) A River Park, public trails, walking and biking paths or trails, and associated open space for use by all members of the public;
- (3) Passive and active recreation space, community and neighborhood parks;
- (4) Practice, intramural, intermural, and recreation fields;
- (5) Facilities for educational, research, entrepreneurial, and technology programs within a vibrant mixed-used campus village and research park that is constructed in phases and comprised of:
 - (A) Academic and administrative buildings and classrooms;
 - (B) Commercial, technology, and office space, compatible and synergistic with SDSU's needs, to be developed through SDSU-private partnerships, and with such uses contributing to sales tax and possessory interest tax, as applicable, to the City;
 - (C) Complementary retail uses serving neighborhood residents and businesses while also creating an exciting college game-day experience for SDSU football fans and other Potential Sports Partners, and with such retail uses contributing to sales tax and possessory interest tax, as applicable, to the City;
 - (D) Hotel(s) to support visitors to campus and stadium-related events, provide additional meeting and conference facilities, and serve as an incubator for graduate and undergraduate students in SDSU's L. Robert Payne School of Hospitality and Tourism Management; and with such uses contributing to sales taxes, possessory interest taxes, and transient occupancy taxes, as applicable, to the City;
 - (E) Faculty and staff housing to assist in the recruitment of nationally recognized talent, and with such uses contributing to possessory interest taxes, as applicable, to the City;
 - (F) Graduate and undergraduate student housing to assist athlete and student recruitment, and with such uses contributing to possessory interest taxes, as applicable, to the City;
 - (G) Apartment-style homes for the local community interested in residing in proximity to a vibrant university village atmosphere, and with such uses contributing to possessory interest taxes, as applicable, to the City;
 - (H) Other market-rate, workforce and affordable homes in proximity to a vibrant university village atmosphere, and with such uses contributing to possessory interest taxes, as applicable, to the City; and
 - (I) Trolley and other public transportation uses and improvements to minimize vehicular traffic impacts in the vicinity.

In addition to the uses identified above, the following requirements are included in SDMC Section 22.0908:

- (f) the Existing Stadium Site shall be comprehensively planned through an SDSU Campus Master Plan revision process, which process requires full compliance with the California Environmental Quality Act (Pub. Resources Code commencing with section 21000), the State CEQA Guidelines (14 Cal. Code Regs., commencing with section 15000), and Education Code section 67504, subdivisions (c) and (d), along with ample opportunities for public participation, including but not limited to input from the Mission Valley Planning Group.
- (g) Though not required by the SDSU Campus Master Plan revision process, SDSU shall use the content requirements of a Specific Plan, prepared pursuant to California Government Code section 65451, subdivision (a), in completing the SDSU Campus Master Plan revision contemplated by this section.
- (h) The environmental commitment set forth in subdivision (f) shall include the requirements arising under CEQA for SDSU to: (i) take steps to reach agreements with the City of San Diego and other public agencies regarding the payment of fair-share mitigation costs for any identified off-site significant impacts related to campus growth and development associated with the Existing Stadium Site; and (ii) include at least two publicly noticed environmental impact report (EIR) scoping meetings, preparation of an EIR with all feasible alternatives and mitigation measures, allowance for a 60-day public comment period on the Draft EIR, preparation of written responses to public comments to be included in the Final EIR, and a noticed public hearing.
- (i) Such sale shall cause the approximate 34-acre San Diego River Park south of the Existing Stadium Site to be revitalized and restored as envisioned by past community planning efforts so as to integrate the Mission Valley's urban setting with the natural environment; the River Park will incorporate active and passive park uses, 8- to 10-foot wide linear walking and biking trails; a river buffer of native vegetation, and measures to mitigate drainage impacts and ensure compliance with water quality standards. River Park improvements shall be made at no cost to the City General Fund and completed not later than seven years from the date of execution of the sales agreement. The City shall designate or set aside for park purposes the River Park pursuant to City Charter Section 55. In addition, the Existing Stadium Site shall reserve and improve an additional minimum of 22 acres as publicly-accessible active recreation space.
- (j) Such sale shall result in the demolition, dismantling, and removal of the Existing Stadium and construction of a new Joint Use Stadium. The construction of the Joint Use Stadium shall be completed not later than seven years from the date of execution of the sales agreement.
- (k) Such sale shall facilitate the daily and efficient use of the existing underutilized Metropolitan Transit System's Green Line transit station, accommodate a planned Purple Line transit station, and enhance a pedestrian connection to the existing light rail transit center.
- (l) Such sale and ultimate development shall require development within the Existing Stadium Site to comply with the City's development impact fee requirements, parkland dedication requirements, and housing impact fees/affordable housing requirements.
- (m) Such sale and ultimate development shall require development within the Existing Stadium Site to comply with the City's greenhouse gas (GHG) emission reduction goals.

City of San Diego Climate Action Plan

In December 2015, the City adopted its final Climate Action Plan (CAP) (City of San Diego 2015b). With implementation of the CAP, the City aims to reduce GHG emissions 15% below the baseline by 2020, 40% below

the baseline by 2030, and 50% below the baseline by 2035. It is anticipated that the City will meet and exceed its GHG reduction targets for 2020, 2030, and 2035 with implementation of the CAP. For additional information regarding the City's CAP, please see Section 4.7, Greenhouse Gas Emissions, of this EIR.

San Diego River Park Master Plan

The San Diego River Park Master Plan, adopted by the City in 2013, is a policy document that communicates a common vision, principles, and recommendations to guide land use decisions within the River Corridor and River Influence Areas along the San Diego River. Thus, the Master Plan informs development along the river in Mission Valley. Notably, the Master Plan envisions the creation of a distinct, identifiable park along the river. This vision for the river is supported by five main principles (City of San Diego 2013a):

- Restore and maintain a healthy river system;
- Unify fragmented lands and habitats;
- Create a connected continuum, with a sequence of unique places and experiences;
- Reveal the river valley history; and
- Reorient development toward the river to create value and opportunities for people to embrace the river.

Specific recommendations for how to achieve this vision are provided within the Master Plan. They include providing interpretive signage at key locations, creating new pedestrian and bicycle connections, and pursuing opportunities to address the hydrology of the river. The Master Plan also provides site-specific recommendations for any redevelopment of the project site.

Affordable Housing Regulations

SDMC Chapter 14, Article 3, Division 7 is titled the Affordable Housing Regulations. The purpose of these regulations is to provide incentives for development that provides housing for very low income, low income, moderate income, or senior households; transitional foster youth; disabled veterans; or homeless persons. Additionally, the purpose is to specify how compliance with California Government Code Section 65915 (State Density Bonus Law) will be implemented, as required by California Government Code Section 65915(a)(1). These regulations are intended to materially assist in providing adequate and affordable housing for all economic segments of the community and to provide a balance of housing opportunities throughout the City.

City of San Diego Inclusionary Housing Ordinance

SDMC Chapter 14, Article 2, Division 13 is titled the Inclusionary Affordable Housing Regulations. The purpose of these regulations is to encourage diverse and balanced neighborhoods with housing available for households of all income levels. The intent is to ensure that when developing the limited supply of developable land, housing opportunities for persons of all income levels are provided. All development subject to the regulations must pay an applicable inclusionary affordable housing fee to the City or elect to provide at least ten percent of the total for-sale dwelling units in the proposed development as affordable to targeted ownership households. The regulations do not apply to residential development containing at least ten percent of the dwelling units as affordable to and occupied by targeted rental households.

Mission Valley Community Plan

The project site is located in the Mission Valley Community Plan Area. The Mission Valley Community Plan, adopted in 1984, provided for limited residential development in Mission Valley and designates the project site as Commercial Recreation and Public Recreation (City of San Diego 2013b). Commercial Recreation uses include lodging facilities (hotels and motels), recreational facilities, and entertainment facilities (theaters and convention centers) (City of San Diego 2013b). The Commercial Recreation designation was reflective of the use of the project site as a sports venue for the National Football League San Diego Chargers, the Major League Baseball San Diego Padres, and the National Collegiate Athletics Association SDSU football. Since 1984, the San Diego Padres moved to a new stadium in downtown San Diego (Petco Park) and the Chargers relocated to Los Angeles, leaving the SDSU football team as the only regular tenant of SDCCU Stadium. As described below, and in Section 4.13, Population and Housing, the City of San Diego is currently updating the Mission Valley Community Plan, with anticipated adoption of the Community Plan Update in 2019.

Mission Valley Public Facilities Financing Plan and Development Impact Fee

The Mission Valley Public Facilities Financing Plan (PFFP) is a financing plan adopted by the City of San Diego that sets forth the major transportation, libraries, park and recreation, and fire facilities needed to serve the community. Development Impact Fees are a method whereby the impact of new development upon the infrastructure is assessed, and, a fee system developed and imposed on the new development. Development Impact Fees cannot be used for demand resulting from existing development. Such fees are collected at the time the City issues building permits. The current Development Impact Fees for the Mission Valley Community Plan Area is broken down as shown in Table 4.10-1.

Table 4.10-1. Mission Valley Development Impact Fee

Residential (per unit)					Nonresidential	
Transportation	Parks and Rec	Library	Fire	Subtotal	Traffic	Fire
					(\$/Trip)	\$/1,000 GFA
\$1,057.00	\$11,422.00	\$410.00	\$245.00	\$13,134.00	\$151.00	\$245.00

Note: GFA = gross floor area.

Source: City of San Diego 2013b.

Final Draft Mission Valley Community Plan Update

The City is in the process of updating the Mission Valley Community Plan. On February 6, 2019, a second working draft of the Mission Valley Community Plan and the Draft Environmental Impact Report were released for public review (City of San Diego 2019a). The Final Draft of the Mission Valley Community Plan Update, as well as the Final Program EIR, was released on May 31, 2019 (City of San Diego 2019). The Mission Valley Community Plan Update (MVCP Update) is currently in the “City hearings on final plans” phase of the process, with the release of the final draft plan and the public meeting process beginning in summer 2019. Although not adopted, the City’s updated plan contemplates that the project site would be redeveloped through Campus Master Plan. (City of San Diego 2019b).

In the Final Program EIR for the MVCP Update, the City states that the Mission Valley Community Plan Update serves as a comprehensive long-term plan for the physical development of the Mission Valley Community Planning Area and is intended to manage and address future growth through 2050 (City of San Diego 2019c). The draft Mission

Valley Community Plan Update is intended to provide orderly growth and redevelopment by placing higher density residential development within and around transit and commercial corridors (City of San Diego 2019c).

As described in Section 1, Introduction, the proposed MVCP Update identifies “conceptual changes” (Figure 3 in the MVCP Update) for several areas of Mission Valley, including the “Stadium site” and “Eastern Mission Valley” (City of San Diego 2019a). The “Stadium site” referenced in the proposed MVCP Update encompasses the SDSU Mission Valley campus project site. The MVCP Update also designates the project site as Campus Master Plan.

The proposed MVCP Update identifies four geographic areas with different focus points. These include Western Mission Valley (west of SR-163), Central Mission Valley (between SR-163 and I-805), Eastern Mission Valley (east of I-805), and South of I-8 (south of I-8). The SDSU Mission Valley campus project site is in the larger “Eastern Mission Valley” geographic area. The “Eastern Mission Valley” area “will focus on higher density development with an emphasis on connectivity and comfort for pedestrians, cyclists, and other modes of transportation,” and this area will include “a recreation center to meet the active recreational needs of the community” (City of San Diego 2019a).

The proposed MVCP Update also calls for a proposed park site on the SDSU Mission Valley campus project site, adjacent to the San Diego River, which would serve both the Mission Valley and Navajo communities (City of San Diego 2019a). The proposed MVCP Update’s recommendations for the design and construction of park facilities include active and passive recreation, such as lighted sports fields, San Diego River pathway improvements, picnic areas, children’s play areas, multipurpose courts, walkways, landscaping, and parking. In addition, the proposed MVCP Update recommends that the park area accommodate special activities such as skateboarding, dog off-leash, and other unique uses (City of San Diego 2019a).

In addition, the proposed MVCP Update contemplates a 20,000-to-25,000 square-foot recreation center, including indoor gymnasium, multipurpose courts, multipurpose rooms, kitchen, and other community-serving facilities. The proposed MVCP Update (see Table 5 in City of San Diego 2019a) also proposes an aquatics complex to be located at a site to be determined within the Mission Valley community. Recommended uses within the aquatics complex include a swimming pool, children’s pool, therapeutic pool, and pool house with locker rooms; staff offices; and equipment storage facilities. The proposed MVCP Update also identifies a satellite police station on the “Stadium site” (City of San Diego 2019a).

The MVCP Update Final Program EIR identifies the project site for “redevelopment to occur through a future Campus Master Plan” (City of San Diego 2019b). In addition, the Final Program EIR identifies “Eastern Mission Valley” as an area to “support higher density residential development with enhanced multi-modal connectivity” (City of San Diego 2019b).

As accounted for in Table 3.4-1 of the Final Program EIR, the City provides the following net increases under the draft MVCP Update by 2050 (City of San Diego 2019c):

- Housing units: 27,910
- Population: 51,600
- Nonresidential square feet: 7,317,000
- Employment: 19,100

Specific to the project site, the MVCP Update anticipates land uses and intensities similar to those proposed by the project, as shown in Table 4.13-7, Mission Valley Community Plan Update EIR versus Proposed Project.

City of San Diego Multiple Species Conservation Program Subarea Plan

The City of San Diego Subarea Plan (1997) encompasses 206,124 acres within the MSCP Subregional Plan area. The project site is located within an area designated as Urban in the Subarea Plan. Urban habitat areas within the MHPA include existing designated open space such as Mission Bay, Tecolote Canyon, Marian Bear Memorial Park, Rose Canyon, San Diego River, the southern slopes along Mission Valley, Carroll and Rattlesnake Canyons, Florida Canyon, Chollas Creek, and a variety of smaller canyon systems. The eastern area of the Subarea Plan includes East Elliott and Mission Trails Regional Park.

The MSCP Subarea Plan is characterized by urban land uses with approximately three-quarters either built out or retained as open space/park system. The City MHPA is an area within which a “hard line” preserve will be developed by the City in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997). The MHPA is considered an urban preserve that is constrained by existing or approved development, and is comprised of habitat linkages connecting several large core areas of habitat (Figure 1-3, Multi-Habitat Planning Area, and Figure 1-4, Core Areas and Habitat Linkages, in City of San Diego 1997). The criteria used to define core and linkage areas involves maintaining ecosystem function and processes, including large animal movement. Each core area is connected to other core areas or to habitat areas outside of the MSCP either through common boundaries or through linkages. Core areas have multiple connections to help ensure that the balance in the ecosystem will be maintained (City of San Diego 1997). Critical habitat linkages between core areas are conserved in a functional manner with a minimum of 75% of the habitat within identified linkages conserved (City of San Diego 1997).

As discussed above, SDSU was not involved with the preparation of the City’s Subarea Plan and is therefore not a “permittee” under this HCP. Because SDSU is not a Permittee of this HCP and because SDSU does not need to obtain any entitlements that would constitute a discretionary action by the City, adherence to the restrictions typically placed on land within the MHPA as per the City’s Biological Resource Guidelines does not apply to SDSU or SDSU-owned land.

4.10.3 Significance Criteria

The significance criteria used to evaluate the project impacts to land use and planning are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to land use and planning would occur if the project would:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.10.4 Impacts Analysis

4.10.4.1 Division of an Established Community

Would the project physically divide an established community?

The project site is located on the existing SDCCU Stadium site. The proposed project is bounded to the north by a major road (Friars Road), to the east by I-15, to the south by the San Diego River and I-8, and to the east by a

four-lane major road (Stadium Way) and Fenton Marketplace. The development of the proposed project would not add any physical division of an established community because the project site does not encroach into any established community.

The introduction of new development to an area may indirectly divide existing communities due to off-site improvements. As it relates to the proposed project, surrounding neighborhoods include Serra Mesa (north of the project site), Grantville (east of the project site), and Normal Heights (south of the project site), as well as Mission Valley to the west of the project site. While the development of the proposed project would have impacts as a result of increased intensity of development, it would not divide any of these established communities. Specifically, the proposed project does not include any new or extended infrastructure through existing residential areas that may divide an established community due to the proposed project's location and proximity to major roadways, and the existing infrastructure serving the project site. The only improvements off the project site are within or adjacent to existing rights-of-way as described in Section 4.15, Transportation, and Section 4.17, Utilities and Utility Systems and shown in Figures 2-10B, 2-10C, 2-1-D and 4.15-15.

Lastly, the proposed project's potential to result in indirect growth or induce additional growth which may divide an established community are addressed in Sections 4.13, Population and Housing, and Section 5.1, Growth Inducement, of Chapter 5, Other Environmental Considerations. As determined in these sections, the proposed project would not result in indirect growth or induce additional growth that may divide an established community. Accordingly, impacts related to the division of an established community would be **less than significant**.

4.10.4.2 Conflicts with Land Use Plan, Policy, or Regulation

Would the project cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

As described above, because SDSU is a component of the CSU, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan or City municipal zoning code.

Applicable Plans

Federal

The project site falls within the FAA Height Notification Boundary, the Part 77 Airspace Surfaces for Montgomery Field and Airport Overflight Notification Area for new residential development (see Figures 4.10-1 through 4.10-3). As a result of the project site's location within the Airspace Protection Area and Overflight Notification Area of Montgomery Field, SDSU/CSU is required to file notifications with the FAA (Form 7460-1, Notice of Proposed Construction or Alteration), as construction or alteration is anticipated to exceed 200 feet above ground level and/or exceed an imaginary surface extending outward and upward at defined slopes, such as 100 feet outward and 1 foot upward for a horizontal distance of 20,000 feet from the nearest point of the nearest runway (San Diego County ALUC 2010). Although the new buildings could be taller than 200 feet, the proposed project would not encroach into the imaginary flight surface. It should be noted that the proposed ground level elevation where new buildings would be located sit at elevations of approximately 65 to 75 feet above mean sea level (AMSL). The addition of buildings of up to 24 stories

or 230 feet would reach a maximum elevation of approximately 305 feet AMSL. Elevations across Montgomery Field Airport range from approximately 420 to 430 feet AMSL, and elevations on the north (Serra Mesa) and south (Normal Heights) mesas of Mission Valley are approximately 305 feet AMSL and 400 feet AMSL, respectively.

The proposed project would be required to notify the FAA (via FAA Form 7460-1, Notice of Proposed Construction or Alteration) of new buildings which are anticipated to reach a height of approximately 230 feet above ground level, as well as of the anticipated temporary use of construction cranes, which may be used during construction of the proposed project and may reach heights of up to 300 feet above ground level. In addition to FAA notifications of the proposed project, the FAA restricts aircraft operations within the vicinity of stadiums exceeding a capacity of 30,000 people during sporting events (FAA 2015).

State

SDSU Campus Master Plan (College Area)

The existing SDSU Campus Master Plan is for the 288-acre area wherein the current university is located, within the College Area of the City of San Diego, generally bound by I-8 on the north, Zura Road and E. Campus Drive on the east, Montezuma Road on the south, and Hewlett Drive on the west. The existing Campus Master Plan provides for 35,000 full-time equivalent students (FTES).

The project site is located within a different geographic area than the one addressed in the existing SDSU Campus Master Plan, and therefore, necessarily requires a Mission Valley Campus Master Plan, which is consistent with the provisions of SDMC Section 22.0908: “the Existing Stadium Site shall be comprehensively planned through an SDSU Campus Master Plan revision process.” In completing the SDSU Campus Master Plan, SDSU prepared the SDSU Mission Valley Campus Guidelines (Guidelines), using the content requirements of a specific plan pursuant to Government Code Section 65451, subdivision (a), as also contemplated by SDMC Section 22.0908(g). Figure 2-8 depicts the proposed SDSU Mission Valley Campus Master Plan. The proposed SDSU Mission Valley Campus Master Plan identifies the locations of new buildings and facilities within the project site and provides that the Mission Valley campus could accommodate up to 15,000 FTES at build out.

The SDSU Mission Valley Campus Guidelines control the development of the project site by describing the land use plan and permitted uses, open space plan, circulation plan, and infrastructure plan for the proposed project, provides architectural design guidelines and development expectations to guide the vertical construction of the various components of the Campus Master Plan, and provides for an implementation plan including phasing, financing and other measures to ensure the orderly development of the project site.

Once adopted, the SDSU Mission Valley Campus Master Plan would add the proposed office/research/academic, recreation, housing, commercial/hospitality and related facilities to serve SDSU at the project site. With adoption of the proposed SDSU Mission Valley Campus Master Plan, the proposed project would be consistent with the applicable land use plan. Impacts would be **less than significant**.

SDSU Climate Action Plan (College Area)

As noted above, SDSU has a CAP for its College Area campus, which describes the university’s commitment to achieving specified GHG reductions and contains goals and actions in various emission sectors. However, SDSU’s CAP was developed for and is focused on issues specific to the already built-out SDSU main campus located in the College Area. SDSU’s CAP is not an applicable document for purposes of the proposed project, which proposes the

establishment of an SDSU Mission Valley campus. The SDSU Mission Valley Campus Master Plan Guidelines are being prepared in order to ensure that SDSU's leadership on sustainability and stewardship issues is carried forward to this project. Please refer to Section 4.7, Greenhouse Gas Emissions.

Nonetheless, in preparing the SDSU CAP, a greenhouse gas inventory was conducted to determine the sources of emissions on the SDSU main campus. The results indicated that campus emissions are primarily due to the on-site power plant and commuters. As to energy, while the proposed project would increase the baseline electricity, natural gas, and fuel usage for the project site, the overall energy usage requirements expressed per service population decrease with implementation of the project's proposed energy efficiency Project Design Features. The proposed project would also comply with applicable plans for renewable energy or energy efficiency. Please refer to Section 4.5, Energy. As to the SDSU CAP's finding that commuters are a primary source of campus emissions, the proposed project would result in benefits in that the proposed Mission Valley campus would be constructed three trolley stops west of the SDSU existing main campus. Additionally, the proposed project would develop campus residential and nonresidential land uses in an infill setting that is served by multimodal transportation options (trolley and bus) and would further enhance other multimodal options by designing the site to encourage pedestrian- and bicycle-oriented connectivity.

Regional

Airport Land Use Compatibility Plan

The project site is located approximately 2 miles south/southeast of Montgomery Field. The Montgomery Field ALUCP contains four principal compatibility concerns: noise (exposure to aircraft noise), safety (land use factors that affect safety both for people on the ground and occupants of aircraft), airspace protection (protection of airport airspace), and overflight (annoyance or other general concerns related to aircraft overflights).

With respect to noise, the project site falls outside all Noise Exposure Ranges (see Figure 4.12-8). With respect to safety, the project site falls outside all Safety Zones.

With respect to airspace protection and overflight, as shown in Figure 4.10-4, the project site is within Review Area 2 of the Montgomery Field Airport Influence Area. An Airport Influence Area is established with guidance from the Airport Land Use Planning Handbook (Caltrans 2011) and as defined in the California Business and Professions Code 11010(b)(13)(b) as "the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses" (San Diego County ALUC 2010). The Airport Influence Area is divided into Review Area 1 and Review Area 2.

- Review Area 1 consists of locations where noise and safety concerns may necessitate limitations on the types of land use actions. Specifically, Review Area 1 encompasses locations exposed to aircraft noise levels of 60 decibels Community Noise Equivalent Level or greater together with all of the safety zones depicted on the associated maps in this chapter.
- Review Area 2 consists of locations beyond Review Area 1 but within the airspace protection and overflight notification areas depicted on the associated maps. Limits on the heights of structures, particularly in areas of high terrain, are the only restrictions on land uses within Review Area 2. The recordation of overflight notification documents is also required in locations within Review Area 2.

As explained under Review Area 2, "Limits on the heights of structures, particularly in areas of high terrain, are the only restrictions on land uses within Review Area 2" (San Diego County ALUC 2010). While the project involves land uses which are different than the land use identified in the ALUCP (Commercial Recreation), the ALUCP does not

regulate land uses outside Review Area 1. Accordingly, the proposed project would not conflict with the Montgomery Field ALUCP, and impacts would be **less than significant**.

Local Plans Considered

For informational purposes, the proposed project has considered these planning documents and the project's site location within, and relationship to, each.

San Diego Municipal Code Section 22.0908

The purpose and intent of SDMC Section 22.0908 was to adopt a new legislative City policy authorizing, directing, and providing the means for the City to sell the project site to CSU/SDSU for “Bona Fide Public Purposes,” provided such sale complied with the conditions established in the new law and that such sale is at such price and upon such terms and timing as the City Council deems fair and equitable and in the public interest; and that such sale would create jobs and economic synergies in the City and improve the quality of life of Mission Valley residents through the development specified therein. Section 22.0908 defines “Bona Fide Public Purposes” to encompass the proposed project's land uses. While SDSU is not subject to local government planning and land use plans, given the unique circumstances and opportunities presented and to implement the desire of the local electorate, the development features and framework set forth in Section 22.0908 have been considered by the proposed project. Refer to Table 4.10-2, below for a consistency analysis.

Table 4.10-2. San Diego Municipal Code Section 22.0908 Consistency Analysis

SDMC Section 22.0908	Consistency Analysis
The Existing Stadium Site belonging to the City is needed for Bona Fide Public Purposes by SDSU, a public agency, and for that reason, the City shall sell such property to SDSU in accordance with the City Charter, but only if such sale is in compliance with the conditions herein established.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(a) Such sale shall be at such price and upon such terms as the Council shall deem to be fair and equitable and in the public interest; and the City may fairly consider various factors, including but not limited to: adjustments, deductions, and equities in arriving at a Fair Market Value.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(b) Such sale shall proceed without advertising for bids and shall not be subject to any of the provisions of this Code pertaining to the sale of City property, including but not limited to Sections 22.0902, 22.0903, and 22.0907.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(c) Such sale shall provide for the development of	Consistent. The proposed project provides for the following:
(1) A new Joint Use Stadium for SDSU Division 1 collegiate football and other Potential Sports Partners including but not limited to professional, premier, or MLS soccer and adaptable for the NFL;	Consistent. The proposed project would include a 35,000-capacity stadium which would host SDSU football and may accommodate professional, premier, or MLS soccer. The stadium location and surrounding concourse has been sized and designed for future adaptation should such an expansion become necessary for an NFL or other professional sports team; however, it is noted that such an expansion is not contemplated by this EIR and is not part of the proposed project because it is not reasonably foreseeable. Additional CEQA review may be required if a professional sports team proposed to expand the stadium facility.
(2) A River Park, public trails, walking and biking paths or trails, and associated open space for use by all members of the public;	Consistent. The proposed project would include the development of a river park with approximately 4 miles of public trails and public space as described in Section 4.14, Public Services and Recreation. The park would be open and available to the public at all times.
(3) Passive and active recreation space, community and neighborhood parks;	Consistent. The proposed project would provide for approximately 86 acres of parks, recreation and open space as described in Section 4.14, Public Services and Recreation. These parks and recreation areas would include a mix of active and passive parks and provide recreational services at both the community and neighborhood scale.

Table 4.10-2. San Diego Municipal Code Section 22.0908 Consistency Analysis

SDMC Section 22.0908	Consistency Analysis
(4) Practice, intramural, intermural, and recreation fields;	Consistent. The proposed project would include active recreational fields and courts for practice, intramural, intermural, and community recreation. While the final design would be determined based on community input, the River Park has been sized with several soccer fields, baseball/softball field, and basketball courts, as well as open lawn areas for more informal recreation.
(5) Facilities for educational, research, entrepreneurial, and technology programs within a vibrant mixed-used campus village and research park that is constructed in phases and comprised of:	Consistent. The proposed project would include approximately 1.6 million square feet of campus office, innovation, research and development, and academic uses, as well as approximately 4,600 campus residential units and 95,000 square feet of campus commercial/retail uses to provide neighborhood services in close walking or bicycle distance of both residences and jobs.
(A) Academic and administrative buildings and classrooms; (B) Commercial, technology, and office space, compatible and synergistic with SDSU's needs, to be developed through SDSU-private partnerships, and with such uses contributing to sales tax and possessory interest tax, as applicable, to the City;	Consistent. The proposed project would include approximately 1.6 million square feet of campus office, innovation, research and development, and academic uses. This space is anticipated to be flexible as the campus builds out, and these buildings could initially be leased for office/commercial use through public-private partnerships to facilitate building construction and funding of campus facilities. These buildings would support educational, research, entrepreneurial, and technology programs as determined necessary by SDSU. As determined by Appendix 4.13-1, Economic and Tax Impacts of SDSU's Mission Valley Project, prepared by Ernst & Young (Economic Impact Analysis), the additional tax revenue for the City of San Diego associated with annual operations would be \$21.9 million annually (2018 dollars), including property (on possessory interest), sales and transient occupancy taxes. The tax estimate includes direct taxes related to the taxable activity of the businesses and employees at the campus site, as well as taxes due to indirect and induced activity.
(C) Complementary retail uses serving neighborhood residents and businesses while also creating an exciting college game-day experience for SDSU football fans and other Potential Sports Partners, and with such retail uses contributing to sales tax and possessory interest tax, as applicable, to the City;	Consistent. The proposed project would include up to 95,000 square feet of retail uses focused on the main north/south entry road (Street D). As determined by Appendix 4.13-1, Ernst & Young Economic Impact Analysis, the retail portion of the proposed campus project would provide approximately \$289,304 in annual sales tax revenue for the City.

Table 4.10-2. San Diego Municipal Code Section 22.0908 Consistency Analysis

SDMC Section 22.0908	Consistency Analysis
(D) Hotel(s) to support visitors to campus and stadium-related events, provide additional meeting and conference facilities, and serve as an incubator for graduate and undergraduate students in SDSU's L. Robert Payne School of Hospitality and Tourism Management; and with such uses contributing to sales taxes, possessory interest taxes, and transient occupancy taxes, as applicable, to the City;	Consistent. The proposed project would include two hotels with up to 400 hotel rooms and ancillary conference uses. Specifically, Hotel H1, north of the multipurpose Stadium, would include up to 255 hotel rooms and 40,000 square feet of conference facilities, and would provide an on-campus hotel to serve as an incubator in SDSU's L. Robert Payne School of Hospitality and Tourism Management. As determined by Appendix 4.13-1, Ernst & Young Economic Impact Analysis, the proposed project is projected to generate for the City of San Diego approximately \$2.4 million in annual occupancy and sales taxes due to hotels.
(E) Faculty and staff housing to assist in the recruitment of nationally recognized talent, and with such uses contributing to possessory interest taxes, as applicable, to the City;	Consistent. The proposed project would include faculty and staff housing. As determined by Appendix 4.13-1, Ernst & Young Economic Impact Analysis, the proposed project is projected to generate \$4.0 million in local property taxes (based on possessory interest) to the City annually.
(F) Graduate and undergraduate student housing to assist athlete and student recruitment, and with such uses contributing to possessory interest taxes, as applicable, to the City;	Consistent. The proposed project would include student housing. As determined by Appendix 4.13-1, Ernst & Young Economic Impact Analysis, the proposed project is projected to generate \$4.0 million in local property taxes (based on possessory interest) to the City annually.
(G) Apartment-style homes for the local community interested in residing in proximity to a vibrant university village atmosphere, and with such uses contributing to possessory interest taxes, as applicable, to the City;	Consistent. The proposed project would include 4,600 units of housing on the campus site. The residential area would provide housing for students, faculty, and staff. As determined by Appendix 4.13-1, the proposed project is projected to generate \$4.0 million in local property taxes (based on possessory interest) to the City annually.
(H) Other market-rate, workforce and affordable homes in proximity to a vibrant university village atmosphere, and with such uses contributing to possessory interest taxes, as applicable, to the City; and	Consistent. The proposed project would include 4,600 units of housing on the campus site, including market-rate, workforce and affordable housing, within a vibrant, transit-oriented university village setting. As determined by Appendix 4.13-1, Ernst & Young Economic Impact Analysis, the proposed project is projected to generate \$4.0 million in local property taxes (based on possessory interest) to the City annually.
(I) Trolley and other public transportation uses and improvements to minimize vehicular traffic impacts in the vicinity	Consistent. The proposed project integrates the existing Green Line and Stadium Trolley Station into the project design. The Stadium Trolley Station is within 0.5 miles of all uses within the project site. The proposed project reserves an alternative alignment for the future Trolley Purple Line along the eastern edge of the project site, over Murphy Canyon Road, while also accommodating the existing, planned Purple Line alignment.

Table 4.10-2. San Diego Municipal Code Section 22.0908 Consistency Analysis

SDMC Section 22.0908	Consistency Analysis
(d) Such sale shall be based on the Fair Market Value of the Existing Stadium Site, and the City may fairly consider various factors, adjustments, deductions, and equities, including, but not limited to: the costs for demolition, dismantling, and removal of the Existing Stadium; the costs associated with addressing current flooding concerns; the costs of existing contamination; the costs for revitalizing and restoring the adjacent River Park and the costs of avoiding, minimizing, and mitigating impacts to biota and riparian habitat.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(e) Such sale shall be at such price and upon such terms as are fair and equitable, including without limitation payment terms, periodic payments, payment installments, and other payment mechanisms.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(f) The Existing Stadium Site shall be comprehensively planned through an SDSU Campus Master Plan revision process, which process requires full compliance with the California Environmental Quality Act (Pub. Resources Code commencing with section 21000), the State CEQA Guidelines (14 Cal. Code Regs., commencing with section 15000), and Education Code section 67504, subdivisions (c) and (d), along with ample opportunities for public participation, including but not limited to input from the Mission Valley Planning Group.	Consistent. The project involves a Mission Valley Campus Master Plan for the SDSU Mission Valley campus. The NOP of the project's Draft EIR was circulated on January 19, 2019, and three NOP Scoping Meetings were held, two of which were within the Mission Valley Community Plan Area. SDSU has attended regular meetings of the Mission Valley Community Planning Group. The Draft EIR is subject to a 60-day public comment period.
(g) Though not required by the SDSU Campus Master Plan revision process, SDSU shall use the content requirements of a Specific Plan, prepared pursuant to California Government Code section 65451, subdivision (a), in completing the SDSU Campus Master Plan revision contemplated by this section.	Consistent. In completing the SDSU Mission Valley Campus Master Plan, SDSU prepared the SDSU Mission Valley Campus Guidelines, using the content requirements of a Specific Plan pursuant to California Government Code Section 65451, subdivision (a).
(h) The environmental commitment set forth in subdivision (f) shall include the requirements arising under CEQA for SDSU to: (i) take steps to reach agreements with the City of San Diego and other public agencies regarding the payment of fair-share mitigation costs for any identified off-site significant impacts related to campus growth and development associated with the Existing Stadium Site; and (ii) include at least two publicly noticed environmental impact report (EIR) scoping meetings, preparation of an EIR with all feasible alternatives and mitigation measures, allowance for a 60-day public comment period on the Draft EIR, preparation of written responses to public comments to be included in the Final EIR, and a noticed public hearing.	Consistent. The Campus Master Plan planning process included the requirements arising under CEQA for SDSU to take steps to reach agreements with public agencies regarding payment of fair-share mitigation costs. CSU/SDSU has also prepared this EIR pursuant to CEQA requirements. CSU/SDSU held three public EIR scoping meetings, which were publicly noticed including in the NOP of the Draft EIR. CSU/SDSU has also allowed for a 60-day public comment period on the draft EIR and preparation of written responses to public comments to be included in the Final EIR, which will be subject to a noticed public hearing prior to determination by the CSU Board of Trustees.

Table 4.10-2. San Diego Municipal Code Section 22.0908 Consistency Analysis

SDMC Section 22.0908	Consistency Analysis
(i) Such sale shall cause the approximate 34-acre San Diego River Park south of the Existing Stadium Site to be revitalized and restored as envisioned by past community planning efforts so as to integrate the Mission Valley's urban setting with the natural environment; the River Park will incorporate active and passive park uses, 8- to 10-foot wide linear walking and biking trails; a river buffer of native vegetation, and measures to mitigate drainage impacts and ensure compliance with water quality standards. River Park improvements shall be made at no cost to the City General Fund and completed not later than seven years from the date of execution of the sales agreement. The City shall designate or set aside for park purposes the River Park pursuant to City Charter Section 55. In addition, the Existing Stadium Site shall reserve and improve an additional minimum of 22 acres as publicly-accessible active recreation space.	Consistent. The proposed project would construct a River Park, including the 34-acre area identified by SDMC Section 22.0908 as River Park, which would incorporate active and passive park uses, 8- to 10-foot-wide linear walking and biking trails, a river buffer of native vegetation, and measures to mitigate drainage impacts and ensure compliance with water quality standards. As described in Section 4.14, Public Services and Recreation, the proposed project includes 23.8 acres of population-based parks and recreation facilities, and approximately 28.3 acres of additional parks, recreation, and open space areas, for a total of approximately 86 acres of parks, recreation, and open space.
(j) Such sale shall result in the demolition, dismantling, and removal of the Existing Stadium and construction of a new Joint Use Stadium. The construction of the Joint Use Stadium shall be completed not later than seven years from the date of execution of the sales agreement.	Consistent. The proposed project would include the demolition of SDCCU Stadium and the construction of a new multipurpose stadium. The proposed project schedule anticipates a new stadium by August 2022, which would be approximately 4 years following codification of SDMC Section 22.0908.
(k) Such sale shall facilitate the daily and efficient use of the existing underutilized Metropolitan Transit System's Green Line transit station, accommodate a planned Purple Line transit station, and enhance a pedestrian connection to the existing light rail transit center.	Consistent. The Stadium Trolley Station is within 0.5 miles of all uses within the project site, and the proposed project has been designed to enhance north/south pedestrian and bicycle access through the use of street trees, wide sidewalks, and an enhanced design along Street D to promote access to the existing Stadium Trolley Station. Parking has been limited as described in Section 4.16, Transportation, and a Transportation Demand Management Plan would further encourage the use of transit including the trolley system. In addition, the proposed project establishes an alternative alignment for the future Trolley Purple Line along the eastern edge of the project site, over Murphy Canyon Road, while also accommodating the existing, planned Purple Line alignment.

Table 4.10-2. San Diego Municipal Code Section 22.0908 Consistency Analysis

SDMC Section 22.0908	Consistency Analysis
(l) Such sale and ultimate development shall require development within the Existing Stadium Site to comply with the City's development impact fee requirements, parkland dedication requirements, and housing impact fees/affordable housing requirements.	Consistent. While nothing in SDMC Section 22.0908 abrogates the authority of CSU, as part of the Purchase and Sale Agreement, CSU/SDSU would ensure that development within the Stadium site comply with the City's development impact fee requirements, parkland dedication requirements, and housing impact fees/affordable housing requirements to the extent required. As to housing impact fees/affordable housing requirements, the proposed project would include 4,600 campus residential units and would be set aside affordable housing in conformance with the City of San Diego's current Inclusionary Housing Ordinance.
(m) Such sale and ultimate development shall require development within the Existing Stadium Site to comply with the City's greenhouse gas (GHG) emission reduction goals.	Consistent. The proposed project will be consistent with the City of San Diego's Climate Action Plan (CAP), which is the primary vehicle by which the City establishes its GHG reduction goals and outlines the emission reduction strategies necessary for attainment of those goals. Refer to Chapter 4.7, Greenhouse Gas Emissions, and Appendix 4.7-2, CAP Evaluation Memo, for a detailed analysis of how the proposed project would comply with the City's CAP.
(n) Such sale, upon completion, shall ensure that the City does not pay for any stadium rehabilitation costs, stadium demolition or removal costs, stadium cost overruns, Joint Use Stadium operating costs, Joint Use Stadium maintenance, or Joint Use Stadium capital improvement expenses; and that the City be reimbursed for reasonable costs incurred by the City in providing public safety and traffic management-related activities for games or other events at the Existing Stadium Site.	N/A. This provision is beyond the scope CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(o) Such sale and ultimate development shall not impair or preclude SDSU from engaging in SDSU-private partnerships with other entities or affiliates to finance, construct, and operate the resulting buildings and facilities on the Existing Stadium Site for a defined period of time.	N/A. This provision is beyond the scope CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(p) Such sale and ultimate development shall not impair the City's ability to continue its plan of environmental remediation of the Existing Stadium Site and River Park based on its existing agreements with responsible parties.	Consistent. As discussed in Section 4.8, Hazards and Hazardous Materials, previous environmental remediation efforts have largely been completed. The proposed project would not preclude additional, ongoing monitoring as required by any existing agreements between the City and responsible parties.
(q) Such sale shall not raise or impose any new or additional taxes on City residents.	N/A. The provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.

Table 4.10-2. San Diego Municipal Code Section 22.0908 Consistency Analysis

SDMC Section 22.0908	Consistency Analysis
(r) Such sale shall not prohibit SDSU from leasing, selling, or exchanging any portion of the Existing Stadium Site to an entity or affiliate as part of a SDSU-private partnership/arrangement, or to an SDSU auxiliary organization.	N/A. This provision is beyond the scope CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(s) Such sale shall require SDSU and the City to negotiate fair-share contributions for feasible mitigation and applicable taxes for development within the Existing Stadium Site.	Consistent. See above response regarding the contribution of fair share payments.
(t) Such sale shall not change or alter any obligation under any existing lease regarding the use of Existing Stadium Site, or any portion thereof, that continues in effect until approximately 2018 and that could be extended until approximately 2022 or thereafter.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(u) Such sale shall acknowledge that portions of the Existing Stadium Site are currently owned by the City's Public Utilities Department, which has reserved rights to extract subsurface water, minerals, and other substances (excluding those under permanently erected structures) and that such department has received, and may continue to receive, compensation for its portion of the Existing Stadium Site. If the Initiative is approved, the sale shall acknowledge said department's entitlement, if any, to receive compensation for its portion of the Existing Stadium Site at a price that is fair and equitable, in the public interest, and commensurate with prior compensation actually received.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(v) Such sale shall require the City and SDSU to cooperate to modify or vacate easements or secure lot line adjustments on the Existing Stadium Site (other than easements of the City or any utility department of the City for which the City retains its full regulatory discretion), so that development of the Existing Stadium Site is facilitated.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.
(w) Such sale shall require SDSU or its designee to pay prevailing wages for construction of the Joint Use Stadium and other public improvements, provided that the construction occurs on state-owned property or involves the use of state funding. To the extent possible under state law, all building and construction work shall be performed by contractors and subcontractors licensed by the State of California, who shall make good faith efforts to ensure that their workforce construction hours are performed by residents of San Diego County. With respect to the new Joint Use Stadium, SDSU will use good faith efforts to retain qualified employees who currently work at the Existing Stadium.	N/A. This provision is beyond the scope of CEQA analysis as it does not relate to physical impacts to the environment. No further analysis is required.

City of San Diego Climate Action Plan

The proposed project would be consistent with the City CAP, as discussed in Section 4.7, Greenhouse Gas Emissions, of this EIR. Specifically, as to Step 1: Land Use Consistency, of the CAP Checklist, the proposed project would result in increased density within a Transit Priority Area and implement CAP Strategy 3 actions as explained in Appendix 4.17-2. Additionally, as to Step 2: CAP Strategies Consistency, of the CAP Checklist, the proposed project would implement all applicable strategies and actions of the CAP set forth in its implementing Checklist.

City of San Diego Park Dedication Ordinance

Refer to Section 4.14, Public Services and Recreation, for a detailed description of how the proposed project would be consistent with the City's population-based park demand requirements. As described therein, the City's parks standard calls for a minimum ratio of 2.8 useable acres per 1,000 residents. Under this standard, the proposed project would be required to improve 23.8 acres of parks based on the project population of 8,510 residents. The proposed project would meet and exceed the City's parks standard, by providing approximately 86 acres of parks, recreation, and open space throughout the project site.

City of San Diego Development Impact Fee Program – Mission Valley

DIF funds per the Mission Valley PFFP and DIF program are collected on a per-unit, per-square footage, or per-average daily traffic basis as shown in Table 4.10-1. The purpose is to allow the City to collect fees from individual projects which may be too small to construct larger public facilities such as community parks or large traffic improvements, or to fund improvements that would provide a benefit to the larger community. Therefore, each project is only responsible for a portion of funding. However, larger projects such as the proposed project may construct the improvements contemplated by the PFFP and DIF and either be eligible to receive credits against payment of the fees or become exempt from paying certain portions of the fee.

While nothing in SDMC Section 22.0908 abrogates the authority of CSU, as part of the Purchase and Sale Agreement, CSU/SDSU would ensure that development within the Stadium site comply with the City's DIF to the extent required.

The largest component of the DIF is the Park fee, which is currently \$11,422 per unit, which reflects the limited availability of parks and current shortage of park space in Mission Valley. As described in the Mission Valley Community Plan Update Final Program EIR, and as further analyzed in Section 4.14, Public Services and Recreation, Mission Valley is severely short of park acreage to serve residents based on both current levels of development as well as future planned intensification of Mission Valley as the plan area is built out with additional residential uses.

Based on the General Plan requirement to provide 2.8 acres of parkland per 1,000 residents, the proposed project would be required to provide 23.8 acres of improved parkland. Further, as contemplated by SDMC Section 22.0908, the proposed project would improve the River Park area in the southern portion of the project site.

The proposed project would include approximately 86 acres of parks, recreation, and open space facilities which would exceed the demand generated by the new residents by approximately 62 acres as described in Section 4.14. Because the proposed project would improve significantly more parkland than it would otherwise be required to improve under the City's 2.8-acre/1,000 population standard, the proposed project may be eligible to receive park credits.

Accordingly, the proposed project would be consistent with the Mission Valley PFFP and DIF program per SDMC Section 22.0908 and the Purchase and Sale Agreement.

City of San Diego Inclusionary Housing Ordinance

The proposed project would include 4,600 units of housing on the campus site. The residential area would provide housing for students, faculty, and staff. While nothing in SDMC Section 22.0908 abrogates the authority of CSU, as part of the Purchase and Sale Agreement, CSU/SDSU would ensure that development within the Stadium site comply with the City's current housing impact fees/affordable housing requirements to the extent required by building affordable housing onsite. The remainder of the residential units would be made available to provide workforce and publicly available housing within a vibrant, transit-oriented university village setting.

San Diego River Park Master Plan

The project site includes areas that are within the river influence area of the San Diego River as identified in the San Diego River Park Master Plan. The San Diego River Park Master Plan includes specific recommendations related to the project site. As shown in Table 4.10-3, the proposed project would implement the recommendations in the San Diego River Park Master Plan. Impacts would be less than significant.

Table 4.10-3. Project Conformance with San Diego River Park Master Plan

San Diego River Park Master Plan	Project
3.1.3 CREATE A CONNECTED CONTINUUM, WITH A SEQUENCE OF UNIQUE PLACES AND EXPERIENCES	
F. Explore Opportunities for Additional Community or Neighborhood-Scale Parks	
The Mission Valley, Tierrasanta, Navajo Community Plan Areas will have population-based park deficits in the year 2030 per the City's General Plan Standards. Long-range planning for these communities and the San Diego River Park should look for locations along the river, such as at the Qualcomm Stadium site and the Grantville Development Subarea, to reduce the park deficits. New park sites along the river should provide connections to the San Diego River Park and the San Diego River Pathway.	The proposed project includes approximately 86 acres of parks, recreation and open space facilities which are connected to the River Park through a series of trails and paseos. The proposed project includes approximately 62 acres more park, recreation, and open space than the population-based demand generated by the proposed project (23.8 acres). As discussed in Section 4.14, Public Services and Recreation, the proposed project would reduce the park deficit in the Mission Valley Community Plan Area, and would contribute 10 acres of community park for the Navajo Community Planning Area.
3.2 SPECIFIC REACH RECOMMENDATIONS	
3.2.2 Lower Valley Reach	
I. Consider public recreation, the San Diego River Pathway and a naturalized open space along the river when planning any future use of the City's property at the Qualcomm Stadium site.	The proposed project includes active recreation, passive trails and natural landscaping through the River Park and adjacent parks, recreation and open space area adjacent to the San Diego River.
J. Provide interpretive signage along the San Diego River Pathway about the rich history of the Lower Valley including: the prehistoric Village of Kosa'aay (Cosoy) and Nipaguay; the first Spanish Mission in California; and the farming industry of the 1880's; the sand and gravel companies; the construction of the highway system; and the development of Qualcomm Stadium (formerly known as Jack Murphy Stadium).	The proposed project would include interpretative signage in the River Park. The SDSU Mission Valley Campus Guidelines include signage and wayfinding considerations.

Table 4.10-3. Project Conformance with San Diego River Park Master Plan

San Diego River Park Master Plan	Project
Key Sites of the Lower Valley Reach	
B. Qualcomm Stadium Site	
The Mission Valley Community Plan locates a Community Park at the Qualcomm Stadium site. This site is the last remaining City-owned property that is large enough to be in scale with the river valley. Careful consideration should be given to the intrinsic value of this place as a public green space and as an opportunity to create value to help finance development. A river-oriented community park could provide public recreation facilities adjacent to the naturalized open space San Diego River Park, which would complement Mission Bay Park and Mission Trails Regional Park.	The proposed project includes active recreation, passive trails, and natural landscaping through the River Park and adjacent parks, recreation, and open space area adjacent to the San Diego River.
Key Points for Qualcomm Stadium Site	
<ul style="list-style-type: none"> Critical location for meeting community-based park and recreation needs in Mission Valley, as identified in the Mission Valley Community Plan. 	The proposed project includes approximately 62 acres more park, recreation, and open space than the population-based demand generated by the proposed project (23.8 acres). As discussed in Section 4.14, Public Services and Recreation, the proposed project would reduce the park deficit in the Mission Valley Community Plan Area.
<ul style="list-style-type: none"> No acquisition costs required; land is currently owned by City of San Diego. 	The proposed project would not involve acquisition costs for the City.
<ul style="list-style-type: none"> Critical location for creating continuity in San Diego River Park and San Diego River Park pathway. 	The proposed project includes a system of trails throughout the River Park.
<ul style="list-style-type: none"> Create primarily natural open space located between the trolley and the river. 	The proposed project includes a combination of active and passive uses and natural landscaping, and maintains a 100-foot buffer.
<ul style="list-style-type: none"> Extend open space corridor to create new habitat and trail connection to Murphy Canyon. 	The proposed project includes parks, recreation, and open space along the eastern edge of the project site, adjacent to Murphy Canyon Creek. This portion of the River Park would include trail connections to the development and connections to off-site facilities.
<ul style="list-style-type: none"> Acknowledge environmental constraints with adjacent land uses. 	The proposed project includes a combination of active and passive uses and natural landscaping, and maintains a 100-foot buffer.
Potential Community Park Elements for Qualcomm Stadium Site	
<ul style="list-style-type: none"> Ball fields/soccer fields Active sports complex Picnic facilities Amphitheater Children's Play area with "natural" character (wood, boulders, sand) 	The proposed River Park is anticipated to include active uses including ball fields, outdoor assembly/shared plaza space, and picnic and play areas.

Table 4.10-3. Project Conformance with San Diego River Park Master Plan

San Diego River Park Master Plan	Project
<i>Potential San Diego River Park Elements for Qualcomm Stadium Site</i>	
<ul style="list-style-type: none"> • San Diego River Pathway • Natural riparian and upland habitat areas • Boardwalk/overlooks for viewing and interpretation • Pedestrian linkage: park to river and Murphy Canyon • Focus park toward river 	The proposed River Park would include a hike and bike loop and trail, passive landscape areas, and connections trails to the existing Murphy Canyon Creek Trail.

Other Plans Considered

Regional

San Diego Forward: The Regional Plan

Consistency of the proposed project with SANDAG's RTP/SCS (titled, San Diego Forward: The Regional Plan), which serves to implement SB 375, is addressed in Section 4.7, Greenhouse Gas Emissions, of this EIR. As discussed therein, the proposed project is consistent with each of the five basic strategies set forth in the RTP/SCS for SANDAG's achievement of the SB 375 regional targets for the reduction of GHG emissions.

For purposes of this discussion, several other factors are noted: First, the proposed project would facilitate the use of zero-emission vehicles through the provision of on-site charging infrastructure. The extension of zero-emissions vehicle infrastructure is critical to the transition of the vehicle fleet from internal combustion engines to zero emission engines, which serves to reduce GHG emissions in accordance with the SB 375 regional targets.

Second, the SB 743 analysis (see Appendix 4.15-1, Fehr & Peers' Traffic Impact Analysis, 2019) confirms that – with implementation of the project's Transportation Demand Management Program – the project-generated VMT per service population would represent an approximately 25% reduction from the regional baseline VMT per service population level and an approximately 21% reduction from the citywide baseline VMT per service population level. Further, when viewed in the cumulative setting, the proposed project would reduce regional VMT as compared to regional VMT without the proposed project, illustrating the GHG reduction benefits of the locational attributes of developing residential and nonresidential uses on the project site.

Third, the location of the project site is compatible with and complementary of the intent underlying SB 375. More specifically, the proposed project would develop residential and nonresidential land uses in an infill setting that is served by multimodal transportation options (trolley and bus), and would further enhance other multimodal options by designing the site to encourage pedestrian- and bicycle-oriented connectivity. The infill location allows the City of San Diego specifically, and the San Diego region generally, to accommodate existing and projected population and employment growth within a developed, urbanized area (i.e., Mission Valley), thereby avoiding the conversion of undeveloped land to developed uses. Relatedly, the project site is identified as a potential "Town Center" (specifically, "SD MV-5") on SANDAG's Smart Growth Concept Map for the Mid-City and East County Subregion. As described by SANDAG, "Existing/Planned smart growth areas are locations that either contain existing smart growth development or allow planned smart growth in accordance with the identified land use targets, and are accompanied by existing or planned transit services included in San Diego Forward: The Regional Plan."

In summary, the proposed project would not conflict with SB 375 and SANDAG’s corresponding RTP/SCS, and impacts would be **less than significant**.

Multiple Species Conservation Program

SDSU is not a signatory to the San Diego MSCP and, thus, is not a “permittee” under this habitat conservation plan. As such, SDSU is not subject to the MSCP and need not comply with its provisions. Because SDSU is not subject to the policies and ordinances set forth by the MSCP, the proposed project will not impact this regional habitat conservation plan. Please refer to Section 4.3, Biological Resources.

Local

San Diego General Plan – City of Villages

The City of Villages directs new development away from natural, undeveloped lands into already urbanized areas and/or areas where conditions allow the integration of housing, employment, civic, and transit uses, mirroring regional planning and smart growth principles intended to preserve remaining open space and natural habitat and focus development in areas with available public infrastructure. The proposed project would implement the City of Villages by providing for a development including office/campus employment uses, residential uses with ground floor, neighborhood/community serving commercial and retail opportunities, and 86 acres of parks, recreation, and open space. The project site includes the existing MTS Trolley Green Line and Stadium Trolley Station, and would provide for connectivity to this station through a grid street pattern and trail and bicycled connections.

Final Draft Mission Valley Community Plan Update

The MVCP Update designates the project site as “Specific Plan or Master Plan.” As stated in Figure 3 of the MVCP Update, redevelopment of the SDCCU Stadium site will be accomplished through a Campus Master Plan, which will include detailed information on the land uses, mobility system, and recreation facilities.

As stated on page ES-3 of the Mission Valley Community Plan Update Final Program EIR:

“The Stadium Site. Redevelopment to occur through a future Campus Master Plan, which would use the content requirements of a Specific Plan prepared pursuant to California Government Code Section 65451(a).¹

¹. The proposed CPU assumed that 4,800 dwelling units, two million square feet of office space, 300,000 square feet of retail space, 450 hotel rooms, 38.1 acres of active park, 4.9 acres of open space, and a 40,000-seat stadium would be developed on the Stadium site. The future Specific Plan for the Stadium site will provide more site-specific development details.”

In completing the SDSU Mission Valley Campus Master Plan, SDSU also prepared the SDSU Mission Valley Campus Guidelines (Guidelines), using the content requirements of a specific plan pursuant to Government Code Section 65451, subdivision (a)..

In addition, the MVCP Update Final Program EIR anticipated land uses and intensities comparable to those proposed by the proposed project, as shown in Table 4.13-7. As determined in Section 4.13, the proposed project would be consistent with the level of development anticipated in the MVCP Update and Final Program EIR.

Navajo Community Plan Public Facilities Financing Plan

While not subject to the Navajo Community Plan PFFP, the proposed project would develop a River Park. The Navajo PFFP identified 10 acres of the project site for a community park. The proposed 34-acre River Park as identified in SDMC Section 22.0908 would accommodate park demand in the Navajo Community Plan Area (in addition to 20 acres of demand in the Mission Valley Community Plan Area). The proposed project would provide for parks and open space within the 34-acre area identified in SDMC Section 22.0908 as River Park and; thus, would be compatible with the Navajo Community Plan PFFP.

City of San Diego Multi-Habitat Planning Area

Please refer to Section 4.3, Biological Resources, and Appendix 4.3-1, Biological Resources Technical Report.

4.10.4.3 Cumulative Impacts

Would the project result in a cumulative impact to land use and planning?

The geographic scope for the cumulative analysis for Land Use and Planning is the Mission Valley Community Plan Area. In combination with the cumulative projects listed in Table 3-1, the proposed project would not contribute to a cumulatively considerable impact to the physical division an established community. The project would not directly or indirectly cause the surrounding community to become physically divided because the project site is an infill site and is surrounded by existing development (to the west), a major six-lane road and open space slopes (to the north), I-15 (to the east), and the San Diego River (to the south).

Like the proposed project, development of the cumulative projects is expected to occur in accordance with adopted plans and regulations. If plan amendments or zone changes are needed to accommodate particular projects, they would be carried out in accordance with established local procedures, including CEQA review and an evaluation of consistency with policies/regulations adopted for the purpose of avoiding or mitigating a physical impact on the environment. Based on the information available regarding the cumulative projects, such projects under consideration in the cumulative project area would implement and support important local and regional planning goals and policies. New projects would be subject to appropriate permit approval processes and would incorporate mitigation measures necessary to reduce potential land use and planning impacts. Furthermore, as the proposed project would be consistent with applicable land use plans, policies, and regulations, the proposed project would not incrementally contribute to significant cumulative land use inconsistencies. Therefore, no significant cumulative land use impacts are anticipated.

4.10.5 Summary of Impacts Prior to Mitigation

Impacts related to land use and planning would be **less than significant** because the proposed project would not divide and established community or result in a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.10.6 Mitigation Measures

Impacts related to land use and planning would be **less than significant**. Accordingly, mitigation is not necessary or required.

4.10.7 Level of Significance After Mitigation

Impacts related to land use and planning would be **less than significant**.



AIRPORT LAND USE COMMISSION
SAN DIEGO COUNTY

LEGEND

- Airport Property Boundary
- Parcel Line
- Highways
- Airport Overflight Notification Area
- Project Boundary



0 4,000 ft.

Note: 1. See Policy 3.6.3 for overflight notification requirements.
2. See Airport Influence Area map for the real estate disclosure area.

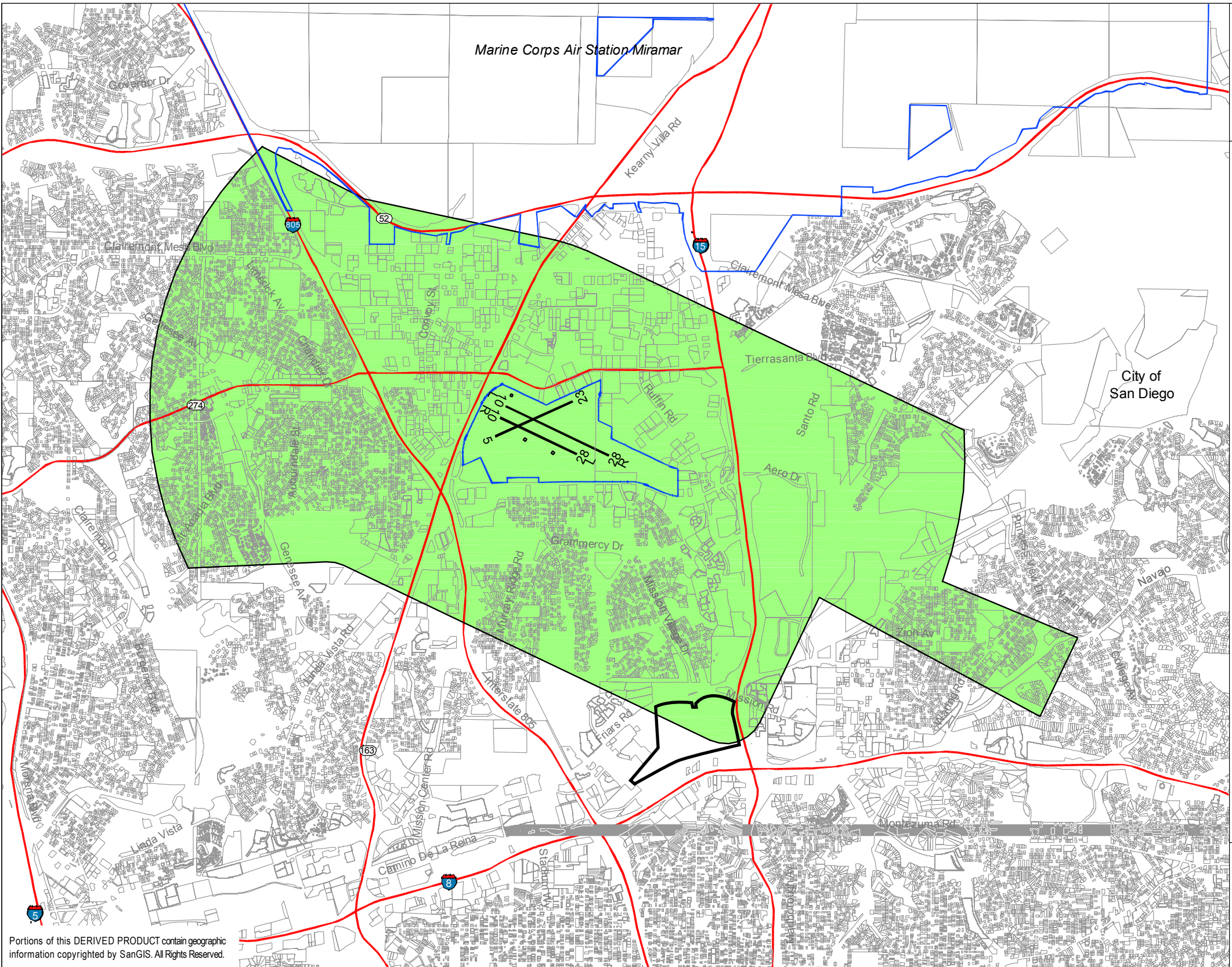
Sources: Parcels - San Diego Geographic Information Source (SanGIS), 2008;
Airport Overflight Notification Area - Mead & Hunt, Inc., 2008.

Prepared by: Ricondo & Associates, Inc., October 2009.

Exhibit III-4

Compatibility Policy Map:
Overflight

Montgomery Field Airport Land Use Compatibility Plan
January 25, 2010



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SOURCE: RICONDO & ASSOCIATES, INC., OCTOBER 2009

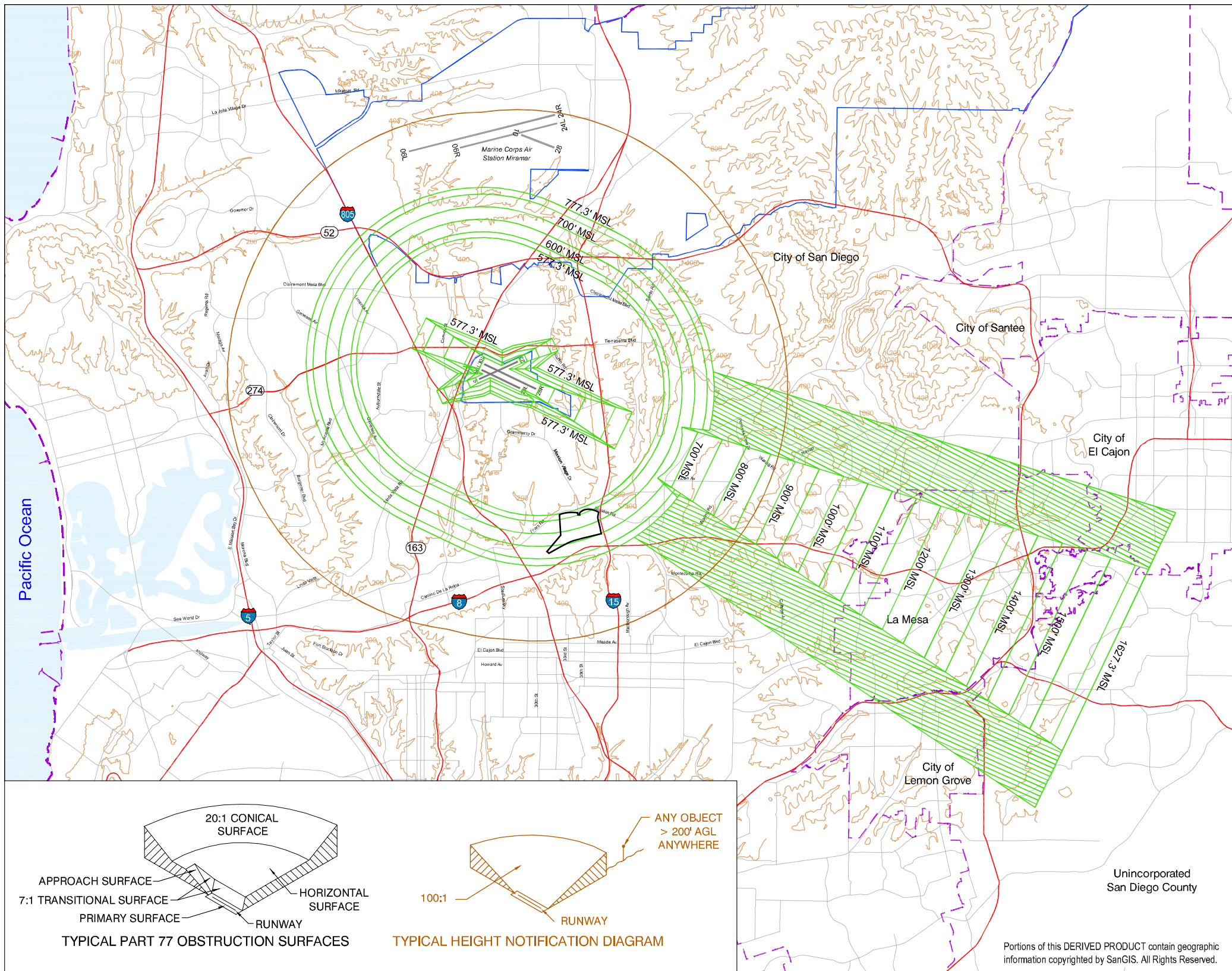
SDSU Mission Valley Campus Master Plan EIR



SAN DIEGO STATE
UNIVERSITY

Figure 4.10-1
Montgomery Field Overflight Map

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SOURCE: RICONDO & ASSOCIATES, INC., OCTOBER 2009

SDSU Mission Valley Campus Master Plan EIR



Montgomery Field Airport Land Use Compatibility Plan
January 25, 2010

Figure 4.10-2
Montgomery Field Part 77 Airspace Protection Map

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AIRPORT LAND USE COMMISSION
SAN DIEGO COUNTY

LEGEND

- Airport Property Boundary
- - - Municipal Boundary
- Highways
- Water
- Avigation Easement Areas
- Airport Overflight Notification Area
(only applies to new residential development)
- Project Boundary



0 3,000 ft.

Note: As a condition of the approval of applicable development projects, property owners shall dedicate an avigation easement to the airport operator, see Policy 2.11.5. Applicable projects include: (1) all projects within the runway protection zone, Safety Zone 1; (2) conditional uses within the 65 dB CNEL contour and higher; (3) uses proposed on sites where the ground penetrates a Part 77 airspace surface; and (4) projects where proposed structures, trees, or other objects would be obstructions, according to the FAA. Areas where the first two conditions would apply are shown in this exhibit. Areas where the third condition would apply will vary depending on the specific project proposal and the findings of the FAA's Form 7460-1 aeronautical study process.

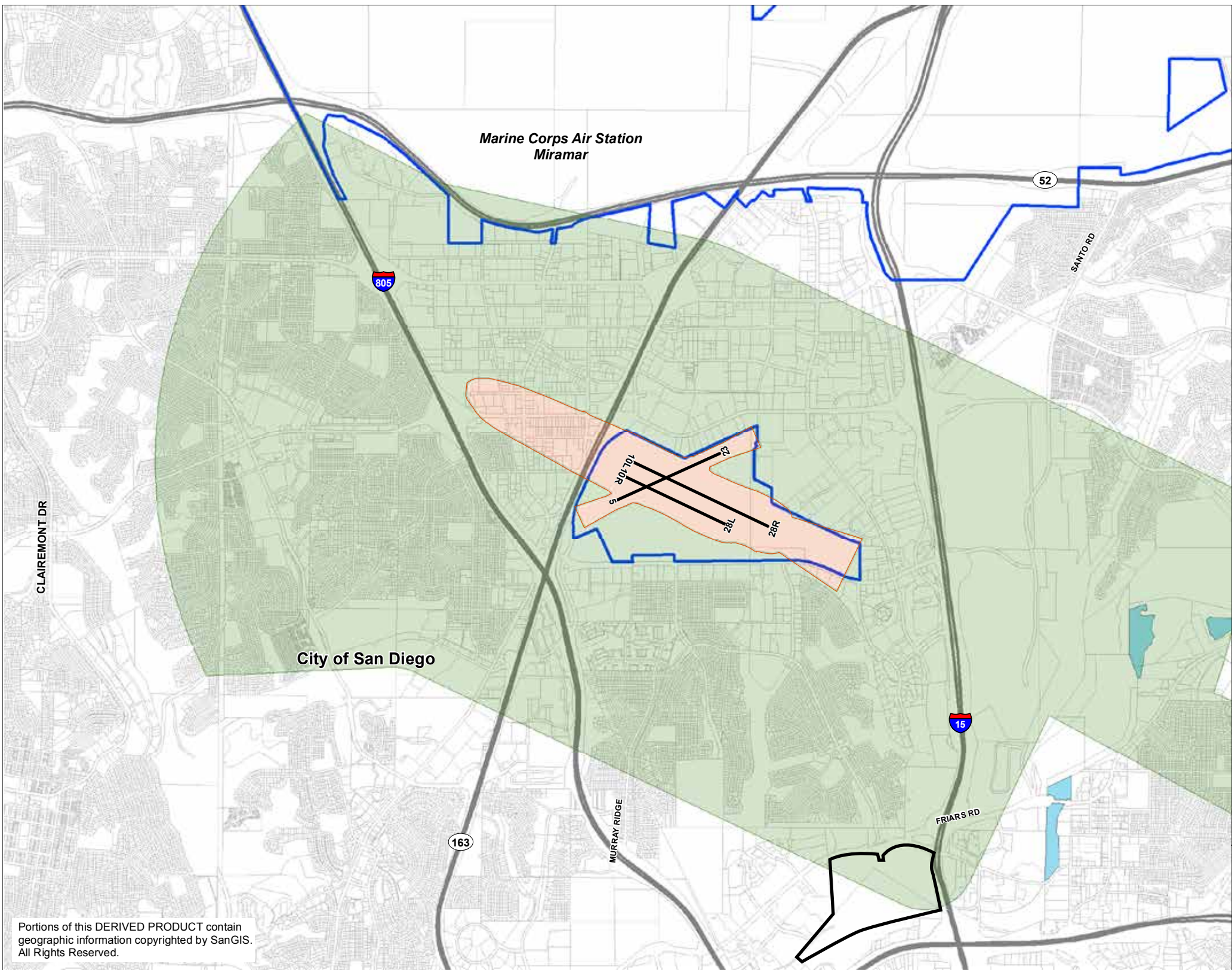
Sources: Parcels - San Diego Geographic Information Source (SanGIS), 2008; Roads and Highways - SANDAG, 2008.

Prepared by: Ricondo & Associates, Inc., January 2010.

Exhibit III-6

Avigation Easement and
Overflight Notification Areas

Montgomery Field Airport Land Use Compatibility Plan
January 25, 2010



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SOURCE: RICONDO & ASSOCIATES, INC., JANUARY 2010

SDSU Mission Valley Campus Master Plan EIR



Figure 4.10-3
Montgomery Field Avigation Easement and Overflight Notification Map

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AIRPORT LAND USE COMMISSION
SAN DIEGO COUNTY

LEGEND

- Project Boundary
- Airport Property Boundary
- Roads
- Highways
- Municipal Boundary

Airport Influence Area

- Review Area 1
- Review Area 2



0 7,000 ft.

Note: Real estate disclosure required in the entire Airport Influence Area (see Policy 3.6.2).

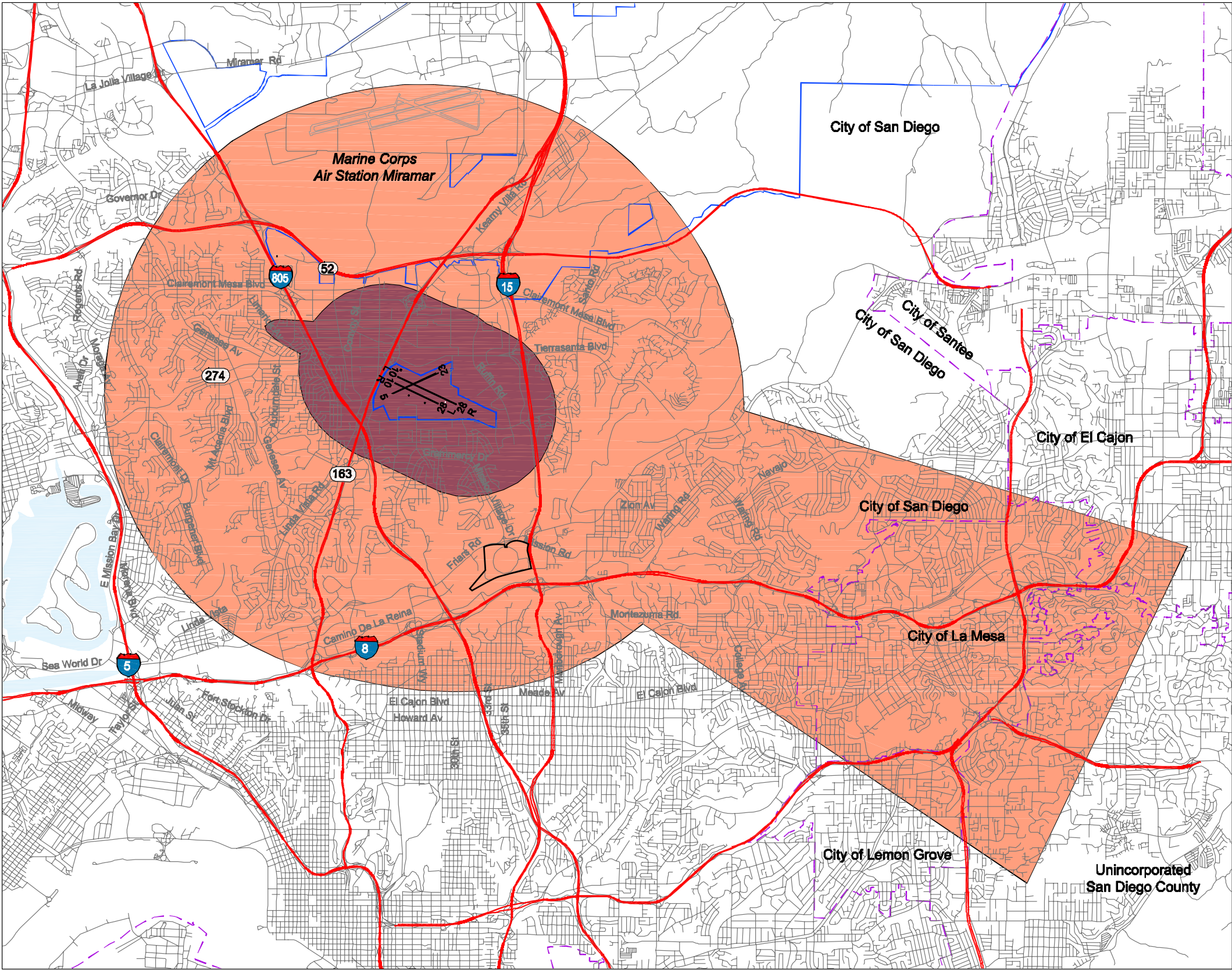
Sources: Roads - San Diego Association of Governments (SANDAG), 2006.
Airport Influence Area - Mead & Hunt, Inc., 2008.

Prepared by: Ricondo & Associates, Inc., October 2009.

Exhibit III-5

**Compatibility Policy Map:
Airport Influence Area**

Montgomery Field Airport Land Use Compatibility Plan
January 25, 2010



SOURCE: RICONDO & ASSOCIATES, INC., JANUARY 2010

SDSU Mission Valley Campus Master Plan EIR



Figure 4.10-4

Montgomery Field Airport Influence Area

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4.11 Mineral Resources

This section describes the existing mineral resources conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. No comments related to mineral resources were received. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.11.1 Existing Conditions

The project site is located on approximately 172 acres within the Mission Valley community of the City of San Diego (City). The project area is surrounded by major freeways, roadways, existing urban development, and the San Diego River. Historically, Mission Valley was home to gravel and rock quarries, agricultural uses, and natural open space. Over the past 60+ years, the area has been developed with office buildings along both the north and south side of Interstate 8, hotels, and large shopping areas, as well as over 10,000 residential units in numerous mixed-use and multifamily developments (City of San Diego 2015).

The project site is underlain by fill soils placed during grading for Stadium construction in 1966, Quaternary alluvial flood-plain deposits, and the Friars Formation. The fill material used at the project site was primarily derived from the Stadium Conglomerate (clayey sand and gravel) and some of the underlying Friars Formation. Fill thickness is estimated to range up to 35 feet at the project site (Appendix 4.8-2). The topography of the project site generally slopes from the east to west and from north to south with the perimeter around the existing San Diego County Credit Union (SDCCU) Stadium elevated to create adequate drainage away from the existing stadium.

As required by the Surface Mining and Reclamation Act (SMARA) of 1975 (California PRC, Sections 2710–2796), the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones have been established based on the presence or absence of significant sand and gravel deposits and crushed rock source (e.g., products used in the production of cement). As shown in Figure 4.11-1, the project site is located within MRZ-2, as indicated on the State of California Department of Conservation California Geological Survey (DOC 1996). The MRZ-2 mineral resource classification indicates areas known or inferred to have mineral resources, the significance of which is undetermined based on available data (DOC 2000).

4.11.2 Relevant Plans, Policies, and Ordinances

State

Surface Mining and Reclamation Act of 1975

As mandated by SMARA, the California State Mining and Geology Board classifies the state's mineral resources with the MRZ system. This system includes identification of presence/absence conditions for meaningful sand and gravel deposits.

The classification system emphasizes Portland Cement Concrete aggregates, which are used in manufacturing strong, durable concrete, and have stricter specifications than other aggregate materials.

Mineral land classification for the region is designated as follows (California PRC, Sections 2710–2796):

- **MRZ-1** – Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- **MRZ-2** – Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence.
- **MRZ-3** – Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- **MRZ-4** – Areas where available information is inadequate for assignment to any other MR zone.

Additionally, SMARA Sections 2762 and 2763 require that jurisdictions issue a Statement of Reasons for projects that include the elimination of the potential for extraction in areas of regionally significant minerals resources. SMARA requires that the lead agency consider this elimination of extraction potential in their land use decisions. The Statement of Reasons lists potential reasons to approve the proposed project and to include elimination of the potential for extraction of all of this resource; decision makers may adopt or modify any of these. The Statement of Reasons must be forwarded to the State Geologist and California State Mining and Geology Board for review in conjunction with the environmental review of the proposed project.

Local

San Diego State University (SDSU) is part of the California State University (CSU), which is a state agency, and as such, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered local planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to federal and state agency planning documents, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The following goal and policies from the City of San Diego General Plan Conservation Element address mineral resources.

- **Goal** – Balance mineral production and conservation with habitat and topography protection.
- **Policy CE-K.1.** Promote the recycling and reclamation of construction materials to provide for the City's current and future growth and development needs.
- **Policy CE-K.2.** Permit new or expanded mining operations within the MHPA [Multi-Habitat Planning Area] in accordance with MSCP [Multiple Species Conservation Plan] policies and guidelines.
- **Policy CE-K.3.** Produce sand and gravel with minimal harm and disturbance to adjacent property and communities.
- **Policy CE-K.4.** Plan rehabilitation of depleted mineral areas to facilitate reuse consistent with state requirements, the Surface Mining and Reclamation Act (SMARA), and local planning goals and policies, including the MSCP.

4.11.3 Significance Criteria

The significance criteria used to evaluate the project impacts to mineral resources are based on Appendix G of the California Environmental Quality Act Guidelines. According to Appendix G, a significant impact related to mineral resources would occur if the project would:

1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

4.11.4 Impacts Analysis

Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

As discussed in Section 4.11.1, the project site is located within MRZ-2, as indicated on the State of California Department of Conservation California Geological Survey, which indicates areas known or inferred to have mineral resources, the significance of which is undetermined based on available data (DOC 2000). However, the project site is underlain by fill soils placed during grading for Stadium construction in 1966, Quaternary alluvial flood-plain deposits, and the Friars Formation. The fill material used at the project site was primarily derived from the Stadium Conglomerate, which possesses a relatively high percent of gravel, cobbles, and boulders. Some fill material was also derived from the underlying Friars Formation. The surface and intermediate gravels, which are more easy to access, are not as widespread, and therefore not a reliable resource. Specifically, although there is a significant amount of cobble within the subsurface soils on the project site, they are not found in continuous thick zones across the site, but appear to be localized stream channel deposits that vary in thickness from a few feet to 15 to 20 feet. The exception would be the basal gravel layer atop the Friars Formation. These gravels are up to 25 feet thick and are relatively continuous; however, these materials are very deep, at depths of approximately 40 to 75 feet, and therefore, more costly to obtain. These minerals underlying the project site may have the potential to be mined, processed, and utilized as a source of sand and gravel.

Prior to implementation of the proposed project, the project site could be mined for any existing mineral resources on site. However, the site is urban, currently the location of existing development, and does not have an operating mine, sampling, or availability of a known mineral resource that would be of value to the region and the residents of the state per the City of San Diego's General Plan. Therefore, the project site is not currently a known mineral resource that would be of value to the region and the residents of the state.

In addition, the existing land uses surrounding the project site would preclude the majority of the project site from extractive operations. Mining operations require an adequate setback from certain land uses due to the variety of environmental issues associated with mining, which include, but are not limited to, noise, truck traffic, air quality, and visual resources impacts. Incompatible land uses may include improvements of high cost, such as high-density residential developments, intensive industrial developments, commercial developments, sensitive biological resources, and major public facilities.

The majority of the project site is surrounded by various incompatible land uses, including high-density residential developments to the northwest and east, lower density residential developments to north, and commercial

developments to the west and south. The project site borders the City's MHPA Preserve to the south. Additionally, the Metropolitan Transit System Trolley Green Line transects the project site with the Stadium Trolley Station located on site. Therefore, these resources are already constrained by the existing conditions of the project site.

For instance, typical extractive operations require a 1,300-foot setback from such incompatible land uses in the County of San Diego (County of San Diego 2008). According to the County of San Diego Guidelines for Determining Significance for Mineral Resources, the primary typical adverse effect to mineral resources in San Diego County is the loss of their availability by the placement of inappropriate and incompatible land uses, which either directly or indirectly make the resource inaccessible for future extraction. Using this setback, due to the location of incompatible land uses surrounding the project site, only the central portion of the project site, which is largely compromised of the footprint of the existing SDCCU Stadium, would not be located within this 1,300-foot buffer or other conflicting land uses as shown in Figure 4.11-2. Development of the proposed project would also place incompatible uses on site, including high-density residential and office/commercial land uses.

Additionally, while the proposed project would not be under the jurisdiction of the City of San Diego, the current City zoning for the project site is Mission Valley Planned District – Commercial Visitor (MVPD-MV-CV) (City of San Diego 2019). According to the City's Zoning Regulations, mining and extractive industries are not permitted within the Commercial Visitor zone. Therefore, mining and extractive industries would not be a permitted use under the site's current zoning.

Further, in consideration of San Diego Municipal Code Section 22.0908, the new multipurpose stadium and proposed River Park would be completed no later than 7 years from the date of execution of the Purchase and Sale Agreement between CSU/SDSU and the City. Thus, any potential extractive operations would not be financially viable within this short time frame to complete the Stadium and River Park.

Lastly, while there may be potential mineral resources on the project site, mining operations would be restricted due to the presence of groundwater across the project site, which creates difficult and cost-prohibitive mining conditions. Therefore, because the project site is not currently a known mineral resource that would be of value to the region and the residents of the state, and due to existing, surrounding development, the presence of shallow groundwater, and the constrained time frame contemplated by San Diego Municipal Code Section 22.0908 for development of the River Park and stadium on any potential mining operations that could occur, impacts to mineral resources are considered **less than significant**.

Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The project site is not delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site. The project site is located within MRZ-2 as indicated in the City and County of San Diego General Plans, similar to the State of California Department of Conservation CGS previously discussed. However, as discussed above, while the proposed project would result in the permanent loss of potential mineral resources, impacts on any potential mining operations that could occur on the project site are considered **less than significant** due to the presence of existing surrounding land uses, the presence of shallow groundwater, and the constrained time frame per San Diego Municipal Code Section 22.0908.

Would the project result in a cumulative impact to mineral resources?

The cumulative impact area for mineral resources is the San Diego region. While cumulatively considerable projects, including those listed in Table 3-1 of Chapter 3, may impact mineral resources, the project site is not a known mineral resource that would be of value to the region and the residents of the state per the City of San Diego's General Plan, nor is the project site delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site. Therefore, the proposed project **would not contribute to a cumulatively considerable impact** to mineral resources.

4.11.5 Summary of Impacts Prior to Mitigation

Impacts to mineral resources would be **less than significant**.

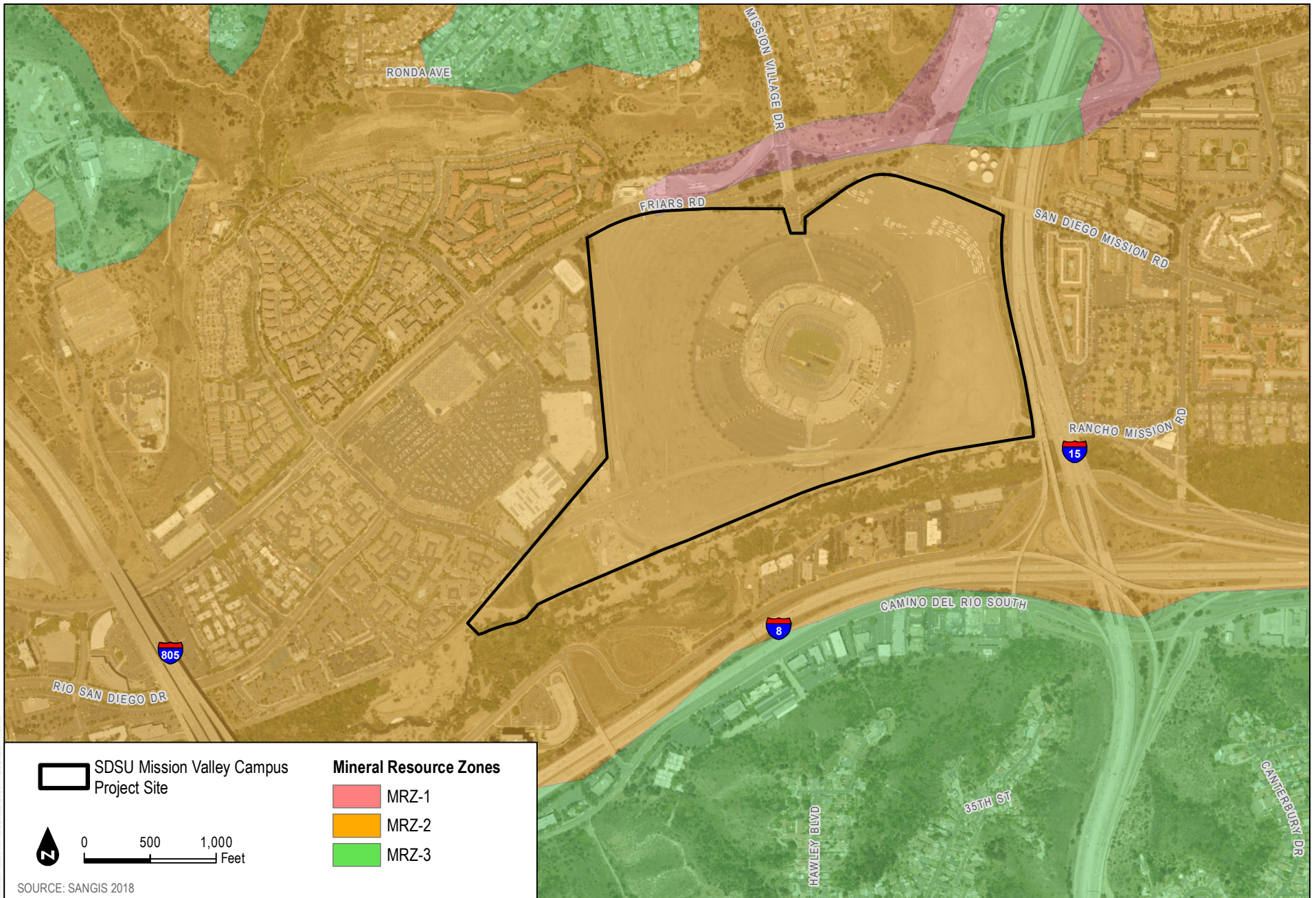
4.11.6 Mitigation Measures

Impacts to mineral resources would be **less than significant**. No mitigation is required.

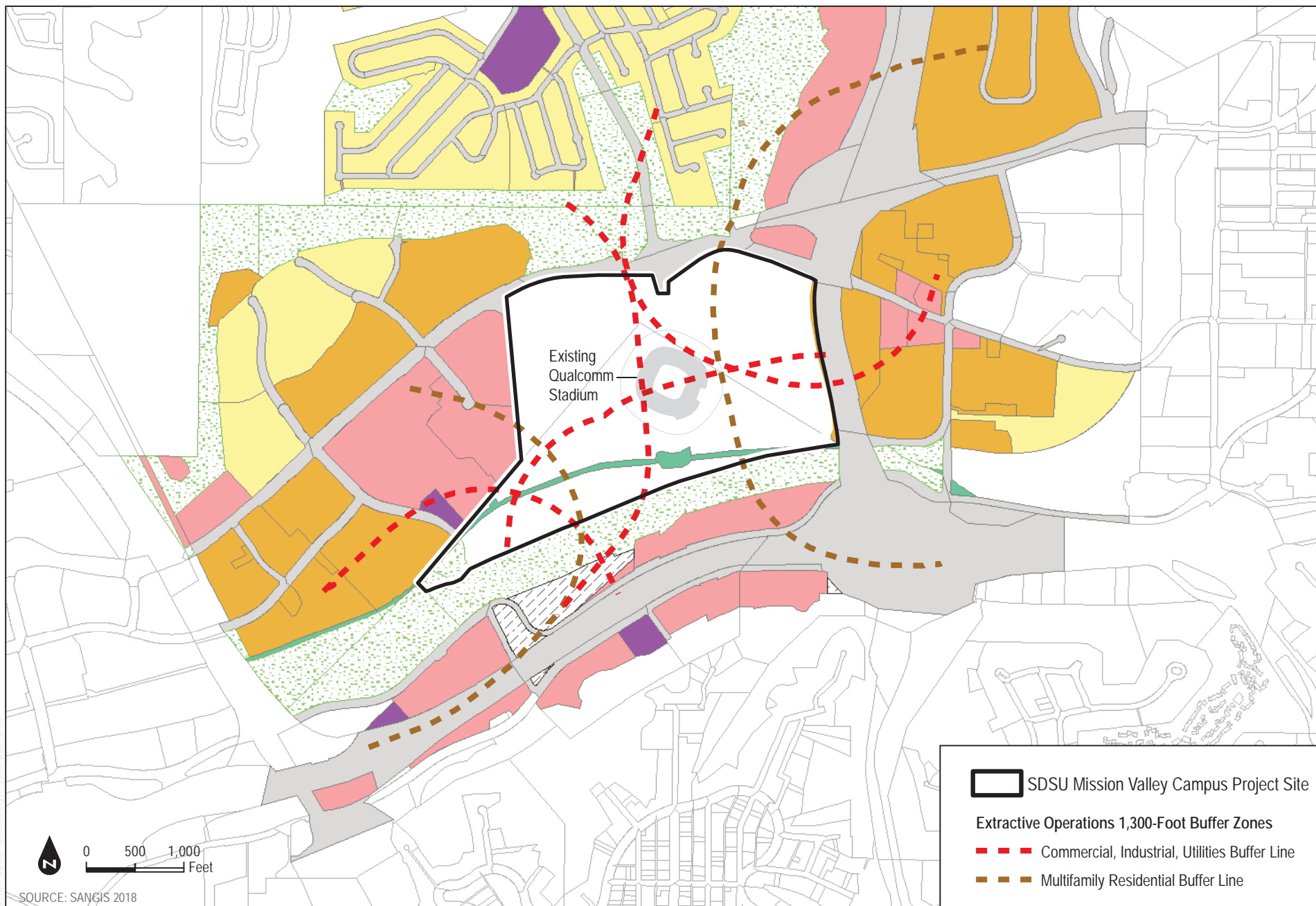
4.11.7 Level of Significance After Mitigation

Impacts to mineral resources would be **less than significant**.

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4.12 Noise

This section describes the existing noise conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

Methods for Analysis

Information contained in this section is based on the Noise Technical Report for the proposed project prepared by Dudek in July 2019. This report is included as Appendix 4.12-1 of this environmental impact report (EIR). Please refer to this appendix for the methodology used to perform noise modeling and analysis.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. Approximately 150 letters were received during this comment period. Comments received related to noise included concerns regarding increased project noise impacting Serra Mesa residents due to the proximity of the proposed stadium, noise diffusion impacts in Serra Mesa from the architectural design of the stadium, and noise impacts from special events at the proposed stadium. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

Project Design Features

The following project design features (PDF) are anticipated as representing both best construction practices and assumptions that support the value of construction noise level predictions herein.

- PDF-N-1** California State University/San Diego State University, or its designee, will take steps necessary to ensure that all construction equipment is properly maintained and equipped with noise-reducing air intakes, exhaust mufflers, and engine shrouds in accordance with manufacturers' recommendations. Equipment engine shrouds will be closed during equipment operation.
- PDF-N-2** Electrical power will be used to run air compressors and similar power tools.
- PDF-N-3** All equipment staging areas will be located as far as feasible from occupied residences or schools.
- PDF-N-4** Noise attenuation techniques will be employed as practical for all construction activity on and off the project site. Such techniques to achieve received noise levels below 75 A-weighted decibels (dBA) 12-hour noise equivalent level (L_{eq12h}) at potentially affected land uses will include, but are not limited to, the use of sound blankets on noise-generating equipment and the insertion of field-erected temporary sound barriers to occlude source-to-receiver sound paths.
- PDF-N-5** On-site crushing facilities will be located a minimum of 600 feet from existing residences, future on-site residences, and other nonresidential noise-sensitive receivers (e.g., seasonal avian nesting areas as identified by appropriate biological surveys).

- PDF-N-6** When facility design details are sufficiently complete, California State University/San Diego State University, or its designee will prepare an acoustical study(s) of sound emission from proposed stationary noise sources. Best engineering practices will be implemented in the design and selection of these systems and their noise-producing components, as well as means for noise control or sound abatement that would be expected to help noise from such stationary sources comply with applicable standards at project property lines or sensitive receptor locations, as appropriate.
- PDF-N-7** To help minimize occurrence of annoying impulse noise and ground vibration, California State University/San Diego State University, or its designee will consider usage of pavement saws and other equipment in lieu of impact-generating devices such as jackhammers, pavement breakers, and hoe rams for tasks such as concrete or asphalt demolition and removal.
- PDF-N-8** Where impact-type equipment are anticipated on site, California State University/San Diego State University, or its designee will consider application of noise-attenuating shields, shrouds, or portable barriers or enclosures, to reduce the magnitudes of impulse noise.
- PDF-N-9** California State University/San Diego State University, or its designee will consider lining the interior surfaces of hoppers, storage bins, and chutes with sound-deadening material (i. e., apply wood or rubber sheet liners to metal bin surfaces and thus help reduce impact-type noise due to dropped hard materials on these otherwise hard surfaces).

4.12.1 Existing Conditions

The project site is located in the northeast portion of the Mission Valley community within the City of San Diego (City). Specifically, the project site is situated south of Friars Road, west of Interstate (I) 15, north of the San Diego River, and east of the existing Fenton Marketplace shopping center. It is approximately 5 miles from downtown San Diego and approximately 2.5 miles west of the existing San Diego State University (SDSU) main campus situated along I-8 within the College Area Community of the City of San Diego. The project site is in a developed area surrounded by major freeways, roadways, existing development, and the San Diego River. Higher density multifamily residential land uses are located to the northwest, southwest, and east, across I-15. Friars Road, Mission Village Road, and San Diego Mission Road are located to the north. The San Diego River, which flows east to west, is located south of the project site; and south of the river are additional office uses and I-8. To the north of Friars Road is San Diego Fire-Rescue Department Fire Station 45, undeveloped hillsides, and single-family residences situated atop the mesa. To the west are office and large commercial retail uses. Murphy Canyon Creek, a partially earthen and concrete-lined channel that conveys flow into the river, is located within the eastern project boundary, and I-15 is located east of Murphy Canyon Creek.

Sound pressure level measurements were conducted around the project site vicinity to determine the existing noise levels. The daytime, short-term (i.e., measurement duration of 1 hour or less) investigator-attended sound level measurements were taken with a Rion NL-52 sound-level meter. This sound-level meter meets the current American National Standards Institute standard for a Type 1 precision sound-level meter. The calibration of the sound-level meter was verified before and after the measurements were taken, and the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

The existing or “baseline” outdoor noise level measurements were conducted on three separate occasions:

- Monday, December 31, 2018, during the Holiday Bowl NCAA collegiate football bowl game event in progress at the existing SDCCU Stadium; and,
- Thursday, January 24, 2019, as part of a multi-day, field survey during “typical” conditions that include non-holiday roadway traffic and no event at the existing San Diego County Credit Union (SDCCU) Stadium.
- Thursday, May 23, 2019, to measure representative outdoor ambient sound levels in the riparian area immediately south of the existing stadium southern fenceline.

The noise measurement locations are depicted as Sites ST1 through ST10 in Figure 4.12-1, Noise Measurement Locations. These field survey sites were selected on the basis of providing samples of typical outdoor ambient noise levels at existing and potential future representative noise-sensitive land uses (NSLUs) in the project vicinity. The two riparian area sites are distinguished from the previous set as ST-R1 and ST-R2. As shown in Table 4.12-1 below, the measured energy-averaged noise level (L_{eq}) ranged from 50 dBA at ST10 to 76 dBA at ST1 during the December 31, 2018, field survey, and 52 dBA at ST9 to 77 dBA at ST1 during the January 24, 2019, field survey.

Table 4.12-1. Measured Noise Level and Traffic Volumes

Site	Location/ Description	Holiday Bowl (holiday roadway traffic, major event at existing Stadium)			Typical Weekday (non-holiday roadway traffic, no major event at existing Stadium)		
		Date/Time	L_{eq}	L_{max}	Date/Time	L_{eq}	L_{max}
ST1	Bella Posta Apartments, east of I-15	12/31/2018, 1:00 p.m. to 1:10 p.m.	76	80.9	1/24/2019, 11:30 a.m. to 11:40 a.m.	77	81.3
ST2	West of Rancho Mission Villas, east of I-15: <i>no event fireworks</i>	12/31/2018, 5:51 p.m. to 5:53 p.m.	68	72.8	1/24/2019, 11:45 a.m. to 11:55 a.m.	72	74.3
ST2	West of Rancho Mission Villas, east of I-15: <i>during event fireworks</i>	12/31/2018, 5:54 p.m. to 6:00 p.m.	85	95.3	n/a	n/a	n/a
ST3	South of Friars Road, entrance to Qualcomm Way	n/a	n/a	n/a	1/24/2019, 12:35 p.m. to 12:45 p.m.	70	82
ST4	Cul-de-sac at the northern end of Cromwell Court	12/31/2018, 7:49 p.m. to 7:58 p.m.	57	68.3	n/a	n/a	n/a
ST5	South of 2385 Northside Drive San Diego, CA 92108	12/31/2018, 5:19 p.m. to 5:28 p.m.	60	76.9	1/24/2019, 12:27 p.m. to 12:37 p.m.	54	59.4
ST6 (at LT5)	Southern Stadium fenceline (across from trolley station)	12/31/2018, 11:54 a.m. to 12:08 p.m.	63	68.6	n/a	n/a	n/a

Table 4.12-1. Measured Noise Level and Traffic Volumes

Site	Location/ Description	Holiday Bowl (holiday roadway traffic, major event at existing Stadium)			Typical Weekday (non-holiday roadway traffic, no major event at existing Stadium)		
		Date/Time	L_{eq}	L_{max}	Date/Time	L_{eq}	L_{max}
ST6A (at LT5a)	South of San Diego River, east of Mission City Parkway	n/a	n/a	n/a	1/24/2019, 12:05 p.m. to 12:15 p.m.	65	66.4
ST7	Mission Valley Public Library, north of Fenton Parkway	12/31/2018, 5:00 p.m. to 5:09 p.m.	60	68	1/24/2019, 11:34 a.m. to 11:40 a.m.	59	63.6
ST8	Backyard of 5399 Wilshire Drive	12/31/2018, 1:55 p.m. to 2:04 p.m.	72	74.6	n/a	n/a	n/a
ST8	Southeast corner of Caminito Cascara and Rancho Mission Road	n/a	n/a	n/a	1/24/2019, 11:52 a.m. to 12:02 p.m.	67	77.8
ST9	South stairs of Juarez Elementary School	12/31/2018, 4:06 p.m. to 4:15 p.m.	55	65.3	1/24/2019, 10:35 a.m. to 10:40 a.m.	52	63.5
ST10	East of 2340 Harcourt Drive San Diego, California 92123	12/31/2018, 4:36 p.m. to 4:45 p.m.	50	64.8	1/24/2019, 10:48 a.m. to 10:53 a.m.	53	59.6
ST-R1	San Diego River riparian area, north of ST6A	n/a	n/a	n/a	5/23/2019, 9:30 a.m. to 9:40 a.m.	64	68.6
ST-R2	San Diego River riparian area, north of ST6	n/a	n/a	n/a	5/23/2019, 10:00 a.m. to 10:10 a.m.	59	66.2

Notes: L_{eq} = Equivalent Continuous Sound Level (Time-Average Sound Level); L_{max} = Maximum Noise Level.

In general, at survey positions ST1, ST2, ST5, ST7, ST9, and ST10, where attended sound pressure level (SPL) measurements were performed during both the Holiday Bowl event day (December 31, 2018) and a subsequent weekday without an event taking place at the existing Stadium, L_{eq} values from the sampling periods were comparable and no more than 3 dBA apart. The SPL measurement at ST5 during the Holiday Bowl event was 6 dBA higher than that of the subsequent survey result, but it included event-attributed intermittent sounds as suggested by the much higher maximum noise level (L_{max}) value during the measurement period.

Unattended long-term (“LT”, for several consecutive hours or consecutive diurnal cycles) SPL measurements were also performed during the two aforesaid field surveys to yield empirical data to exhibit how project vicinity outdoor ambient noise levels may vary over a sample 24-hour period, and over successive days, due nearby roadway traffic flows and other observed environmental factors. Appendix 4.12-1 presents plots of L_{eq} values collected at a variety of surveyed positions identified geographically in Figure 4.12-1. Key findings from study of these LT plots are as follows:

- As measured at LT1, a survey location on the edge of the western Bella Posta Apartments parking lot that adjoins the I-15 northbound easement, SPL dominated by highway traffic noise was generally higher during

the 1:00 p.m. to 8:00 p.m. period on December 31, 2018, when compared with the same 7-hour time period on January 24, 2019. A pronounced “spike” of approximately 10 minutes in duration is consistent with the observed fireworks performed over the Stadium as part of the Holiday Bowl festivities.

- As measured at LT4A, a survey location on northern edge of a residential property overlooking the Stadium and the I-15/I-8 interchange, SPL dominated by highway traffic noise was generally higher during a measured 19-hour period (beginning at 2:00 p.m. on December 31, 2018, and continuing to 11:00 a.m. on January 1, 2019) when compared with the same consecutive hours from January 24–25, 2019. A noise level spike occurs during the aforementioned Holiday Bowl fireworks. Further, although apparent highway traffic noise appears to drop significantly before midnight and the onset of New Year’s Day, apparent traffic noise rises sharply and then tapers gradually to lower levels as the early morning hours of New Year’s Day transpire—suggesting that many motorists were driving back home after attending New Year’s Eve festivities. In contrast, the pattern of noise level rise and decline for the January 24–25, 2019, period appears representative of typical expected conditions: during the day, there is prominence associated with usual commuter traffic peaks in the morning, afternoon, and evening. At night, SPL during the January 24–25, 2019, period dips down from daytime highs in the mid-70s to nearly 60 dBA.

4.12.2 Relevant Plans, Policies, and Ordinances

Federal

The Noise Control Act of 1972

The Noise Control Act of 1972 recognized the role of the federal government in dealing with major commercial noise sources, which require uniform treatment. Since Congress has the authority to regulate interstate and foreign commerce, regulation of noise generated by such commerce also falls under congressional authority. The federal government specifically preempts local control of noise from aircraft, railroads, and interstate highways. The U.S. Environmental Protection Agency has identified acceptable noise levels for various land uses to protect the public, with an adequate margin of safety, and establish noise emission standards for interstate commerce.

The Department of Housing and Urban Development standards define day–night average sound (L_{dn}) levels below 65 dBA outdoors as acceptable for residential areas. Outdoor levels up to 75 dBA L_{dn} may be made acceptable through the use of insulation in buildings.

State

California Code of Regulations

Title 24, California Code of Regulations, Noise Insulation Standards, establishes the acceptable interior environmental noise level (45 dBA L_{dn}) for multifamily dwellings (may be extended by local legislative action to include single-family dwellings). California Code of Regulation Section 65302(f) requires local land use planning jurisdictions to prepare a general plan. The Noise Element is a mandatory component of the general plan. It may include general community noise guidelines developed by the Governor’s Office of Planning and Research and specific planning guidelines for noise/land use compatibility developed by the local jurisdiction. The state guidelines also recommend that the local jurisdiction should consider adopting a local noise control ordinance. The Governor’s Office of Planning and Research has developed guidelines (OPR 2017) for community noise acceptability for use

by local agencies. Selected relevant levels are as follows (L_{dn} /DNL may be considered approximately equivalent to Community Noise Equivalent Level [CNEL]):

- CNEL below 60 dBA—normally acceptable for low-density residential use;
- CNEL of 55 to 70 dBA—conditionally acceptable for low-density residential use;
- CNEL below 65 dBA—normally acceptable for multifamily residential use;
- CNEL of 60 to 70 dBA—conditionally acceptable for multifamily residential use, transient lodging, churches, educational and medical facilities; and
- CNEL below 70 dBA—normally acceptable for playgrounds and neighborhood parks.

“Normally acceptable” is defined as satisfactory for the specified land use, assuming that normal conventional construction is used in buildings. “Conditionally acceptable” may require some additional noise attenuation or special study. Under most of these land use categories, overlapping ranges of acceptability and unacceptability are presented, leaving some ambiguity in areas where noise levels fall within the overlapping range.

The State of California additionally regulates the noise emission levels of licensed motor vehicles traveling on public thoroughfares, sets noise emission limits for certain off-road vehicles and watercraft, and sets required sound levels for light-rail transit vehicle warning signals. The extensive state regulations pertaining to worker noise exposure are, for the most part, applicable only to the construction phase of any project (e.g., the Cal-OSHA Occupational Noise Exposure Regulations [8 CCR, General Industrial Safety Orders, Article 105, Control of Noise Exposure, Section 5095, et seq.]) or workers in a central plant and/or a maintenance facility or involved in the use of landscape maintenance equipment or heavy machinery.

Local

Because SDSU is a component of the California State University, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, SDSU has considered the following planning documents and the project’s site location within, and relationship to, each. The proposed project would be subject to federal and state agency planning documents described above, but would not be subject to regional or local planning documents such as the City’s General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego Municipal Code 59.5.0401

The City’s Noise Ordinance limits property line noise levels for various land uses by time of day for noise generated by on-site sources associated with project operation (Table 4.12-2), such as the following for multifamily residential land uses: 55 dBA L_{eq} from 7:00 a.m. to 7:00 p.m., 50 dBA L_{eq} from 7:00 p.m. to 10:00 p.m., and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. A project that would generate noise levels at the property line that exceed the City’s Noise Ordinance Standards is considered potentially significant (such as potentially a carwash or projects operating generators or noisy equipment). If a nonresidential use, such as a commercial, industrial, or school use, is proposed to abut an existing residential use, the decibel level at the property line should be the arithmetic mean of the decibel levels allowed for each use as set forth in San Diego Municipal Code Section 59.5.0401 (Table 4.12-2).

Table 4.12-2. Applicable Noise Limits

Land Use	Time of Day	One-Hour Average Sound Level (dB)
Single-family residential	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	40
Multifamily residential (up to a maximum density of 1/2,000)	7:00 a.m. to 7:00 p.m.	55
	7:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
All other residential	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial	7:00 a.m. to 7:00 p.m.	65
	7:00 p.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	60
Industrial or agricultural	Any time	75

Note: dB = decibels

City of San Diego Municipal Code 59.5.0404 (Noise Ordinance), Construction Noise

Aside from emergency work, temporary construction noise is limited to 75 dBA L_{eq} over a 12-hour period at a residentially-zoned receptor. In addition, construction activity is prohibited between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with the exception of Columbus Day and Washington's Birthday, or on Sundays, that would create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator, in conformance with San Diego Municipal Code Section 59.5.0404.

City of San Diego General Plan

The City's General Plan Noise Element identifies compatible exterior noise levels for various land use types (City of San Diego 2008). The maximum allowable noise exposure varies depending on the land use. The maximum acceptable exterior noise level for residential uses and other noise-sensitive uses (including kindergarten through 12th grade schools, libraries, hospitals, daycare facilities, hotels, motels) is 65 dBA CNEL. However, exterior noise levels are considered compatible up to 75 dBA CNEL at higher education institutions.

Significance Determination Thresholds

The City of San Diego's California Environmental Quality Act (CEQA) Significance Determination Thresholds outline the criteria and thresholds used to determine whether project impacts are significant (City of San Diego 2011). The following three categories of thresholds have been used in this analysis for identifying potentially significant noise impacts as a result of implementation of the proposed project.

Interior and Exterior Noise Impacts from Traffic-Generated Noise

The City's CEQA Significance Determination Thresholds provide guidance on implementing the City's noise policies and ordinances, including the general thresholds of significance for uses affected by traffic noise included in Table 4.12-3. As shown in Table 4.12-3, the noise level at exterior usable open space for single- and multifamily residences should not exceed 65 dBA.

Operational noise is typically considered permanent, in the sense of the duration of the operation of the constructed facility, while not continuous in nature and occurring only when the Stadium is hosting an event (in progress). A significant permanent increase is defined as a direct project-related permanent ambient increase of 3 dBA or greater, where exterior noise levels would already exceed the City’s significance thresholds (City of San Diego 2011) (e.g., 65 dBA daytime for single-family residential land uses). An increase of 3 dBA is perceived by the human ear as a barely perceptible increase.

Table 4.12-3. Traffic Noise Significance Thresholds

Structure of Proposed Use That Would Be Impacted by Traffic Noise	Interior Space	Exterior Useable Space ¹	General Indication of Potential Significance
Single-family detached	45 dB	65 dB	Structure or outdoor useable area ² is <50 feet from the center of the closest (outside) lane on a street with existing or future average daily traffic >7,500
Multifamily, school, library, hospital, day care center, hotel, motel, park, convalescent home	Development Services Department ensures 45 dB pursuant to Title 24	65 dB	
Office, church, business, Professional uses	n/a	70 dB	Structure or outdoor useable area is <50 feet from the center of the closest lane on a street with existing or future average daily traffic >20,000
Commercial, retail, industrial, outdoor sports uses	n/a	75 dB	Structure or outdoor useable area is <50 feet from the center of the closest lane on a street with existing or future average daily traffic >40,000

Source: City of San Diego 2011.

Notes:

- ¹ If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3-dB increase, then the impact is not considered significant.
- ² Exterior useable areas do not include residential front yards or balconies unless the areas such as balconies are part of the required useable open space calculation for multifamily units.

Impacts to Sensitive Wildlife

Noise mitigation may be required for significant noise impacts to certain avian species during their breeding season depending upon the location of the slope (such as adjacent to an Multi-Habitat Planning Area) and what birds may be present in the area such as the California gnatcatcher (*Poliophtila californica*), least Bell’s vireo (*Vireo bellii*), southwestern willow flycatcher (*Empidonax traillii extimus*), least tern (*Sternula antillarum*), cactus wren (*Campylorhynchus brunneicapillus*), tricolored blackbird (*Agelaius tricolor*), western snowy plover (*Charadrius nivosus*), or burrowing owl (*Athene cunicularia*). If these avian species (except for the California gnatcatcher) are present, then mitigation will be required if construction or operational noise levels would exceed 60 dBA or the existing ambient noise level if already above 60 dBA during the breeding season. For California gnatcatcher habitat within the Multi-Habitat Planning Area and occupied, construction or operational noise levels exceeding 60 dBA (or exceeding the existing ambient noise level if already above 60 dBA) during the breeding season is considered significant. There are no restrictions for the gnatcatcher outside the Multi-Habitat Planning Area anytime of the year.

Noise/Land Use Compatibility

Table NE-3 from the City’s General Plan Noise Element indicates the City’s exterior unconditional “compatible” noise level standard for noise-sensitive areas is 60 dBA CNEL. The City assumes that standard construction design

techniques would provide a 15-dB reduction of exterior noise levels to interior noise levels of 45 dBA CNEL or less when exterior sources are 60 dBA CNEL or less. When exterior noise levels are greater than 60 dBA CNEL and the interior threshold is 45 dBA CNEL, consideration of specific construction techniques is required. Areas with exterior noise levels of up to 70 dBA CNEL are “conditionally compatible” provided that the building structure attenuates interior noise levels to 45 dBA CNEL.

4.12.3 Significance Criteria

The significance criteria used to evaluate the project impacts related to noise are based on CEQA Guidelines Appendix G. According to Appendix G, a significant impact related to noise would occur if the project would:

1. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Result in generation of excessive groundborne vibration or groundborne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

In analyzing impacts related to these significance criteria, pertinent noise regulations and other standards, introduced in Section 4.12.2, are considered and utilized as addressed below.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

For temporary construction activities associated with the proposed project, which are anticipated to be carried out as sequential phases (but as appropriate may have concurrent activities across the project site), generated noise that exceeds 75 dBA L_{eq} over a 12-hour period at the property line of a residentially zoned receptor would be considered significant per Section 59.5.0404(b) of the City’s Noise Ordinance.

For stationary sound sources attributed to the proposed project, exceedance of the City’s 1-hour average sound level limits would constitute a significant impact. For example, at the multifamily residential properties (Monte Vista) to the northwest of the proposed project, the daytime, evening, and nighttime noise limits would be 55 dBA 1-hour A-weighted equivalent sound level (L_{eq1h}), 50 dBA L_{eq1h} , and 45 dBA L_{eq1h} , respectively.

For project-attributed increases to local roadway traffic volumes, a significant permanent increase to the outdoor sound environment would be defined as an increase of 3 dBA or greater, where exterior noise levels would already exceed the City’s significance thresholds (City of San Diego 2011) (e.g., 65 dBA daytime for single-family residential land uses). An increase of 3 dBA is perceived by the average healthy human ear as barely perceptible.

Generation of excessive groundborne vibration or groundborne noise levels.

Due to a lack of vibration level regulation or policy guidance at the local level, this impact analysis will apply Federal Transit Administration (FTA) and California Department of Transportation guidance that suggests 0.2 inches per second (ips) peak particle velocity (PPV) (or 94 vibration velocity decibels [VdB]) as both an annoyance-based

criterion for occupants of inhabited buildings and a risk level for minor cosmetic damage to typical residential buildings featuring non-engineered timber and masonry (Caltrans 2013).

For a project located within the vicinity of a private airstrip or an airport land use plan or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

The project site is not located within the vicinity of a private airstrip, public airport, or otherwise exposed to excessive noise levels due to normal aviation traffic.

4.12.4 Impacts Analysis

Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Temporary Increase (Construction)

Conventional Equipment

Development activities for project construction would generally involve the following sequence for all three defined phases of construction of the proposed project: (1) site grading, (2) trenching, (3) building construction, (4) architectural coating, and (5) paving.

The following are typical types of construction equipment that would be expected:

- Concrete/industrial saws
- Excavators
- Dozers
- Tractors/loaders/backhoes
- Forklifts
- Welders
- Cement and mortar mixers
- Paving equipment
- Trenching equipment
- Off-highway water trucks
- Pile drivers (and comparable equipment or activities, such as dynamic compactors)
- Asphalt trucks
- Materials delivery trucks
- Pneumatic tools
- Graders
- Cranes
- Generator sets
- Air compressors
- Pavers
- Scrapers
- Rollers
- Concrete trucks

As demonstrated by this list, construction equipment anticipated for all phases of project development would include standard equipment that would be employed for any routine construction project of this scale. The proposed project would also include demolition of the existing stadium structure. While controlled detonation is not anticipated to be used, demolition may include controlled detonation in lieu of a mechanical means of rendering

the structure into materials that can be re-used on site or transported off site, or to supplement a mechanical means of demolition.

Construction noise is difficult to quantify because of the many variables involved, including the specific equipment types, size of equipment used, percentage of time, condition of each piece of equipment, and number of pieces of equipment that will actually operate on the site. The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 4.12-4.

The noise values represent maximum noise generation, or full-power operation of the equipment. As an example, a loader and two dozers, all operating at full power and relatively close together, would generate a maximum sound level of approximately 86 dBA at 50 feet from their operations. As one increases the distance between equipment, or separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. In addition, typical operating cycles may involve 2 minutes of full-power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activities is thus generally lower than the aggregate of maximum sound levels, since maximum noise generation may only occur up to 50% of the time.

Table 4.12-4. Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (L_{\max} , dBA) 50 Feet from Source
All Other Equipment > 5 HP	85
Backhoe	78
Compressor (air)	78
Concrete Saw	90
Crane	81
Dozer	82
Excavator	81
Front-End Loader	79
Generator	72
Grader	85
Man Lift	75
Mounted Impact Hammer (hoe ram)	90
Paver	77
Roller	80
Scraper	84
Tractor	84
Welder/Torch	73

Source: FTA 2018.

Notes: L_{\max} = Maximum Noise Level; dBA = A-weighted decibels; HP = horsepower.

Off-Site Noise Impacts from Daytime Construction

The nearest off-site sensitive receptors to the on-site project site construction work would be the multifamily homes (i.e., Monte Vista Apartment Homes [MVAH]) to the northwest, on the north side of Friars Road. Noise levels generated by construction equipment (or by any point source) decrease at a rate of approximately 6 dBA per doubling of distance from the source (Beranek & Ver 1992). Therefore, if a particular construction activity generated average noise levels of 88 dBA at 50 feet, the L_{eq} would be 82 dBA at 100 feet, 76 dBA at 200 feet, 70 dBA at 400 feet, and so on. Intervening structures that block the line of sight, such as buildings, would further decrease the resultant noise

level by a minimum of 5 dBA. The effects of molecular air absorption provide an additional source of attenuation that is often approximated for “standard air” (10° Centigrade, 70% relative humidity) at a rate of 1 dBA per 1,000 feet.

The closest point of construction activities to the nearest noise-sensitive receivers would be approximately 175 feet during off-site improvements to Friars Road and San Diego Mission Road.

The noise levels from the construction equipment to nearby sensitive receptors would be nominal given the distance between the construction activity area and high existing ambient noise level. The estimated construction noise levels (expressed as 12-hour L_{eq} values) at nearby NSLUs are summarized in Table 4.12-5.

Table 4.12-5. Construction Noise Modeling Summary Results

Construction Phase	Distance to Nearest Receiver (feet)	Predicted 12-hour L_{eq} (dBA)
Grading Phase A	450	70.9
Site Preparation Phase A	600	65.1
Building Construction Stadium (Phase A)	600	63.5
Grading Phase A (cont'd)	450	70.6
Grading Phase B (Rough Residential Pad & Initial River Parks)	475	71.5
Site Preparation Phase B (utilities)	1,200	58.1
Paving Stadium (Phase A)	200	72.9
Demolition of SDCCU Stadium (Phase A)	1,200	69.9
Architectural Coating Stadium (Phase A)	600	58.5
Demolition of SDCCU Stadium (Phase B)	1,200	68.0
Finish Phase B (Finish Residential Pad and River Park)	450	67.9
Grading Phase C	450	71.9
Building Construction Phase C1	450	65.9
Site Preparation - Off-Site Improvements	175	73.1
Paving Phase C1	450	65.2
Architectural Coating Phase C1	600	55.4
Building Construction Phase C2	450	66.4
Paving Phase C2	450	66.1
Architectural Coating Phase C2	600	55.4
Building Construction Phase C3	800	58.0
Paving Phase C3	450	65.2
Architectural Coating Phase C3	450	57.9

Notes: L_{eq} = Noise Equivalent Level; dBA = A-weighted decibels

As shown in Table 4.12-5, the noise levels during on-site construction-related activities would be below the City's 75 dBA 12-hour average noise level criterion at the nearest off-site NSLUs. Thus, temporary off-site construction noise impacts from construction on the project site would be **less than significant**.

Nighttime Construction

It is anticipated that nighttime construction would be necessary during some portions of project development. Between approximately January 1, 2022, and August 31, 2022, in order to complete the Stadium, a 16-hour work day may be required (roughly 6:00 a.m. to 10:00 p.m.); however, the final work schedule is not available. Therefore, around-the-clock construction activities (i.e., 24 hours per day) have been assumed. Under such circumstances,

nighttime construction activity would occur outside of the City's allowable 7:00 a.m. to 7:00 p.m. daytime period and potentially expose nearby noise-sensitive receptors to sound levels that, depending on activity location, intensity, and equipment type and quantities that are not clearly defined at the time of this writing, could exceed City hourly L_{eq} thresholds during evening and nighttime periods (i.e., 7:00 p.m. to 7:00 a.m.), and therefore result in **potentially significant impacts (Impact NOI-1)**.

Off-Site Improvements

It is anticipated that there will be off-site construction for utility connections and/or road improvements. Depending on factors that include the proximity of construction activity to NSLU, activity location, intensity, timing, and equipment type and quantities that are not known at this time, noise emissions attributed to implementation of these off-site improvements could occur within or external to the City's typically allowable 7:00 a.m. to 7:00 p.m. daytime period and thus potentially expose nearby noise-sensitive receptors to sound levels that exceed either the 12-hour City threshold of 75 dBA L_{eq} allowable between 7:00 a.m. and 7:00 p.m. or the appropriate City hourly L_{eq} thresholds during evening and nighttime periods (i.e., 7:00 p.m. to 7:00 a.m.), and therefore result in **potentially significant impacts (Impact NOI-2)**.

On-Site Construction Noise Impacts

Because the development of the proposed project would be a multiyear endeavor, portions of the development would be completed and occupied during the construction of subsequent portions (phases). Therefore, the occupied proposed project phases have the potential to be impacted by noise from ongoing construction activities. Location-specific phasing schedules for vertical construction beyond the stadium are not available at this time; it is therefore possible that construction of a new phase of the proposed project could take place as near as 50 feet of an occupied phase. In such an instance, short-term construction levels as high as 81 dBA could occur. This impact would be **potentially significant. (Impact NOI-3)**

Portable Rock-Crushing/Processing Facility

A portable crushing/processing facility may be used on site during construction activities to crush and re-use existing concrete and asphalt associated with the parking lot and existing SDCCU Stadium. These materials would be recycled on site into future fill material to avoid off-site import of fill material.

Typically, crushing operations would begin with a front-end loader picking up material and dumping the material into a primary crusher. The material would then be crushed, screened, and stacked in product piles. The material would be stockpiled adjacent to the crushing equipment. All material would be used on site. Electric power would most likely be provided by a diesel engine generator. Based on noise measurements that have been conducted for portable crushing operations (Ldn Consulting 2011), the crushing activity would generate a 3-hour average noise level of approximately 80 dBA at a distance of 100 feet from the combination of a jaw crusher and cone crusher.

At a distance of 250 feet, the average noise level from this studied rock crushing operation would be reduced to 72 dBA L_{eq} and could, therefore, combine with non-crusher construction noise at the same intensity (72 dBA L_{eq}) but still comply with the City standard due to the principles of logarithmic addition (i.e., the log-sum of 72 dB and 72 dB is 75 dB). Therefore, where possible and practical, rock-crushing equipment should be located further than 250 feet to minimize annoyance to nearby NSLUs.

The closest existing off-site residence property line or NSLU could be located within approximately 175 feet of the project site. At this distance, the noise level associated with the rock crushing activities—were they to be located as close as the project property line—would be approximately 75 dBA L_{eq} (hourly) and approximately 83 dBA L_{max} . While this rock crusher noise level does not individually exceed the City's construction noise threshold, it could combine with noise propagation from other on-site construction activities and therefore result in an aggregate construction noise impact that would be **potentially significant**. (Impact NOI-4)

Construction Noise Impacts to Sensitive Wildlife

Noise mitigation may be required for significant noise impacts to certain avian species during their breeding season located in or adjacent to a Multi-Habitat Planning Area south of the project site. Temporary construction noise could reach up to 79 dBA during construction near the southern boundary. Significance of impacts are discussed in Section 4.3, Biological Resource, and the Biological Resources Technical Report (Appendix 4.3-1).

Stadium Implosion Scenario

While not anticipated as part of the proposed project, due to the presence of the existing SDCCU Stadium structure and the project construction schedule, implosion of the existing Stadium or portions thereof may be determined to be the most efficient and preferred method for demolition to implement the proposed project. At the current stage of the proposed project design, a blasting study has not been completed, and no specific blasting timelines, or blast parameters are available. However, in order to address and evaluate this potential scenario, the following is based on the potential (based upon other implosion events) that one large implosion may occur.

Blasting typically involves drilling a series of boreholes, placing explosives ("charge") in each hole, then topping the charge with fill material to help confine the blast. These multiple holes are typically arranged so as to yield optimal fracturing of the structure and thus allow gravity to subsequently collapse or "implode" the structure in as safe and controlled manner as possible after detonation. Post-detonation material can then be further broken down to manageable size and hauled away with conventional construction equipment and vehicles. By limiting the amount of charge in each hole, and detonating each charge successively with a time delay, the blasting contractor can limit the total energy released at any single time, which in turn reduces the airborne noise L_{max} and groundborne vibration energy associated with each individual detonated charge.

By way of example, using mathematical expressions provided by the Blasting and Explosives Quick Reference Guide (Dyno Nobel 2010), up to an 8-kilogram (17.6 pounds) charge per detonation would result in 85 dBA L_{max} at a distance of 1,200 feet. Due to the impulsive nature of the blast, the sound lasts no more than a second, which means the hourly L_{eq} for a single detonation would be less than 50 dBA L_{eq} . Hence, many detonations could occur in succession as part of a single "implosion" event per a well-designed blasting plan and still result in potential compliance with the City's noise standards. Until such blasting details are known, this assessment shall assume that blasting noise is **potentially significant**. (Impact NOI-5)

Permanent Noise Increase (Operations)

Off-Site Traffic Noise

Operational noise is typically considered permanent, in the sense of duration for operation of the constructed facility. The character of operation noise would include relatively continuous sources such as heating, ventilating, and air conditioning (HVAC) systems associated with newly constructed buildings, above which noise due to an in-

progress stadium event (of limited duration) would likely dominate the outdoor sound environment. As shown in Table 4.12-2, the noise level at exterior usable open space for single- and multifamily residences should not exceed 65 dBA.

A significant permanent increase is defined as a direct project-related permanent ambient increase of 3 dBA or greater, where exterior noise levels would already exceed the City's significance thresholds (City of San Diego 2011) (e.g., 65 dBA daytime for single-family residential land uses). An increase of 3 dBA is perceived by the human ear as a barely perceptible increase.

The proposed project would generate a net traffic volume increase as overall daily trips from the project site would increase compared to the existing use. To be conservative, the proposed project traffic volumes without implementation of Transportation Demand Management measures were used for noise modeling purposes. The largest anticipated gains in roadway traffic volumes, in terms of percentage growth, would be along Friars Road and Ward Road (Appendix 4.15-1). Using the Federal Highway Administration's Traffic Noise Model (FHWA 2004), the noise level increase associated with the additional traffic volume was calculated. The results are summarized in Table 4.12-6. The Traffic Noise Model input and output data files are provided in Appendix 4.12-1.

Table 4.12-6. Traffic Noise Modeling Results Summary (Typical Day, No Stadium Event)

Site	Existing (CNEL (dBA))	Existing Plus Project (CNEL (dBA))	Increase (dB)	Horizon Year without Project (CNEL (dBA))	Horizon Year Plus Project (CNEL (dBA))	Increase (dB)
ST1	78.1	78.1	0	79	79.1	0.1
ST2	74.8	74.8	0	75.7	75.8	0.1
ST3	62.7	63.9	1.2	63.5	64.5	1
ST4	70.4	70.4	0	71.2	71.4	0.2
ST5	56.2	57	0.8	57	57.7	0.7
ST6	68	68.1	0.1	68.9	68.9	0
ST7	59.4	59.7	0.3	60.2	60.5	0.3
ST8	67.1	68.4	1.3	68	69.1	1.1
ST9	55.5	55.7	0.2	56.4	56.6	0.2
ST10	55.3	55.8	0.5	56.2	56.7	0.5

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel; dB = decibel.

As shown in Table 4.12-6, the additional traffic associated with the proposed project would increase the noise at receptor locations by 1 dB CNEL or less (rounded to whole numbers). Thus, the additional project-generated traffic volume along the roads would not substantially increase the ambient noise level.

The existing plus project plus Stadium event traffic noise would generate a noise level increase of 2 dB CNEL or less (rounded to whole numbers) along the studied roads in the vicinity of the project site. The noise level increases associated with the additional traffic volume associated with a Stadium event in progress are depicted in Table 4.12-7.

Table 4.12-7. Traffic Noise Modeling Results Summary (Stadium Event Day)

Site	Existing (CNEL (dBA))	Existing Plus Project Plus Event (CNEL (dBA))	Increase (dB)	Horizon Year without Project (CNEL (dBA))	Horizon Year Plus Project Plus Event (CNEL (dBA))	Increase (dB)
ST1	78.1	78.1	0	79	79.1	0.1
ST2	74.8	74.8	0	75.7	75.8	0.1
ST3	62.7	64.4	1.7	63.5	65	1.5
ST4	70.4	70.4	0	71.2	71.4	0.2
ST5	56.2	57.3	1.1	57	58	1
ST6	68	68	0	68.9	68.9	0
ST7	59.4	59.7	0.3	60.2	60.6	0.4
ST8	67.1	68.5	1.4	68	69.2	1.2
ST9	55.5	55.8	0.3	56.4	56.7	0.3
ST10	55.3	55.9	0.6	56.2	56.7	0.5

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel; dB = decibel.

The additional traffic volume along the adjacent roads would not substantially increase the existing noise level in the project vicinity, and the traffic noise level increase is considered **less than significant**; no mitigation measures are necessary.

Trolley Noise

The Metropolitan Transit System Green Line Trolley bisects the project site. For informational purposes, the following description of potential noise levels from continued operations of the Green Line is reproduced from Appendix J (Noise Analysis) of the Mission Valley Community Plan Update (RECON 2019). Future Green Line Trolley operations are anticipated to continue similar to the existing schedule. The 60, 65, and 70 CNEL contour distances for the Green Line Trolley are summarized in Table 4.12-8. As shown, the 60 CNEL contour extends up to approximately 272 feet from the center of the trolley tracks between the Stadium and Fenton Parkway trolley stations, and the 65 CNEL contour extends up to approximately 86 feet from the trolley tracks.

Table 4.12-8. Green Line Trolley Noise Contour Distances

Stations	Noise Level at 50 feet (CNEL)	Distance to Noise Contour (feet)		
		70 CNEL	65 CNEL	60 CNEL
Mission San Diego to Stadium	58	3	10	32
Stadium to Fenton Parkway	67	27	86	272

Source: RECON 2018.

Note: CNEL = community noise equivalent level.

The nearest NSLUs would be located on the north side of the trolley alignment, with some uses abutting the right-of-way at distances as close as 25 feet from the centerline. These land uses would potentially experience temporary noise exceedances while the trolley passes by; however, these would be very short in duration. Nevertheless, per the California Building Code, design and construction of the exterior shell (including fenestration) for proposed project residential buildings in proximity to the existing trolley route will include adequate sound insulation so that interior sound levels due to exterior-to-interior noise intrusion would not exceed 45 dBA CNEL. Impacts would be **less than significant**.

Parks and Open Space Maintenance Activities

For guidance purposes, Section 59.5.0502(g)(4) of the City of San Diego Noise Ordinance restricts noise from the operation of leaf blowers to 65 dB at a distance of 50 feet. Adjusted to this 50-foot distance, a typical riding-style lawn mower has a comparable noise level (Berger et al. 2015). When such equipment would operate as part of usual maintenance activities at parks and open spaces that are proximate to the nearest future NLSU resulting from development of the proposed project, outdoor ambient noise levels would temporarily rise. However, assuming such activities involve one mower or blower, limited to no more than an hour per day at a distance no closer than 20 feet to the exterior of an NSLU, the resulting predicted sound level would be 60 dBA CNEL and thus compliant with what the City considers “compatible” with the exterior of an NSLU. On this basis, impacts related to noise from park and open space maintenance activities would be considered **less than significant**.

Stationary Noise Sources

As presented in Table 4.12-2, the City of San Diego Noise Ordinance limits property line noise levels for various land uses by time of day for noise generated by on-site sources associated with project operation (e.g., for multifamily residential, 55 dBA L_{eq} from 7:00 a.m. to 7:00 p.m., 50 dBA L_{eq} from 7:00 p.m. to 10:00 p.m., and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m.). A project that would generate noise levels at the property line that exceed the City’s Noise Ordinance Standards is considered potentially significant (such as potentially a carwash or projects operating generators or noisy equipment). If a nonresidential use, such as a commercial, industrial, or school use, is proposed to abut an existing residential use, the decibel level at the property line should be the arithmetic mean of the decibel levels allowed for each use as set forth in San Diego Municipal Code Section 59.5.0401 (Table 4.12-2).

Emergency Generators

The proposed project may include stand-by generators that would operate during emergencies and provide mission-critical power to on-site medical facilities (e.g., urgent care) and telecommunication infrastructure. While operation of such systems during actual emergencies would normally be exempt from City noise standards, short-duration operation during testing at required intervals (e.g., once per month) may produce localized high levels of noise. Therefore, generators would feature sound-insulating enclosures, sound attenuated air intakes (e.g., acoustical louvers or baffled sound traps), and combustion exhaust silencers of sufficient noise-reducing performance or “grade” so as to minimize the potential noise impact from such testing procedures. By way of example, Cummins offers three distinct levels of sound attenuation for a packaged generator, resulting in operating sound levels at a distance of 23 feet ranging from 89 dBA to 70 dBA (Diesel Service & Supply 2019). Given this range of noise emission from an operating enclosed unit during a daytime test, and depending on the level of sound attenuation selected, the project could locate one outdoors at a distance of 40 to 400 feet from the exterior of an occupied on-site residence or commercial use (e.g., retail) and avoid potentially significant noise impact by minimizing outdoor noise exposure and corresponding exterior-to-interior noise intrusion to the occupied new residence or commercial use.

HVAC Systems

Anticipated new on-site stationary operating mechanical equipment that are typical major producers of relatively continuous or “steady-state” outdoor noise include rooftop air-handling units that supply air conditioning to the occupied structures and the potential for parking garage exhaust fans to supplement natural ventilation techniques. Although final project design details are still under development, the rooftop air-handling units would likely be located on the top of the proposed buildings and surrounded by rooftop parapet walls; thus, it is unlikely that most noise-sensitive receivers in the community would have a direct view of them. Specific details (sizes, manufacturers, and

models) of these and other equipment have not been finalized; however, and for purposes of this analysis, Appendix 4.12-1 provides a table that helps show how available information on gross square footage and expected function or usage of the proposed project buildings supported noise emission estimates. Table 4.12-9 provides a summary of the anticipated major stationary producers of outdoor noise for each identified operational phase of the proposed project as contemplated by this noise analysis, summarized as follows:

- **Campus Stadium and Park Built:** The new SDSU Stadium is completed, but campus residential, educational/office, and hotel structures are not constructed yet.
- **Campus Residential Buildout:** The new SDSU Stadium and campus residential buildings are built and operational, but the campus educational/office and hotel structures are not fully constructed yet. Below-grade parking for the new Stadium and residential buildings is built and operating.
- **Full Buildout:** The new Stadium and all buildings (campus residential, educational/office, and hotel) are completed and operational.

Stadium

The proposed Stadium would host SDSU football games and other events attended by several thousands of visitors with capacity of up to 35,000. Aside from intermittent sounds due to music or speech reinforcement and public address systems, which can be controlled as part of the Stadium design and operations (and as emphasized by mitigation measure **MM-NOI-1**), this analysis assumes that the combined noise from these crowds of cheering and shouting event spectators would be a significant (and likely dominant) Stadium-attributed acoustical contributor to the outdoor sound environment on event days.

Stadium event noise was predicted with CadnaA (version 2018 MR1), a commercially available software program that uses algorithms compatible with International Organization of Standardization 9613 standards for outdoor sound propagation calculation (ISO 1996). The noise prediction model accepts user inputs for sources of sound emission and calculates sound pressure level in a 3D model space by accounting for geometric divergence and other sound attenuation physics including air absorption, ground effects, and linear occlusion due to natural or man-made terrain features.

For this operational noise analysis, the Stadium has been modeled as a set of seating areas that reasonably reflect the current design and would contain spectators that, on average, are contributing (via speech, shouts, or cheers) approximately 87 dBA sound power per person at a seating density of one spectator per square meter (about 10 square feet). This individual sound power level is consistent with “very loud speech” per research by Lazarus (Hayne et al. 2006). In total, this analysis conservatively assumes that all 35,000 spectators that may be filling the seats are engaged in loud speech and thus contributing to the aggregate sound emission level from the Stadium. These seating areas are bounded by barrier elements that simulate the solid structures of the Stadium on which the seating areas rest.

Table 4.12-9. Anticipated Major Stationary Operating Sources of Outdoor Noise by Project Phase

Project Feature	Operating during Phase(s)	Description of Sound Source	Estimated Noise Level (dBA Leq) ¹	Height above Grade (feet)
Rooftop Air-Handling Units	Residential Buildout and Full Buildout	Plenum-type centrifugal fan drawing outside air into the building	75 to 95 ²	6 feet above top of roof
Parking Garage Exhaust Fan	Residential Buildout and Full Buildout	Tube-axial fan ventilating below-grade garage	95 to 102 ³	5 feet above grade
New Stadium Seating Areas (when event in progress)	Stadium Built, Residential Buildout, and Full Buildout	Aggregate sound from as many as 35,000 spectators	79 dBA per person ⁴	On average, 49 feet above grade

Notes:

- ¹ Sound pressure level (SPL) distance-adjusted to a reference distance of 1 meter (approximately 3 feet).
² SPL depends on the equipment airflow capacity as suggested by building gross square footage and function or usage.
³ SPL depends on the equipment airflow capacity, determined by 0.75 cubic feet per minute per parking gross square foot (INTEC 2015).
⁴ Based on sound level associated with “very loud speaking” voice effort per Lazarus (Hayne et al. 2006).

Stationary Noise Predictions

Using the aforementioned CadnaA software program, noise levels due to stationary sources shown in Table 4.12-9 were predicted at a set of representative noise-sensitive receiver locations presented in Table 4.12-10. These receiver locations (aside from Broadview) also appear in graphical depictions, presented as Figures 4.12-2 through 4.12-6, of the predicted sound propagation for each of the five studied operation scenarios.

CadnaA-based modeling for the Broadview receptor location in Table 4.12-10 (i.e., just south of Broadview Avenue on the top of the mesa) considers its position approximately 600 feet due north of the northern edge of the parking lot adjoining Fire Station 45 on Friars Road. Over the first 300 feet of this horizontal distance, in the direction of sound travel from the proposed new Stadium, is a steep slope where the grade gains 200 feet of elevation; then there is an additional but much more gradual rise of about 30 feet over the remaining 300 feet of distance. The effect of this topography and distance helps explain the lower predicted levels of the Broadview in comparison with those of receptor MVAH.

Table 4.12-10. Predicted Noise Emission from On-Site Major Stationary Sound Sources

Receiver Identification Tag	Receiver Location Description	Stadium Built, with Event in progress dBA Leq	Residential Buildout, with Stadium Event dBA Leq	Residential Buildout, without Stadium Event dBA Leq	Full Buildout, with Stadium Event dBA Leq	Full Buildout, without Stadium Event dBA Leq
ST3/LT3A	Adjoining Friars Road near northwest corner of project site	64.7	64.7	34.4	64.7	34.2
ST7	South of Mission Valley Public Library (on Fenton Parkway)	61.3	61.3	31.6	56.4	29.9
LT5	Southern fenceline of current Stadium, across from Trolley Station	63.2	62.9	37.5	58.0	35.0

Table 4.12-10. Predicted Noise Emission from On-Site Major Stationary Sound Sources

Receiver Identification Tag	Receiver Location Description	Stadium Built, with Event in progress dBA Leq	Residential Buildout, with Stadium Event dBA Leq	Residential Buildout, without Stadium Event dBA Leq	Full Buildout, with Stadium Event dBA Leq	Full Buildout, without Stadium Event dBA Leq
ST6/LT5A	Northern edge of San Diego River Garden	59.5	59.5	31.4	57.7	29.2
ST2A	Southwestern corner of Rancho Mission Villas	54.3	51.3	32.4	51.5	32.4
ST1/LT1	Western edge of Bella Posta Apartments	56.6	48.2	35.3	48.6	35.3
MVAH	Southeastern edge of Monte Vista Apartment Homes (on Northside Drive, overlooking project)	66.0	66.0	32.8	66.0	33.1
ST5	2365 Mission City Corporate Center (west of project)	64.1	64.2	37.0	64.2	36.9
Broadview	Backyard of residence on south side of Broadview Avenue	60.6	60.6	29.9	57.3	30.4

Note: dBA = A-weighted decibels; Leq = Noise Equivalent Level.

Table 4.12-10 shows that for each of the three studied proposed project operation phases, aggregate noise emission from only the major stationary operating HVAC equipment (and without a Stadium event in progress) should be compliant with the City's nighttime noise thresholds as received by nearby commercial (ST5, ST7), multifamily residential properties (ST1, ST2A, MVAH), and single-family residences (Broadview). When a well-attended Stadium event occurs, however, predicted noise levels would exceed these thresholds at indicated time frames as follows:

- At ST5 (commercial land use), from 7:00 p.m. to 7:00 a.m.;
- At MVAH (nearest Monte Vista Apartment Homes), all day and night;
- At ST1/LT1 (nearest Bella Posta Apartments), all day and night before the residential buildings are constructed;
- At ST2A (nearest Rancho Mission Villas), from 7:00 p.m. to 7:00 a.m. before the residential buildings are constructed; and
- At Broadview (nearest single-family home), all day and night.

Accordingly, impacts at these locations during the indicated times of day, evening, and night are considered **potentially significant** with respect to the City's noise ordinance hourly limits. (**Impact NOI-6**)

Final design features, capacity, and function of the new Stadium and their effects on noise emission performance are important. This Stadium noise analysis models aggregate spectator crowd noise and assesses its potential impact. Due to the variety of potential events and activities that the new Stadium may host, the analysis herein assumes proper implementation of Stadium design features, both structural and pertaining to the audio/visual

systems, to adequately control amplified speech, music, and public address messaging. Public address messages during emergency situations would be exempt from such acoustical controls.

By way of example, Figure 4.12-7 depicts an alternative stadium-only scenario, in which there are no large horizontal or vertical physical gaps in the two east and west “bowl” sides of the Stadium structure containing the seating areas. To the north and south, however, gaps remain. Closing such gaps in the Stadium structural design would help lower noise exposure at the MVAH representative receptor.

Scheduling Stadium events to avoid nighttime (between 10:00 p.m. and 7:00 a.m.) operation would reduce the time period during which these above-noted exceedances would occur.

While predicted stationary operation noise would exceed City standards at representative receptor locations at MVAH, ST1, and ST2A, the existing ambient sound level at these locations—even during nighttime hours—is dominated by roadway traffic and already exceeds the City standards. In fact, and as shown in the plots of long-term baseline data collection in Appendix 4.12-1, the SPL measured at position ST1/LT1 always exceeded 60 dBA L_{eq} . The ST2A measurement location is similarly proximate to I-15 and would be expected to have comparable sound levels at night. And at LT3A, which was located a comparable distance from Friars Road as is MVAH, the measured nighttime sound level never dipped below 52 dBA L_{eq} , and daytime and evening sound levels range from 58 dBA L_{eq} to 62 dBA L_{eq} . Hence, stationary operation noise impacts from the proposed project’s HVAC sources and new Stadium events during daytime and evening hours would be considered **less than significant** with respect to an anticipated increase over existing outdoor ambient sound level.

For the Broadview representative receptor north of the project site, existing sound levels are expected to be comparable to the daytime measurements of 50 dBA L_{eq} to 53 dBA L_{eq} shown in Table 4.12-1 for the ST-10 location, which is also atop a mesa. Compared to the predicted levels that exceed 60 dBA L_{eq} when a Stadium event is in progress, the estimated increase in outdoor of ambient sound level of 7 dB under such conditions would be clearly noticeable and therefore a potentially significant impact.

Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Heavier pieces of construction equipment used at the project site could include dozers, graders, cranes, loaded trucks, water trucks, and pavers. But aside from these vehicles, on-site construction activities that would likely cause the most groundborne vibration and noise would be associated with impact-type equipment: pile-driving for building foundations.

During grading, the largest groundborne vibration levels are anticipated to be generated by large bulldozers and loaded trucks used for earthmoving. According to the FTA, vibration levels associated with the use of bulldozers (based on size) range from approximately 0.003 to 0.089 ips PPV and 58 to 87 VdB at 25 feet, as shown in Table 4.12-11. Additionally, loaded trucks used for soil hauling during grading could generate vibration levels of approximately 0.076 ips PPV and 86 VdB at 25 feet.

Table 4.12-11. Typical Construction Equipment Vibration Levels

Equipment	PPV (inches per second) at 25 feet	L _v (rms vibration velocity dB [VdB]) at 25 feet	PPV (inches per second) at 175 feet
Pile Drive (impact) – typical	0.644	104	0.03
Pile Drive (sonic) – typical	0.170	93	0.009
Vibratory Roller	0.210	94	0.01
Jackhammer	0.035	79	0.002
Large Bulldozer	0.089	87	0.005
Loaded Trucks	0.076	86	0.004
Small Bulldozer	0.003	58	0.0002

Sources: FTA 2018; Caltrans 2013.

Notes: PPV = peak particle velocity; L_v = vibration level; rms = root mean square; dB = decibel.

Off-Site Groundborne Vibration Impacts

The closest off-site homes would be approximately 175 feet or more from the construction area. As presented in the right-most column of Table 4.12-11, at this distance for the listed anticipated construction equipment, the PPV at the receptor would be 0.03 ips for a typical impact-type pile driver and 0.005 ips PPV for a large bulldozer or grader. Therefore, conventional construction activities are not anticipated to result in continuous vibration levels that typically annoy people or risk damage to residential structures; therefore, the vibration impact would be considered **less than significant**, and no off-site mitigation is required.

On-Site Groundborne Vibration Impacts

Because the development of the proposed project would be a multiyear endeavor, portions of the development would be completed and occupied during the construction of subsequent portions (phases). Therefore, the occupied proposed project phases have the potential to be impacted by vibration from ongoing construction activities. Location-specific phasing schedules are not available at this time; it is therefore possible that construction of a new phase of the proposed project could take place as near as 50 feet of an occupied phase. In such an instance, short-term vibration levels as high as 0.03 ips PPV could result from nearby heavy front-end loaders or bulldozers. If pile-driving were to occur at this distance, the reference level of 0.644 ips PPV would translate to 0.23 ips PPV at the receptor and thus be considered an impactful level. Therefore, vibration levels would be **potentially significant** depending on the on-site activities and equipment or processes involved. (**Impact NOI-7**)

Trolley

Based on vibration level screening distances predicted in Appendix J (Noise Analysis) of the Mission Valley Community Plan Update (RECON 2019) and reproduced in Table 4.12-12, potential ground-borne vibration exposures at sufficiently proximate occupied project buildings could result from existing railway operations. FTA guidance describes three categories of VdB thresholds for acceptable levels of vibration velocity (FTA 2018) that include as follows:

- Category 1 – up to 65 VdB or less at buildings where vibration would interfere with interior operations;
- Category 2 – 72 VdB or less at residential uses and places where people normally sleep; and,
- Category 3 – 75 VdB or less at institutional uses with primarily daytime use.

Because the majority of the Green Line Trolley tracks within the project site are on elevated structures, the resulting vibration transmission path from the source (moving trolley) to a nearby occupied receiving structure is not straightforward energy propagation through adjoining soils and thus would not be expected to cause significant vibration impacts to adjacent project-attributed development. Further, areas where noise- and vibration-sensitive uses are located the closest to the tracks (as close as 25 feet) are at the existing Stadium Trolley Station. Since trolleys decelerate and stop at each station upon approach, or accelerate from a stationary position up to track design speeds during station departure, they require considerable lengths of rail near the station to accomplish these velocity changes safely and comfortably for trolley riders. Consequently, the average trolley speeds in the vicinity of trolley stations would be low and would therefore not cause significant vibration over existing levels or exceed the applicable Category-specific FTA guidance-based threshold for potential impact.

Table 4.12-12. Trolley Vibration Screening Distances

Trolley Speed (mph)	Predicted Vibration Velocity Level at 25 Feet (rms VdB)	Distance between Vibration Source and Indicated Threshold (feet)		
		75 VdB (Category 3)	72 VdB (Category 2)	65 VdB (Category 1)
15	67	1	9	33
20	70	6	14	48
25	72	11	21	63
30	73	16	28	77
35	74	21	35	90
40	76	26	42	102
45	77	31	49	114
50	78	36	55	125
55	78	41	62	136
60	79	45	68	147

Source: RECON 2019.

Notes: rms = root mean square; VdB = vibration velocity decibel.

The only portion of the project site where the trolley line is at-grade and therefore would generate the maximum vibration level is in the very southwest corner and again in the southeast corner. The trolley route begins to rise in elevation approximately 400 feet east of Fenton Parkway/Street I. At this location, the nearest on-site building would be approximately 800 feet from the trolley line, well in excess of the distances presented in Table 4.12-12. The existing trolley line would be as close as 25 feet to future occupied campus buildings west of the current Stadium Station, but is elevated by supporting structures. Similarly, Figure 2-3, Surrounding Land Uses, in Chapter 2, Project Description, suggests that the southern-most newly built campus residential buildings associated with the proposed project might be as close as 150 feet to the trolley line, but here too the route is elevated and (in combination with the horizontal distance) would not be expected to result in vibration velocity levels that exceed the 72 VdB threshold for occupied residences. Impacts would be **less than significant**.

Stadium Implosion Scenario

While not anticipated at this time, due to the presence of the existing SDCCU Stadium structure and the project construction schedule, implosion of the existing stadium or portions thereof may be determined to be the most efficient and preferred method for demolition to implement the proposed project. Thus, construction activities may result in significant ground-borne vibration impacts. At the current stage of the proposed project design, a blasting

study has not been completed, and no specific blasting timelines, or blast parameters are available. However, it is anticipated (based upon other implosion events) that one large implosion may occur.

When explosive charges detonate, almost all of the available energy from the explosion is used in breaking and displacing the mass. However, a small portion of the energy is released in the form of vibration waves that radiate away from the charge location. The strength, or amplitude, of the waves reduces as the distance from the charge increases. The rate of amplitude decay can be estimated with a reasonable degree of consistency, which allows regulatory agencies to control blasting operations by means of relationships between distance and explosive quantity.

Using the previous example of an 8-kilogram charge weight studied for potential noise emission, mathematical expressions (Dyno Nobel 2010) suggest that for a “heavily confined” charge, the PPV from its detonation would be 0.082 ips at a distance of 1,200 feet—the apparent closest distance to a residential receptor. While the predicted vibration level for this hypothetical per-charge scenario is below a threshold of 0.5 ips PPV for a single-event source (as opposed to the aforementioned 0.2 ips PPV guidance limit for continuous vibration sources received by the same residential-type structure), the detailed parameters for the SDCCU Stadium demolition plan are not known at this time. Therefore, it is not possible to conduct a meaningful vibration analysis of proposed blasting events. Until such information is available, and for purposes of this analysis, vibration impacts from such a structure implosion are considered **potentially significant (Impact NOI-8)**.

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project is located approximately 1.8 miles south-southeast of Montgomery Field, and approximately 5 miles northeast of San Diego International Airport (ALUC 2010). Based upon the noise contours contained in the airports’ land use compatibility plans, the project site is located outside the 60 dB CNEL noise contours for both Montgomery Field and San Diego International Airport as shown in Figure 4.12-8. Thus, the proposed project would not expose people to excessive noise levels from aircraft. Noise impacts would be **less than significant**.

Would the project result in a cumulative impact to noise?

The proposed project, along with other projects in the area, have the potential to result in cumulative impacts to noise during construction and operation. The proposed project would produce noise associated with construction activities during daytime and potentially during nighttime that would result in significant impacts even after implementation of noise mitigation measures such as those listed in Section 4.12.6. Off-site construction noise could also potentially occur within or external to the City’s typically allowable 7:00 a.m. to 7:00 p.m. daytime period and thus potentially expose nearby noise-sensitive receptors to sound levels that exceed either the 12-hour City threshold of 75 dBA L_{eq} allowable between 7:00 a.m. and 7:00 p.m. or the appropriate City hourly L_{eq} thresholds during evening and nighttime periods (i.e., 7:00 p.m. to 7:00 a.m.) and thereby result in significant and potentially unavoidable impacts even after implementation of practical noise mitigation measures such as those listed in Section 4.12.6. Other project construction activities, such as rock crushing activities and potential blasting, could also produce significant noise impacts. Although mitigation measures would be implemented as described in Section 4.12.6, cumulative noise impacts would remain **significant and unavoidable (Impact NOI-9)**.

4.12.5 Summary of Impacts Prior to Mitigation

The proposed project would result in the following potentially significant noise impacts.

- Impact NOI-1** The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies if construction occurs between 7:00 p.m. and 7:00 a.m.
- Impact NOI-2** The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies due to construction of off-site improvements.
- Impact NOI-3** The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies to on-site residents due to on-going construction as a result of project phasing.
- Impact NOI-4** The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies as a result of on-site rock crushing and processing.
- Impact NOI-5** The project would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies as a result of implosion of SDCCU Stadium.
- Impact NOI-6** The project would result in generation of a substantial increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies as a result of well attended events at the new stadium.
- Impact NOI-7** The project would result in generation of excessive groundborne vibration during construction.
- Impact NOI-8** The project would result in a temporary generation of excessive groundborne vibration during implosion of SDCCU Stadium.
- Impact NOI-9** The project would result in a cumulative impact to noise.

4.12.6 Mitigation Measures

The following mitigation measures are proposed to help reduce construction- and operation-related noise and vibration levels created by the proposed project.

- MM-NOI-1** The project (via construction contractor) shall establish a telephone hot-line for use by the public to report any significant adverse noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours per day, the contractor shall be required to include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This hot-line telephone number shall be posted at the project site during

construction in a manner visible to passersby and on the project website sdsu.edu/missionvalley. This telephone number shall be maintained until the project has been considered commissioned and ready for operation.

Throughout the construction of the project, the contractor shall be required to document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The contractor or its authorized agent shall be required to:

- Use a Noise Complaint Resolution Form to document and respond to each noise complaint.
- Contact the person(s) making the noise complaint within 24 hours.
- Conduct an investigation to attempt to determine the source of noise related to the complaint.
- Take all reasonable measures to reduce the noise at its source.

MM-NOI-2 The project shall implement project design features **PDF-N-1** through **PDF-N-9**.

MM-NOI-3 **Implement Sound Amplification Controls.** Incorporate electronic controls or limits into the final design of the new Stadium's audio/visual sound system, as well as tie-ins from hosted performers to control amplified speech and music noise at the source, and thus offer some degree of expected sound-level reduction at the potentially affected noise-sensitive receiver positions.

To help mitigate this potentially significant impact due to demolition activities involving blasting events, **MM-NOI-2** would require preparation of a blasting plan requiring compliance with applicable standards.

MM-NOI-4 Prior to breaking ground on any portion of the proposed project, California State University/San Diego State University (CSU/SDSU) or its designee shall prepare, or cause to be prepared, a blasting/drilling monitoring plan. The plan shall include estimates of the drill noise levels, maximum noise levels (L_{max}), air-blast overpressure levels, and groundborne vibration levels at each residence within 1,000 feet of the blasting location. Where potential exceedances of the City of San Diego's Noise Ordinance are identified, the blasting/drilling monitoring plan shall identify mitigation measures shown to effectively reduce noise and vibration levels (e.g., altering orientation of blast progression, increased delay between charge detonations, pre-splitting) to be implemented in order to comply with the noise level limits of the City's Noise Ordinance, and a vibration-velocity limit of 0.5 inches per second (ips) peak particle velocity (PPV). The identified mitigation measures shall be implemented by CSU/SDSU, or its designee, prior to breaking ground. Additionally, all project phases involving blasting shall conform to the following requirements:

- All blasting shall be performed by a blast contractor and blasting personnel licensed to operate per appropriate regulatory agencies.
- Each blast shall be monitored and recorded with an air-blast overpressure monitor and groundborne vibration accelerometer that is located outside the closest residence to the blast. This data shall be recorded, and a post-blast summary report shall be prepared and be available for public review or distribution as necessary.
- Blasting shall not exceed 0.5 ips PPV at the nearest occupied residence, in accordance with the California Department of Transportation's *Transportation and Construction Vibration Guidance Manual* guidance.

MM-NOI-5 is proposed, which would require a vibration monitoring plan and require data be sent to a designated CSU/SDSU noise control officer who will take the steps necessary to ensure that future vibration levels do not exceed applicable limits, including suspending those further construction activities that would result in excessive vibration levels until either alternative equipment or alternative construction procedures have been identified to reduce vibration levels below applicable standards.

MM-NOI-5 Prior to beginning construction of any project component within 200 feet of an existing or future occupied residence, California State University/San Diego State University (CSU/SDSU), or its designee, shall require preparation of a vibration monitoring plan. At a minimum, the vibration monitoring plan shall require data be sent to a University noise control officer or designee on a weekly basis or more frequently as determined by the noise control officer. The data shall include vibration level measurements taken during the previous work period. In the event that there is reasonable probability that future measured vibration levels would exceed allowable limits, CSU/SDSU shall take the steps necessary to ensure that future vibration levels do not exceed such limits, including suspending further construction activities that would result in excessive vibration levels until either alternative equipment or alternative construction procedures can be used that generate vibration levels that do not exceed 0.2 inches per second (ips) peak particle velocity (PPV) at the nearest residential structure. Construction activities not associated with vibration generation could continue.

The vibration monitoring plan shall be prepared and administered by a state-approved (or approval delegated to appropriate county or municipal jurisdiction or agency) noise/vibration consultant. In addition to the data described previously, the vibration monitoring plan shall also include the location of vibration monitors, the vibration instrumentation used, a data acquisition and retention plan, and exceedance notification and reporting procedures. A description of these plan components is provided in the following text.

The vibration monitoring plan shall include a scaled plan indicating monitoring locations, including the location of measurements to be taken at construction site boundaries and at nearby residential properties.

Vibration monitors shall be capable of measuring maximum unweighted root-mean square and PPV levels triaxially (in three directions) over a frequency range of 1 to 100 Hertz. The vibration monitor shall be set to automatically record daily events during working hours and to record peak triaxial PPV values in 5-minute interval histogram plots. The method of coupling the geophones to the ground shall be described and included in the report. The vibration monitors shall be calibrated within 1 year of the measurement, and a certified laboratory conformance report shall be included in the report.

The information to be provided in the data reports shall include, at a minimum, daily histogram plots of PPV versus time of day for three triaxial directions, and maximum peak vector sum PPV and maximum frequency for each direction. The reports shall also identify the construction equipment operation during the monitoring period and their locations and distances to all vibration measurement locations.

A description of the notification of exceedance and reporting procedures shall be included, and the follow-up procedures taken to reduce vibration levels to below the allowable limits.

4.12.7 Level of Significance After Mitigation

Anticipated temporary noise impacts during project construction (**Impacts NOI-1 through NOI-5**) would be **potentially significant** because the proposed project would produce noise associated on-site and off-site construction activities, including rock crushing and potential blasting, which would exceed the City's noise thresholds. Furthermore, construction noise could potentially occur external to the City's typically allowable 7:00 a.m. to 7:00 p.m. daytime period. With implementation of **MM-NOI-1** and **MM-NOI-2**, temporary noise impacts from project-related construction would be **less than significant** during expected on-site daytime-only construction activities.

During nighttime construction activities (**Impact NOI-1**), even with proper implementation of **MM-NOI-1** and **MM-NOI-2**, predicted noise impacts may be potentially **significant and unavoidable** depending on the on-site location, intensity, and timing. Noise impacts resulting from off-site roadway and utility improvements (**Impact NOI-2**) may also be potentially **significant and unavoidable**, depending on receptor-to-activity distances, activity intensity, and timing.

Anticipated permanent noise impacts during project operation would be potentially significant because the proposed project would produce noise that could exceed the City's noise thresholds during Stadium events (**Impact NOI-6**). Proper implementation of **MM-NOI-3** during daytime and evening Stadium events would help result in a reduction of project operation noise emission to levels predicted to be comparable to existing outdoor ambient sound at the nearest multifamily residences to the northwest, and thus on the basis of increase over ambient sound would be considered **less than significant**. No further mitigation is required with respect to attended Stadium events during these time periods at these nearest receptors (e.g., MVAH). The single-family residences to the north, at the top of the mesa in the vicinity of Broadview Avenue that have lower existing outdoor ambient sound levels than those in the vicinity of MVAH closer to Friars Road, would likely experience a clearly noticeable increase in outdoor noise level due to aggregate daytime or evening stadium crowd noise and therefore experience a **potentially significant impact** even after implementation of **MM-NOI-3**. Additionally, at night (i.e., past 10:00 p.m.), potential noise impacts would be considered **potentially significant** even after implementation of mitigation measure **MM-NOI-3**, as detailed in Section 4.12.6, due to the possibility of aggregate spectator speech noise as modeled in this analysis. The proposed audio controls on hosted stadium events are independent of aggregate noise level from an excited and loud crowd of cheering spectators. Therefore, under such specific circumstances, operation-related noise impacts would be potentially **significant and unavoidable** at the nearest NSLU to the northwest of the Stadium site.

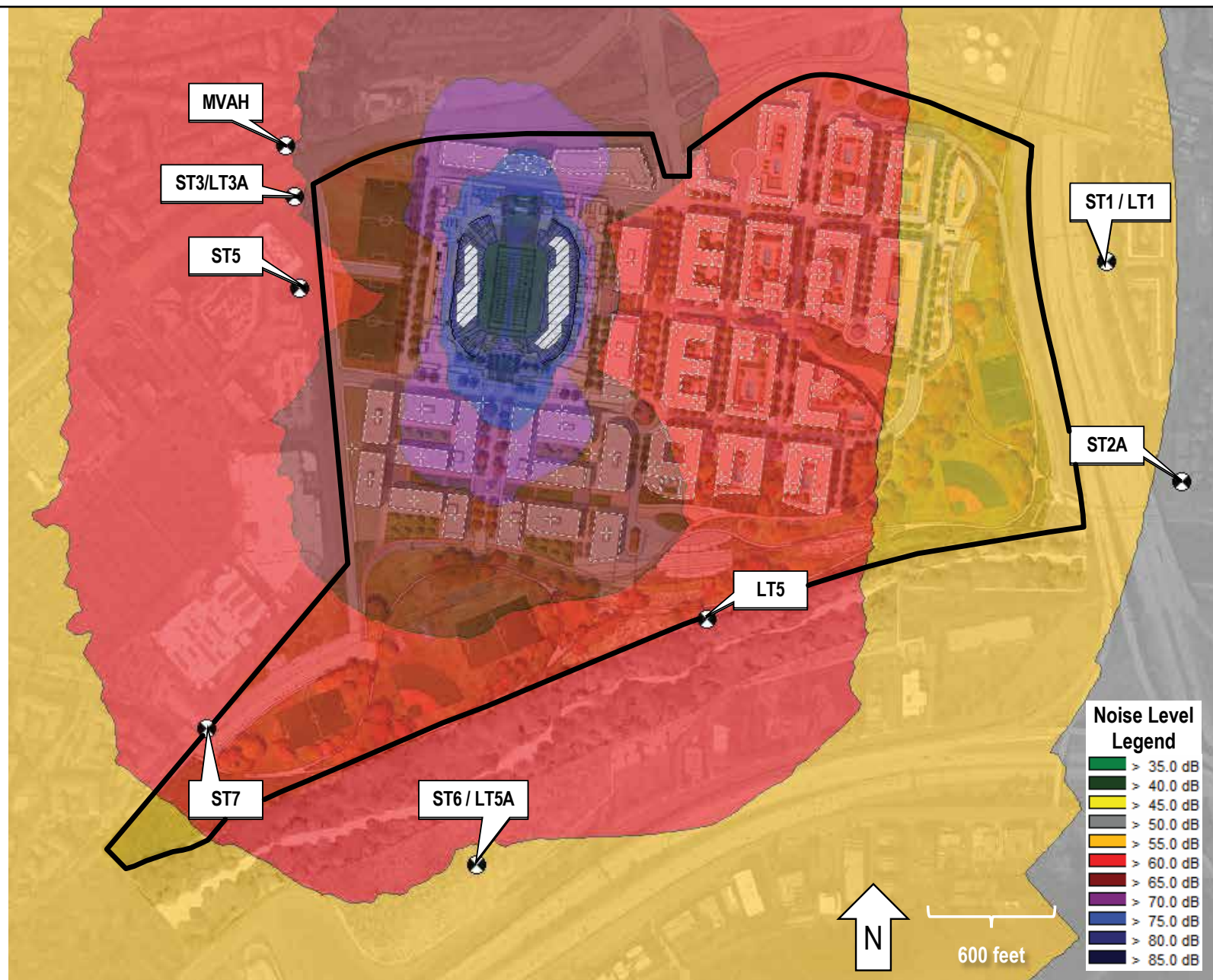
Anticipated on-site groundborne vibration impacts would be potentially significant because occupied proposed project phases have the potential to be impacted by vibration from ongoing construction activities. Furthermore, potentially significant groundborne vibration impacts could result from potential implosion of the existing Stadium or portions thereof. To help mitigate this potentially significant impact due to demolition activities involving blasting events, **MM-NOI-4** would require preparation of a blasting plan requiring compliance with applicable standards. In addition, **MM-NOI-5** would require a vibration monitoring plan and require data be sent to the CSU/SDSU noise control officer who will take the steps necessary to ensure that future vibration levels do not exceed applicable limits, including suspending those further construction activities that would result in excessive vibration levels until either alternative equipment or alternative construction procedures have been identified to reduce vibration levels below applicable standards. With implementation of these mitigation measures, vibration impacts would be **less than significant**.



Figure 4.12-1

Noise Measurement Locations

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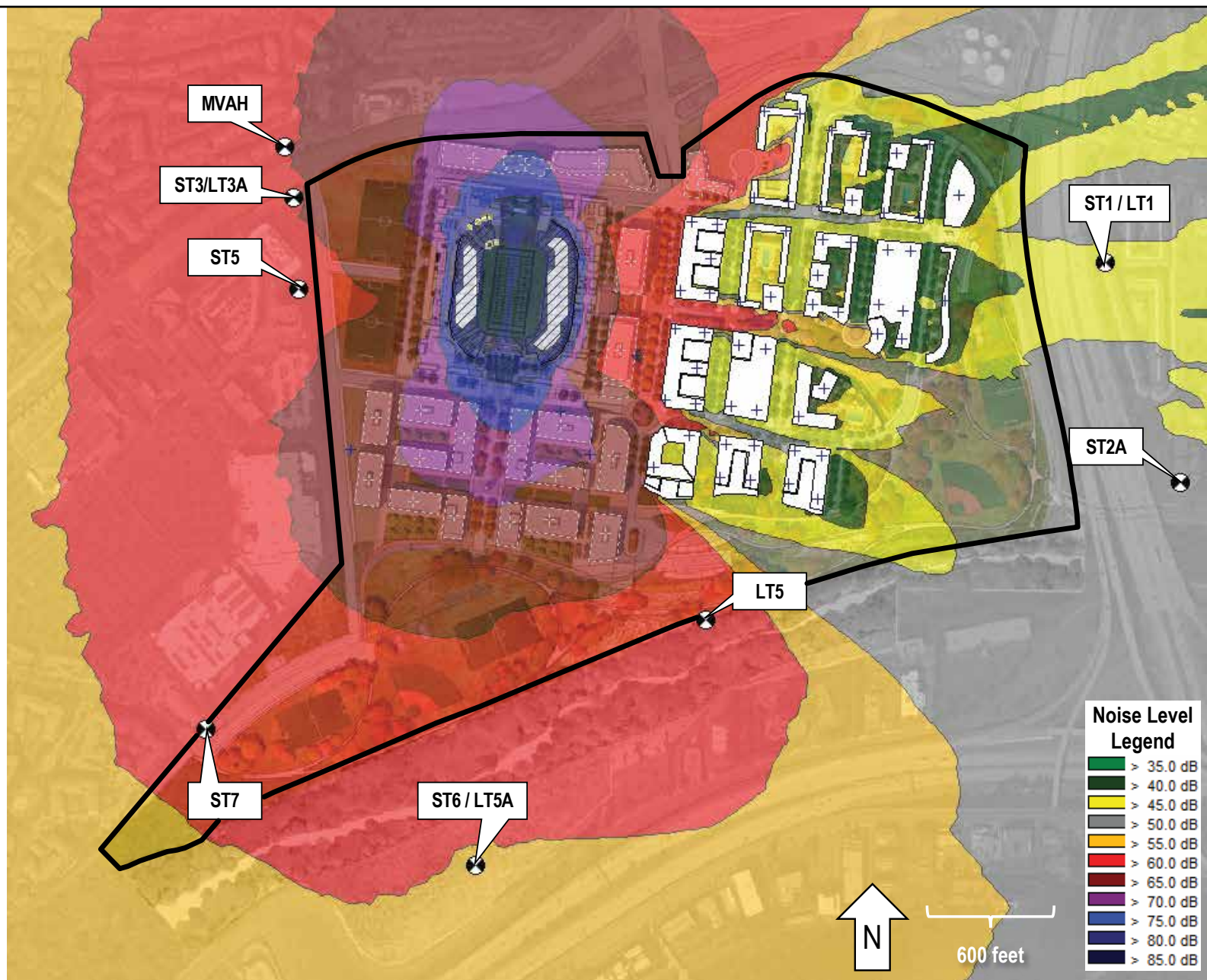
SOURCE: CARRIER JOHNSON SITE PLAN 2/9/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.12-2
Predicted Project Stationary Operation Noise
- Stadium Built, with Stadium Event

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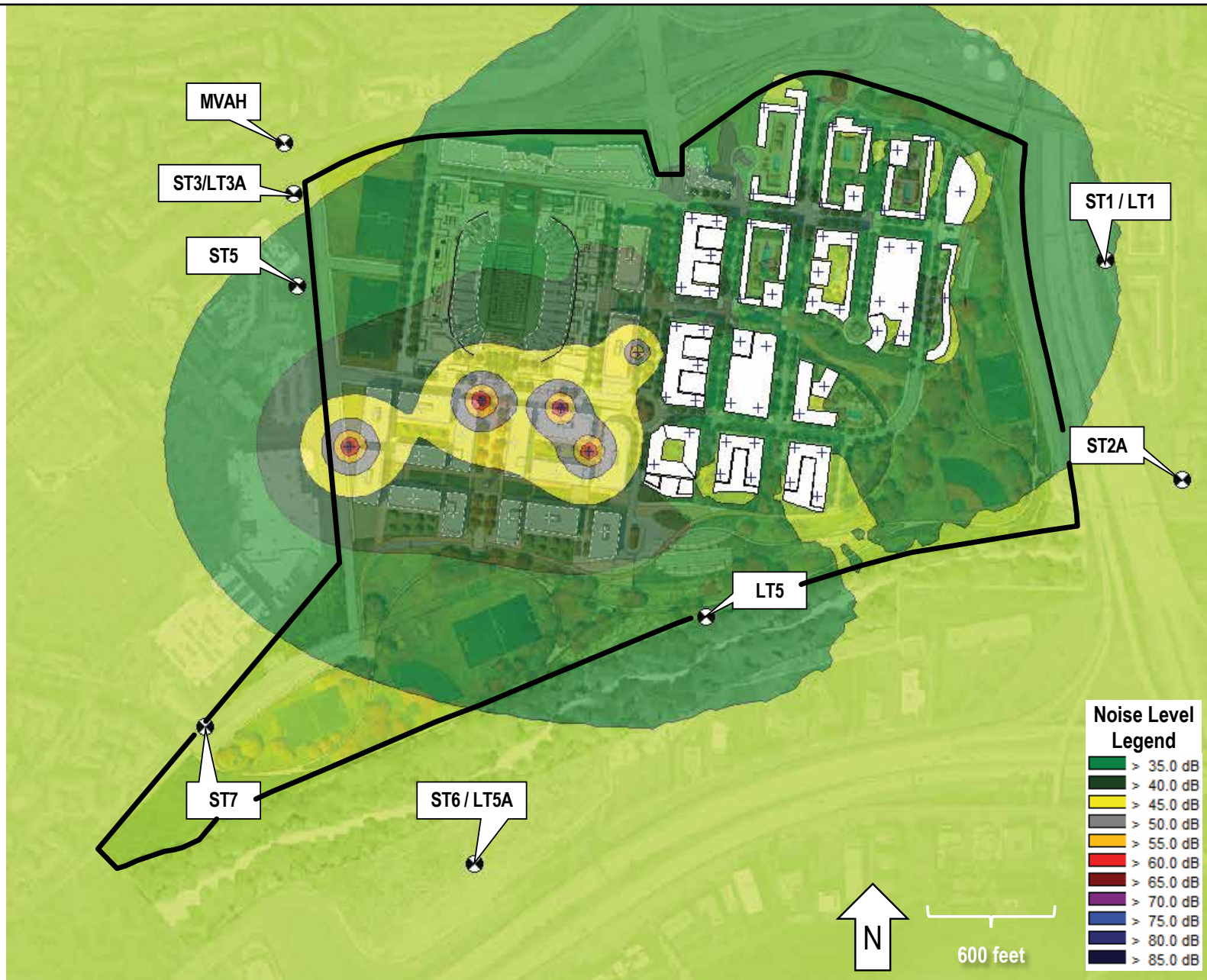
SOURCE: CARRIER JOHNSON SITE PLAN 2/9/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.12-3
Predicted Project Stationary Operation Noise
- Residential Build-Out, with Stadium Event

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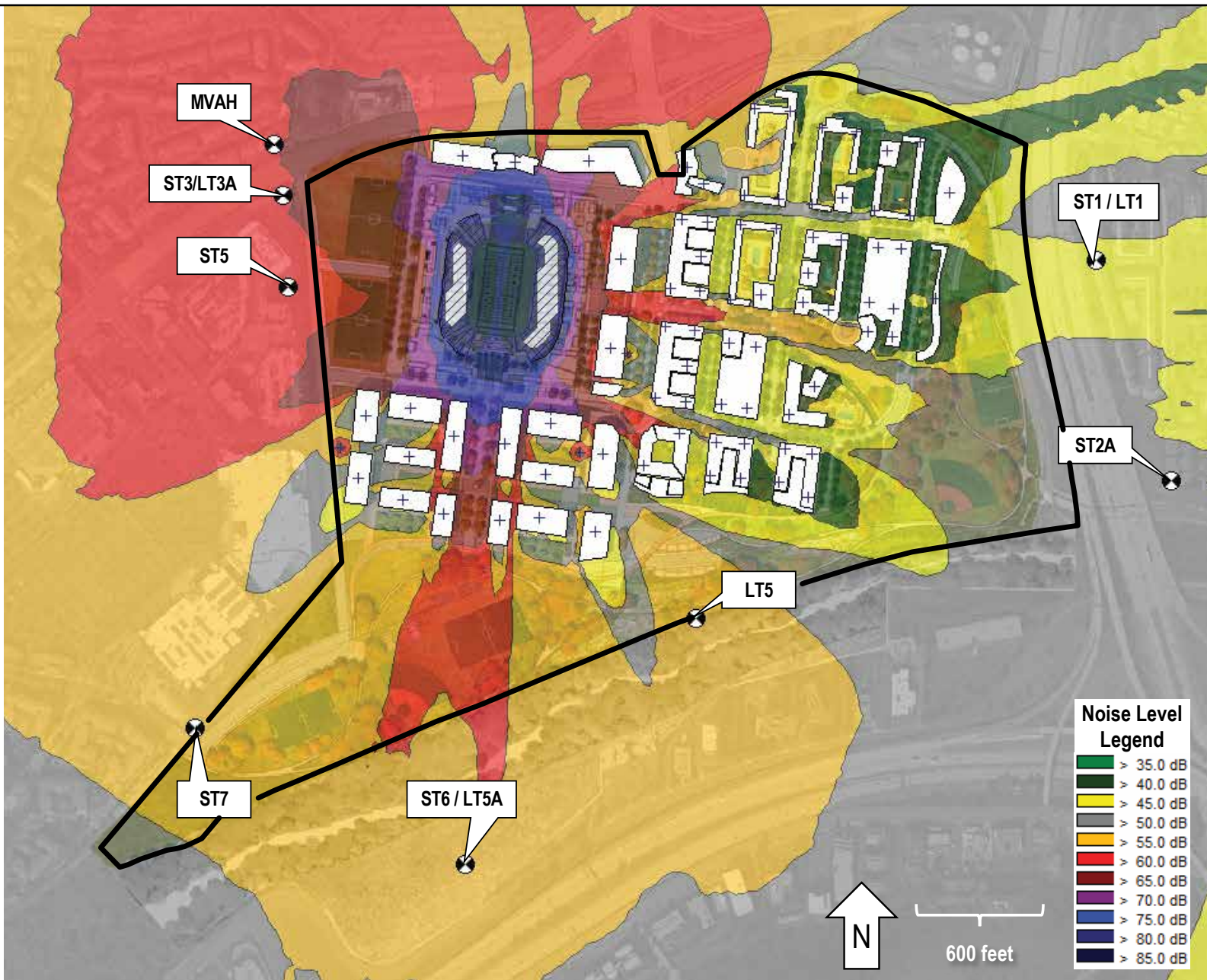
SOURCE: CARRIER JOHNSON SITE PLAN 2/9/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.12-4
Predicted Project Stationary Operation Noise
- Residential Build-Out, without Stadium Event

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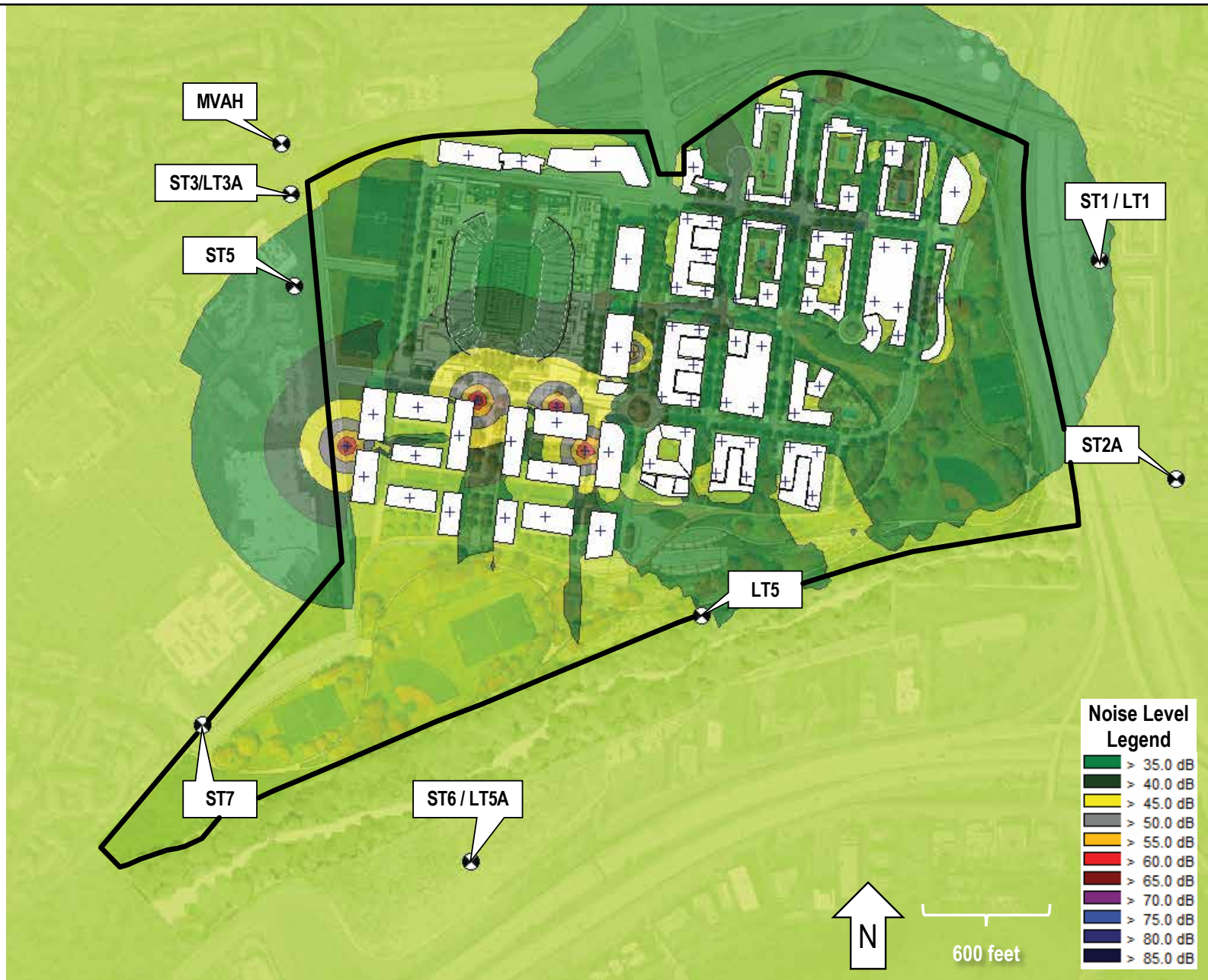
SOURCE: CARRIER JOHNSON SITE PLAN 2/9/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.12-5
Predicted Project Stationary Operation Noise
- Full Build-Out, with Stadium Event

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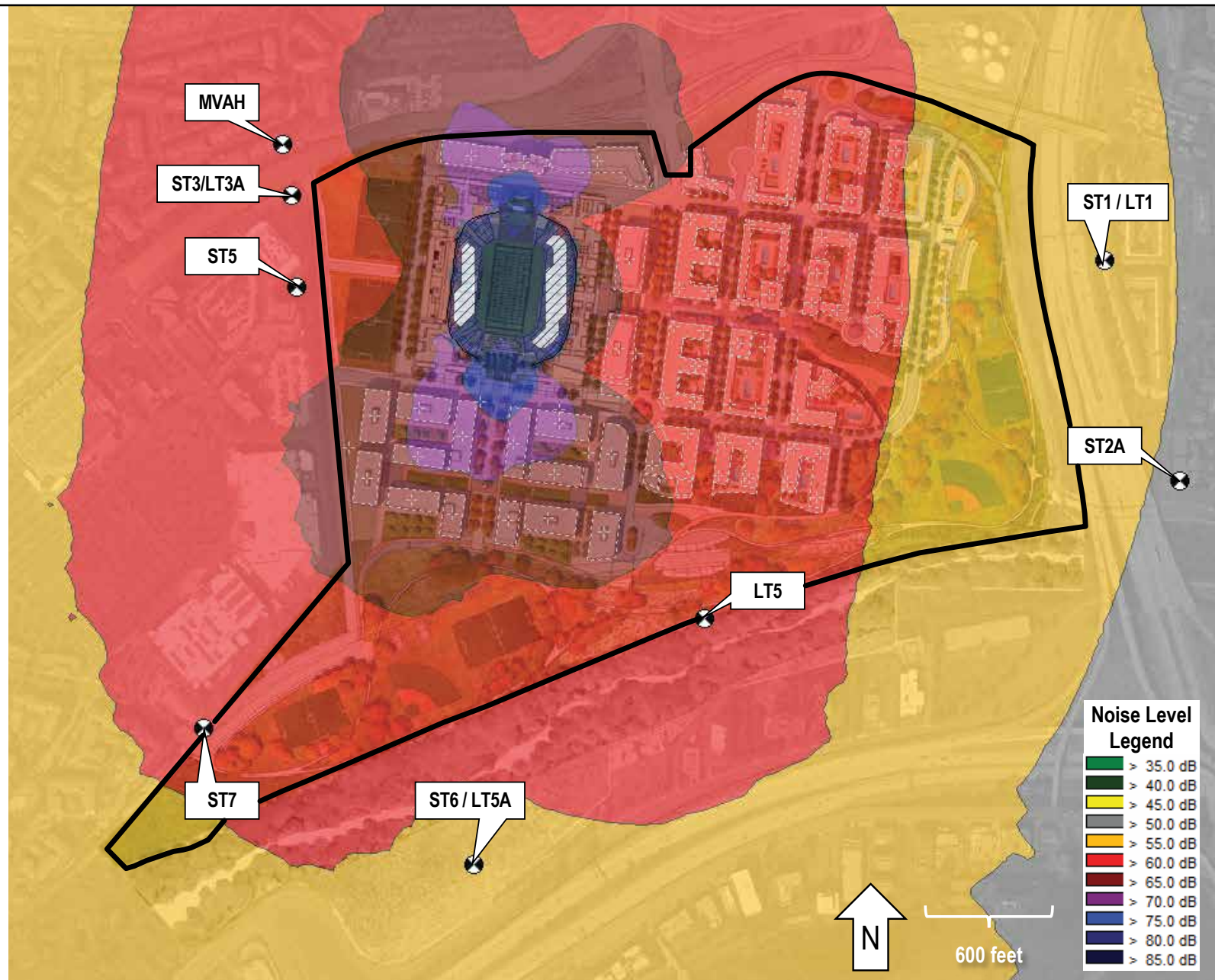
SOURCE: CARRIER JOHNSON SITE PLAN 2/9/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.12-6
Predicted Project Stationary Operation Noise
- Full Build-Out, without Stadium Event

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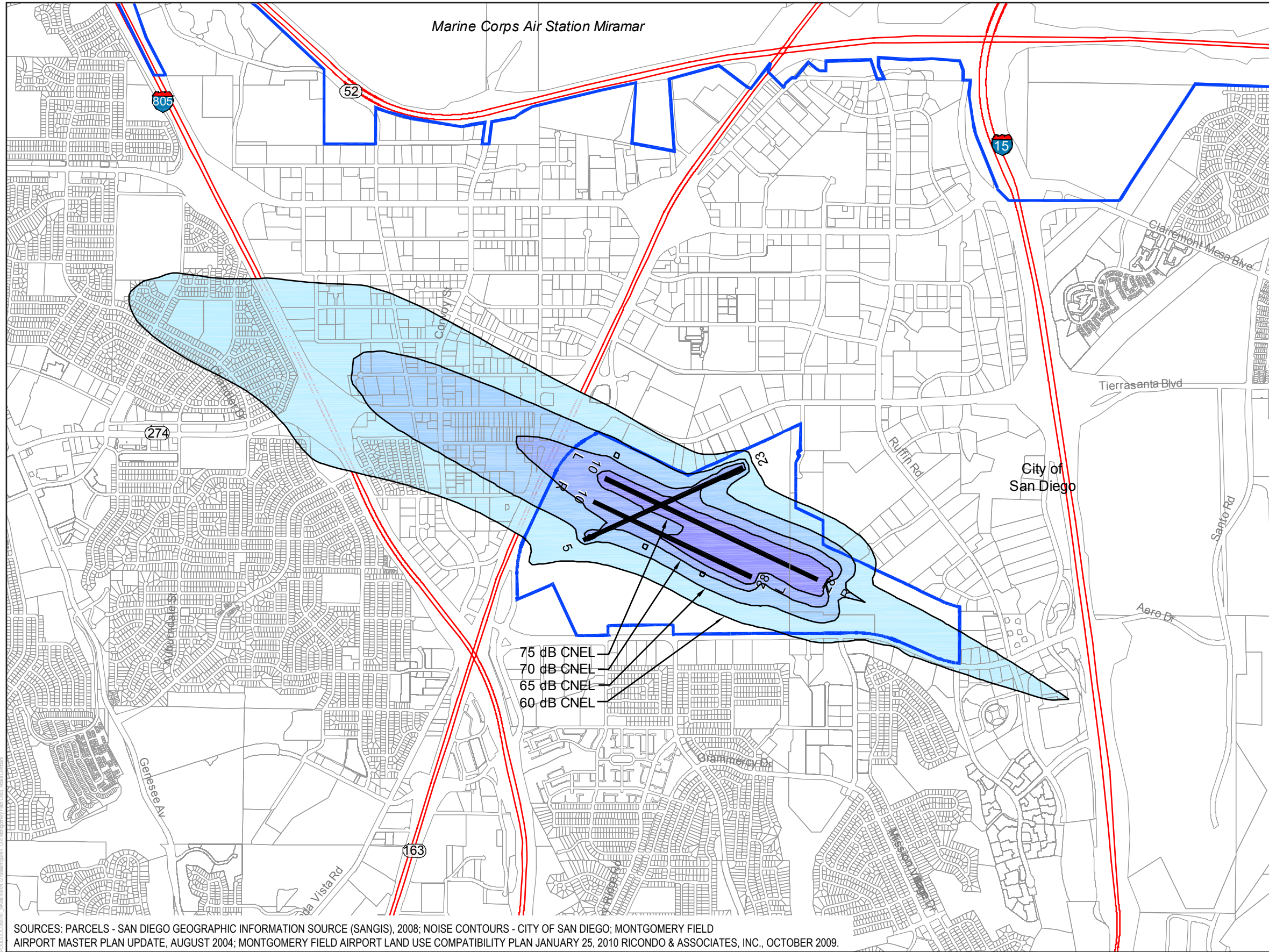
SOURCE: CARRIER JOHNSON SITE PLAN 2/9/19

SDSU Mission Valley Campus Master Plan EIR



Figure 4.12-7
Predicted Project Stationary Operation Noise
- Stadium Built (alternate design), with Stadium Event

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AIRPORT LAND USE COMMISSION
SAN DIEGO COUNTY

LEGEND

- Airport Property Boundary
- Parcel Line
- Highways

Noise Exposure Range

- 60 - 65 dB CNEL
- 65 - 70 dB CNEL
- 70 - 75 dB CNEL
- 75 + dB CNEL

Future Average
Annual Day
(1,014 Operations)



0 2,000 ft.

Notes: 1. See Table III-1 for criteria applicable within each noise exposure range.
2. CNEL = Community Noise Equivalent Level.

Exhibit III-1

Compatibility Policy Map: Noise

SOURCES: PARCELS - SAN DIEGO GEOGRAPHIC INFORMATION SOURCE (SANGIS), 2008; NOISE CONTOURS - CITY OF SAN DIEGO; MONTGOMERY FIELD AIRPORT MASTER PLAN UPDATE, AUGUST 2004; MONTGOMERY FIELD AIRPORT LAND USE COMPATIBILITY PLAN JANUARY 25, 2010 RICONDO & ASSOCIATES, INC., OCTOBER 2009.



SAN DIEGO STATE
UNIVERSITY

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4.13 Population and Housing

This section describes the existing population and housing conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

The analysis for this section uses existing, estimated, and projected population and housing data generated by the U.S. Census Bureau, the California Department of Finance, the San Diego Association of Governments (SANDAG), City of San Diego, and the San Diego State University (SDSU) Office of Facilities Planning, Design, and Construction. The Census Bureau keeps national and local databases on population, ethnicity, housing, employment, and income. The California Department of Finance produces statewide growth forecasts. Both of these agencies provide information on population and housing characteristics. SANDAG provides data on regional and local population and housing. Population projections for each of these sources was considered as explained below.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to population and housing focused on the impacts that could occur to the housing supply in the surrounding neighborhoods due to the increased density of the project site, potential impacts to the homeless population near the San Diego River and Murphy Canyon area, and the need for affordable housing. Please see Appendix 1-1, NOP Scoping Comments, for a compilation of comments received on the NOP.

4.13.1 Existing Conditions

4.13.1.1 Project Setting

Regional Setting

The proposed project lies within the City of San Diego (City), County of San Diego (County), California. The County is economically and culturally diverse, and experienced high population growth over the last decade following the Great Recession of 2007 to 2009. The City is one of the largest cities (by land area) in the United States, and the eighth largest by population. Although the City serves as the anchor jurisdiction in the San Diego Metropolitan area, residents live in many outlying City neighborhoods, as well as outlying cities within the western County area.

Employment centers focus around metropolitan San Diego, which supports major job centers in the downtown area, Mission Valley, Sorrento Valley, Kearny/Balboa Mesa, Rancho Bernardo, and University City. Additionally, job centers have grown in outlying cities, including Chula Vista, Carlsbad, Oceanside and San Marcos/Escondido (i.e., Innovate 78, a collaboration of the five cities that comprise the 78 Corridor in north San Diego County).

Existing On-site Uses

The 172-acre project site consists of two primary existing uses. The project site consists of the existing 70,500-seat San Diego County Credit Union (SDCCU) Stadium and associated parking lot (18,870 parking spaces). The Metropolitan Transit System (MTS) Trolley also bisects the project site, with an on-site trolley station south of the existing SDCCU Stadium; and, Murphy Canyon Creek is located within the eastern project boundary.

Existing Land Use and Zoning Designations

Because SDSU is a component of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents including the Mission Valley Community Plan Update, and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

Under the City's General Plan, the project site is designated as Commercial Employment, Retail, & Services for the majority of the site, and Park, Open Space, and Recreation of the southeast portion of the site (City of San Diego 2018a).

The project is also located in the Mission Valley Community Planning Area (Mission Valley CPA). The City's Mission Valley Community Plan designates the project site as Commercial Recreation and Public Recreation (City of San Diego 2013).

The Final Draft of the Mission Valley Community Plan Update was released on May 31, 2019 (City of San Diego 2019). The Mission Valley Community Plan Final Program EIR identifies the project site for "redevelopment to occur through a future Campus Master Plan" (City of San Diego 2019a). In addition, the Final Program EIR identifies "Eastern Mission Valley," the area where the proposed project is located, as an area to "support higher density residential development with enhanced multi-modal connectivity" (City of San Diego 2019a).

Further, the Mission Valley Community Plan Final Program EIR states that the proposed Mission Valley Community Plan Update "assumed that 4,800 dwelling units, two million square feet of office space, 300,000 square feet of retail space, 450 hotel rooms, 38.1 acres of active park, 4.9 acres of open space, and a 40,000-seat stadium would be developed on the Stadium site" (City of San Diego 2019a). The proposed project's land uses fall within the envelope of site-specific development assumed for the project site.

The existing City zoning of the project site is Mission Valley Planned District – Mission Valley – Commercial Visitor (MVPD-MV-CV) (City of San Diego 2017).

4.13.1.2 State Context

The California Department of Finance (DOF) is responsible for numerous state fiscal functions, including the development of population and housing estimates at the city, county, and state level. The most recent population estimates, released in December 2018, provide estimates as of July 1, 2017, and provisional population estimates as of July 1, 2018, for cities, counties, and the state. The DOF's estimate of statewide population is approximately 39,825,181 people as of January 1, 2018 (DOF 2018a).

Similarly, the DOF provide estimates for housing stock and unit types. The most recent statewide housing estimate is approximately 14,157,590 units as of January 1, 2018 (DOF 2018b).

4.13.1.3 Regional Context

Population

Similar to the statewide population estimates, the DOF provides estimates for counties. The most recent countywide estimate was released by the DOF in December 2018. The current population estimate for San Diego County (as of July 1, 2017) is approximately 3,320,387 people, with a provisional population estimate (for July 1, 2018) of approximately 3,344,430 people (DOF 2018a).

Since 1972, SANDAG has produced long-range forecasts of population, housing, and employment for the San Diego region that are used as a resource numerous purposes, including for planning. In October 2013, SANDAG adopted the Series 13 2050 Regional Growth Forecast and is the most recent growth forecast published by SANDAG. This forecast serves as the foundation for the Regional Plan and other planning documents (e.g., water agency planning, general plans) throughout the region. The forecast represents an assessment of the changes that SANDAG anticipates for the San Diego region based on the best available information and computer modeling. As stated above, the forecasts are based on the most recent planning assumptions, considering local general plans and other factors, per Senate Bill (SB) 375 (Government Code Section 65080(b)(2)(B)). The SANDAG forecasts are intended to assist decision-makers prepare for the future and, according to SANDAG, are “not an expression for or against growth.” For the purposes of discussion, regional (and local) population forecasts will be discussed in the context of SANDAG estimates and projections. Table 4.13-1, SANDAG Regional Population Forecasts, outlines SANDAG’s regional growth forecast for the City and region, as provided by the Series 13 2050 Regional Growth Forecast.

Table 4.13-1. SANDAG Regional Population Forecasts

Location	2012	2020	2035	2050	Total Increase (2012 to 2050)	% Change (2012 to 2050)
Region	3,143,429	3,435,713	3,853,698	4,068,759	925,330	29%
City of San Diego	1,321,315	1,453,267	1,665,609	1,777,936	456,621	35%

Sources: SANDAG 2013a and 2013b.

As shown in Table 4.13-1, the region is forecast to grow by approximately 925,330 people (29%) between 2012 and 2050, while the City is forecast to grow by approximately 456,621 (35%) during the same period. Near the time of anticipated buildout of the proposed project, the region and City is forecast to have a population of approximately 3,853,698 and 1,665,609 people, respectively, in the year 2035 (with buildout estimated occurring around 2037).

Housing

The most recent countywide estimate for housing stock was released by the DOF in May 2018. The current housing estimate for San Diego County (as of January 1, 2017) is approximately 1,201,517 units, with a provisional housing estimate (for January 1, 2018) of approximately 1,210,138 units (DOF 2018b).

As indicated in Table 4.13-2, SANDAG Existing and Projected Housing Units, the region is forecast to grow its housing stock by approximately 326,117 units (28%) between 2012 and 2050, while the City’s housing stock is forecast to grow by approximately 177,566 (34%) during the same period. Near the time of anticipated buildout of the proposed project, the region and City are forecast to have a housing stock of approximately 1,394,783 and 640,668 units, respectively, in the year 2035 (with buildout estimated occurring around 2037).

Table 4.13-2. SANDAG Existing and Projected Housing Units

Location	2012	2020	2035	2050	Total Increase (2012 to 2050)	% Change (2012 to 2050)
Region	1,165,818	1,249,684	1,394,783	1,491,935	326,117	28%
City of San Diego	518,137	559,143	640,668	695,703	177,566	34%

Sources: SANDAG 2013a and 2013b.

SANDAG, as the San Diego metropolitan area's regional planning entity, prepares the Regional Housing Needs Assessment (RHNA) for San Diego County. The purpose of this assessment is to identify the existing and projected housing needs for the region's local jurisdictions. The RHNA defines existing housing opportunities and the need for more affordable options for all segments of the populations, especially lower incomes. Local jurisdictions use this information to prepare the housing elements of their general plans. The most recent assessment was accepted by the SANDAG Board of Directors on June 6, 2018, with the Final Regional Housing Need Determination for the June 2020 – April 2029 projection period submitted to the California Department of Housing and Community Development (HCD) on July 5, 2018 (SANDAG 2018a and 2018b).

The HCD, in conjunction/coordination with regional entities, such as SANDAG, provides each region with its share of the anticipated statewide housing needs. The federal, state, and regional growth forecasts concluded that the San Diego region is projected to need approximately 171,685 new housing units by 2029 (SANDAG 2018a). SANDAG is responsible for allocating this need in an equitable way to each jurisdiction within the region. Each jurisdiction will be allocated a specific number of housing units it will be required to reflect in its housing element for the April 2021 – April 2029 planning period (i.e., the next housing element cycle). The housing units allocated to each jurisdiction will be further divided by income category need. SANDAG determines the RHNA in conjunction with a variety of factors, including, household population by age grouping (informed by the DOF and HCD estimates), projected households, vacancy rates, replacement estimates, and overcrowding.

Employment

As part of its Series 13 2050 Regional Growth Forecast, SANDAG also provides estimates and projections for employment totals for the region. Table 4.13-3, SANDAG Existing and Projected Employment, outlines the existing and projected jobs in the region and the City. As shown in Table 4.13-3, the region is forecast to grow its jobs base by approximately 460,491 jobs (32%) between 2012 and 2050, while the City is forecast to grow by approximately 228,541 (29%) during the same period. Near the time of anticipated buildout of the proposed project, the region and City are forecast to have approximately 1,769,938 and 933,938 jobs, respectively, in the year 2035 (with buildout estimated occurring around 2037).

Table 4.13-3. SANDAG Existing and Projected Employment

Location	2012	2020	2035	2050	Total Increase (2012 to 2050)	% Change (2012 to 2050)
Number of Jobs						
Region	1,450,913	1,624,124	1,769,938	1,911,405	460,492	32%
City of San Diego	780,252	867,641	933,938	1,008,793	228,541	29%
Employment Density*						
Region	15.8	17.1	18.2	19.0	3.2	21%

Table 4.13-3. SANDAG Existing and Projected Employment

Location	2012	2020	2035	2050	Total Increase (2012 to 2050)	% Change (2012 to 2050)
City of San Diego	22.2	24.5	26.1	27.5	5.4	22%

Sources: SANDAG 2013a and 2013b.

Note:

* Employment density = civilian jobs per developed employment acre (industrial, retail, office, schools, and half of mixed use acres).

4.13.1.4 Local Context

Mission Valley Community Planning Area

The project site is located within the Mission Valley CPA of the City. Table 4.13-4a, SANDAG Growth Forecast – Mission Valley Community Planning Area, outlines population, housing, and employment estimates for the Mission Valley CPA as part of SANDAG's Series 13 2050 Regional Growth Forecast.

Table 4.13-4a. SANDAG Growth Forecast – Mission Valley Community Planning Area

Location	2012	2020	2035	2050	Total Increase (2012 to 2050)	% Change (2012 to 2050)
Housing Units	11,233	14,324	19,299	20,734	9,501	85%
Population	19,038	24,894	34,282	36,340	17,302	91%
Employment (Jobs)	45,197	53,673	57,826	59,447	14,250	31%
Employment Density*	37.5	43.4	47.0	48.2	10.6	15%

Source: SANDAG 2013c.

Note:

* Employment density = civilian jobs per developed employment acre (industrial, retail, office, schools, and half of mixed use acres).

As shown in Table 4.13-4a, as of 2013 the Mission Valley CPA was forecasted to experience substantial growth (percent change), relative to the City and region discussed above. Between 2012 and 2050, the Mission Valley CPA was forecast by SANDAG to grow by approximately 17,302 people, 9,501 housing units, 14,250 jobs, and 10.6 employees per developed acre.

Subsequently, the City of San Diego prepared the Mission Valley Community Plan Update, which proposes additional residential and employment uses in the Mission Valley CPA. Table 4.13-4b shows the Buildout Summary from Table 3.4-1 of the Mission Valley Community Plan Final EIR, including Housing Units, Household Population, Nonresidential Square Footages, and Employment in 2050. These projections include the proposed project as explained in Section 4.13.1.1 above.

Table 4.13-4b. City of San Diego – Mission Valley Community Plan Update (Final Draft)

	Base Year (2012)	Buildout (2050)	Net Increase (2012 to 2050)	% Change (2012 to 2050)
Housing Units	11,240	39,160	27,910	248%
Single Family	<5	<5	0	0%
Multi-Family	11,240	39,160	27,910	248%
Household Population	20,800	72,400	51,600	248%

Table 4.13-4b. City of San Diego – Mission Valley Community Plan Update (Final Draft)

	Base Year (2012)	Buildout (2050)	Net Increase (2012 to 2050)	% Change (2012 to 2050)
Nonresidential Square Feet	17,667,000	25,038,000	7,371,000	42%
<i>Commercial/Retail</i>	5,231,350	7,244,347	2,012,997	38%
<i>Office</i>	7,418,523	12,087,208	4,668,685	63%
<i>Motel/Hotel</i>	3,648,880	4,406,391	757,511	25%
<i>Industrial</i>	603,210	120,711	(482,499)	(80%)
<i>Institutional/Community Facilities</i>	158,839	195,358	36,519	23%
<i>Hospital/Clinic</i>	67,223	42,803	(24,420)	(36%)
<i>University and other colleges</i>	247,577	189,163	(58,414)	(24)
<i>Schools K to 12</i>	96,200	105,650	9,450	10%
<i>Recreational</i>	195,181	646,278	495,097	231%
Employment	45,600	64,700	19,100	42%

4.13.2 Relevant Plans, Policies, and Ordinances

State

California Planning and Zoning Law

The legal framework within which California counties and cities exercise local planning and land use functions is provided in the California Planning and Zoning Law (Sections 65000 through 66499.58 of the California Government Code). Under that law, each county and city must adopt a comprehensive, long-term general plan. The law gives counties and cities wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. The requirements include seven mandatory elements described in the Government Code. Each element must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals; diagrams and maps that incorporate data and analysis; and implementation measures.

According to State of California housing element consistency regulations (outlined in California Government Code, Section 65583), each local city/county is required to prepare a housing element assessing the community's needs (with the mandated goal of providing housing opportunities for all community segments and income groups), and establish policies ensuring these needs are met. The housing element includes goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. While providing general plan/zoning designations that allow for adequate housing is an obligation of local governments, there is considerable state oversight to ensure that adequate supplies of all types of housing are being provided statewide. To ensure that state goals are met at the local level, the HCD reviews all local housing elements (California Government Code, Section 65583).

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008, also known as SB 375 (codified in the Government Code and Public Resources Code), took effect in 2008 and provides a planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the

greenhouse gas (GHG) reduction goals established in Assembly Bill 32. SB 375 requires metropolitan planning organizations (MPOs) to incorporate a Sustainable Communities Strategy (SCS) in their Regional Transportation Plan (RTP). SB 375 also aligns the RHNA planning process with the development of each MPOs Sustainable Communities Strategies (SCS) and to accommodate therein each jurisdictions share of the regional housing need for each income level.

Regional Housing Needs Assessment

An RHNA is mandated by State Housing Law as part of the periodic process of updating local housing elements of general plans. The RHNA quantifies the need for housing within each jurisdiction during specified planning periods.

Communities use the RHNA in land use planning, prioritizing local resource allocation, and in deciding how to address identified existing and future housing needs resulting from population, employment, and household growth. The RHNA does not necessarily encourage or promote growth, but rather allows communities to anticipate growth, so that collectively the region and subregion can grow in ways that enhance quality of life, improve access to jobs, promote transportation mobility, and address social equity and fair share housing needs.

The City of San Diego was allocated 88,096 RHNA units for the Fifth Housing Element Cycle (January 1, 2010, to December 31, 2020). In 2018, SANDAG began the RHNA process for the 8-year, sixth housing element cycle (June 30, 2020 to April 15, 2029). On July 5, 2018, the HCD sent the Final Regional Housing Need Determination letter to SANDAG, which identified “the minimum regional housing need of 171,685 total units among four income categories for SANDAG to distribute among its local governments” (SANDAG 2018a).

Regional

SANDAG Regional Comprehensive Plan

The SANDAG Regional Comprehensive Plan, adopted in 2004, provides a long-term planning framework for the San Diego region. The Regional Comprehensive Plan identified smart growth and sustainable development as important strategies to direct the region’s future growth toward compact, mixed-use development in urbanized communities that already have existing and planned infrastructure, and then connecting those communities with a variety of transportation choices.

In 2011, SANDAG approved the 2050 RTP/SCS. This approval marked the first time SANDAG’s RTP included a sustainable communities strategy, consistent with SB 375. This RTP/SCS provided a blueprint to improve mobility, preserve open space, and create communities, all with transportation choices to reduce GHG emissions and meet specific targets set by the California Air Resources Board (CARB) as required by SB 375. In 2010, CARB established targets for each region in California governed by an MPO. SANDAG is the MPO for the San Diego region.

The SANDAG target, as set by CARB, is to reduce the region’s per-capita emissions of GHG emissions from cars and light-duty trucks by 7% by 2020, compared with a 2005 baseline. By 2035, the target is a 13% per-capita reduction. There is no target set beyond 2035. To achieve the 2020 and 2035 targets, SANDAG and other MPOs are required to develop an SCS as an element of its RTP. The SANDAG SCS integrates land use and transportation plans to achieve reductions in GHG emissions and meet the CARB-required targets.

SANDAG is required by law to update its RTP every 4 years. In October 2015, SANDAG adopted the latest update to its RTP/SCS. SANDAG’s 2015 RTP/SCS, known as San Diego Forward: The Regional Plan (Regional Plan), which integrates the elements of the prior Regional Comprehensive Plan and combines those elements with the Regional Plan.

The Regional Plan updates growth forecasts and is based on the most recent planning assumptions considering currently adopted land use plans, including the City's General Plan and other factors from the cities in the region and the County. SANDAG's Regional Plan will change in response to the ongoing land use planning of the City and other jurisdictions. For example, the City's General Plan and other local General Plans of cities, may change based on General Plan amendments initiated by the jurisdiction or landowner applicants. The General Plan amendments may result in increases in development densities by amending the regional category designations or zoning classifications. Accordingly, SANDAG's RTP/SCS latest forecasts of future development in the San Diego region, including location, must be coordinated closely with each jurisdiction's ongoing land use planning because that planning is not static, as recognized by the need for updates to SANDAG's RTP/SCS every 4 years.

Local

San Diego Municipal Code Section 22.0908

San Diego Municipal Code (SDMC) Section 22.0908 was approved by City of San Diego voters on November 6, 2018, directing the sale of real property to SDSU. The sale of the property is required to provide for certain uses, including the following (SDMC Section 22.0908, subsection (c)(5)):

- (A) Academic and administrative buildings and classrooms;
- (B) Commercial, technology, and office space, compatible and synergistic with SDSU's needs, to be developed through SDSU-private partnerships, and with such uses contributing to sales tax and possessory interest tax, as applicable, to the City;
- (C) Complementary retail uses serving neighborhood residents and businesses while also creating an exciting college game-day experience for SDSU football fans and other Potential Sports Partners, and with such retail uses contributing to sales tax and possessory interest tax, as applicable, to the City;
- (D) Hotel(s) to support visitors to campus and stadium-related events, provide additional meeting and conference facilities, and serve as an incubator for graduate and undergraduate students in SDSU's L. Robert Payne School of Hospitality and Tourism Management; and with such uses contributing to sales taxes, possessory interest taxes, and transient occupancy taxes, as applicable, to the City;
- (E) Faculty and staff housing to assist in the recruitment of nationally recognized talent, and with such uses contributing to possessory interest taxes, as applicable, to the City;
- (F) Graduate and undergraduate student housing to assist athlete and student recruitment, and with such uses contributing to possessory interest taxes, as applicable, to the City;
- (G) Apartment-style homes for the local community interested in residing in proximity to a vibrant university village atmosphere, and with such uses contributing to possessory interest taxes, as applicable, to the City;
- (H) Other market-rate, workforce and affordable homes in proximity to a vibrant university village atmosphere, and with such uses contributing to possessory interest taxes, as applicable, to the City; and
- (I) Trolley and other public transportation uses and improvements to minimize vehicular traffic impacts in the vicinity.

Further, SDMC Section 22.0908, subsection (g) provides that, “SDSU shall use the content requirements of a Specific Plan, prepared pursuant to California Government Code section 65451, subdivision (a), in completing the SDSU Campus Master Plan revision contemplated by this section.”

City of San Diego General Plan

Under the City’s General Plan, the project site is designated as Commercial Employment, Retail, & Services for the majority of the site, and Park, Open Space, and Recreation of the southeast portion of the site (City of San Diego 2018a). This designation provides recommended Community Plan designations of varying levels of targeted commercial uses (such as neighborhood, community, regional, office, visitor, and heavy), with or without a residential component. The Mission Valley Community Plan further designates planned land use designations for the project site.

City of San Diego Housing Inventory

The City of San Diego released an annual report on housing inventory in 2018, which provides an overview of progress towards the goals outlined in the City’s Housing Element, including progress toward RHNA requirements. In summary, while the City has been taking steps towards increasing housing production, the market is not keeping up with demand (City of San Diego 2018b). At the end of 2017, housing production for the current RHNA cycle was approximately 33,000 units, with 54,937 more units needed by 2020, meaning that housing production has only met 38% of the housing needs for the RHNA with less than 3 years remaining in the current cycle (City of San Diego 2018b). With this housing need determined, the City has introduced strategies and initiatives to increase housing production in the City, as outlined in Table 5.1 of the housing inventory report (City of San Diego 2018b).

Mission Valley Community Plan (Adopted)

The project site is located in the Mission Valley CPA. The City’s Mission Valley Community Plan designates the project site as Commercial Recreation and Public Recreation (City of San Diego 2013). Commercial Recreation uses include lodging facilities (hotels and motels), recreational facilities, and entertainment facilities (theaters and convention centers) (City of San Diego 2013).

Draft Mission Valley Community Plan Update (Proposed)

The City is currently in the process of updating the Mission Valley Community Plan. On February 6, 2019, a second working draft of the Mission Valley Community Plan and the Draft Environmental Impact Report (EIR) was released (City of San Diego 2019b). The Final Draft of the Mission Valley Community Plan Update, as well as the Final Program EIR, was released on May 31, 2019 (City of San Diego 2019). The Mission Valley Community Plan Update is currently in the “City hearings on final plans” phase of the process, with the release of the final draft plan and the public hearing process beginning in summer 2019. Although not yet adopted, in the final draft update the City considers that the project site would be redeveloped through a Campus Master Plan that should adhere to the land uses and policies to the Mission Valley Community Plan (City of San Diego 2019c).

In the Final Program EIR for the Mission Valley Community Plan Update, the City states that the Mission Valley Community Plan Update serves as a comprehensive long-term plan for the physical development of the Mission Valley CPA and is intended to manage and address future growth through 2050 (City of San Diego 2019a). The Mission Valley Community Plan Update is intended to provide orderly growth and redevelopment by placing higher density residential development within and around transit and commercial corridors (City of San Diego 2019a). As

accounted for in Table 3.4-1 of the Final EIR, the City provides the following net increases under the Mission Valley Community Plan Update by 2050 (City of San Diego 2019a):

- Housing Units: 27,910 (248% increase over 2012 conditions)
- Population: 51,600 (248% increase over 2012 conditions)
- Nonresidential Square Feet: 7,371,000 (42% increase over 2012 conditions)
- Employment: 19,100 (42% increase over 2012 conditions)

4.13.3 Significance Criteria

The significance criteria used to evaluate the project impacts to population and housing are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to population and housing would occur if the project would:

1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.13.4 Impacts Analysis

4.13.4.1 Growth Inducement

Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

4.13.4.1.1 Direct Growth Inducement

Proposed Project

The proposed project would directly induce growth through the redevelopment of the 132-acre SDCCU Stadium site and the adjacent San Diego River Park into a new SDSU Mission Valley campus. The Campus Master Plan would result in a state-of-the-art campus, including approximately 1.6 million square feet of facilities for educational, research, and office uses, 4,600 residential units, 400 hotel rooms, 95,000 square feet of commercial/retail uses, a 35,000-capacity multipurpose stadium, as well as approximately 86 acres of parks, recreation, and open space, including a River Park, which would introduce new residents, students, and jobs to the area. To understand the magnitude of the projected increase in population, an estimate for the number of new residents associated with the proposed project is required. There are several existing population rates that could be applied to the proposed project for this analysis:

- U.S. Census (U.S. Census Bureau 2018):
 - 2.72: estimated persons per household rate (2013–2017) as of July 1, 2018
- DOF (DOF 2018b):
 - 2.68: provisional estimated persons per household rate for the City of San Diego as of January 1, 2018

- SANDAG Series 13 Regional Growth Forecast:
 - 2.65: forecasted persons per household for the City of San Diego in the year 2035 (nearest estimated project buildout) (SANDAG 2013b)
 - 2.64: forecasted persons per household for the City of San Diego in the year 2050 (SANDAG 2013b)
 - 2.16: estimated persons per household for the 92108 zip code as of January 1, 2016 (SANDAG 2016)
 - 1.91: forecasted persons per household for the Mission Valley CPA in the year 2035 (nearest estimated project buildout) and year 2050 (SANDAG 2013c)
- Final Draft of the City of San Diego Mission Valley Community Plan Update (City of San Diego 2019b)
 - 1.85 persons per household for the Mission Valley Community Planning Area 2050 population projection

The most conservative population rate (i.e., providing the largest potential residential population estimate) would be 2.72 from the U.S. Census. However, as with the DOF rates, this rate is an estimate for the entire City of San Diego, which is comprised of highly variable occupancies, unit types, and family sizes (as clearly indicated by the difference in population rates in between the City and the Mission Valley CPA). Due to the historic single-family-dominant nature of development in San Diego, this value likely overestimates the per-person generation rates for an infill campus project with a residential component that is entirely comprised of multifamily units. Additionally, the population estimate is for past years, whereas the proposed project has an anticipated buildout of 2037.

As such, to provide a reasonable estimate of residential population of the proposed project at buildout, the City of San Diego's Final Draft of the Mission Valley Community Plan Update persons per household rate of 1.85 in the year 2050 is used because it is the most recent (2019) and geographically representative (Mission Valley CPA) population estimate for the project area. This is also consistent with the latest SANDAG estimate for year 2035 estimated persons per household for the Mission Valley Community Planning Area of 1.91.

While the Mission Valley Community Plan Update has yet to be adopted, similar high-density developments to the proposed project were identified in the area by the Transportation Impact Analysis (Appendix 4.15-1), as prepared for the proposed project. Analysis conducted for Appendix 4.15-1 determined that these similar existing developments coincided most closely with the 1.85 persons per household metric identified in the Mission Valley Community Plan Update. Specifically, Appendix 4.15-1 identified the River Run Apartments (three-story) and the Promenade Rio Vista Apartments (four-story with some retail) developments which are located in Mission Valley, west of the project site by approximately 1.0 mile (River Run Apartments) and 1.5 miles (Rio Vista Apartments). While this rate is lower than the average for the 92108 zip code, it is justifiable for the proposed project compared to similar high-density developments as opposed to including data from lower density developments and other more general, regional data (Appendix 4.15-1).

For the reasons discussed above, an approximate population of 8,510 represents the most reasonable estimate of new residents as a result of the proposed project's residential component. This estimate is derived by applying the persons per household rate of 1.85 to the proposed project's 4,600 residential units.

Once the proposed project has been developed and is occupied, there would be an ongoing economic and tax impact of the project. The economic contribution of the proposed project has three components: direct, indirect, and induced contributions. Direct contributions include the total full-time and part-time employees, labor income (including the value of benefits), economic output, and value-added associated with the construction expenditures to build the project and subsequent operation of businesses on the site. Indirect contributions are attributable to purchases from suppliers within San Diego County. The indirect contribution also captures the additional input purchases from local suppliers by the suppliers. These additional purchases create subsequent rounds of indirect

effects. The induced contribution includes spending by construction employees or employees who work at businesses at the Mission Valley site, and the employees of suppliers at local businesses, including grocery stores, restaurants, and service providers. The following analysis focuses on the direct and indirect contributions of the proposed project, induced contributions are addressed in Section 5.1, Growth Inducement, of EIR Chapter 5.

The proposed project would include educational/research, residential, retail, and stadium campus components. To estimate the direct and indirect operational impact of the proposed project, Appendix 4.13-1, prepared by Ernst and Young, estimated the direct, indirect, and induced employment for each campus land use. This analysis used an input-output model to estimate the economic contributions of the proposed project's planned capital investments and subsequent operations. The regional economic multipliers were estimated using the 2016 IMPLAN input-output model of San Diego County. IMPLAN is used by more than 500 universities and government agencies. IMPLAN includes the interaction of over 530 industry sectors, thus identifying the interaction of specific industries related to the SDSU Mission Valley Campus Master Plan Project. The following assumptions or data sources were used in the modeling:

- Retail: 2012 Economic Census data for California retail establishments was used to calculate employees per square foot of under-roof floor space for different types of retail (e.g. grocery store, other retail). These ratios were used to estimate direct employment for the retail components.
- Restaurants: Information on labor as a share of restaurant sales and average hourly wages of restaurant workers in San Diego was used to estimate the direct number of employees at restaurants based on projected sales.
- Research and innovation campus: The ratio of one research and innovation campus (office) employee to 200 square feet was used to estimate the number of direct workers associated with the research and innovation campus space at full occupancy. One-third of the space was modeled as traditional office space while the remaining two-thirds were modeled as research and innovation.
- Campus: University employment was also modeled, assuming 1% annual student enrollment growth starting in 2019.
- Hotel: Data on hotel operations were used to estimate labor costs that are equal to 35% of revenue. Dividing labor costs by average annual wages of hotel workers produced an estimate of the number of workers at the planned hotels.
- Stadium: CSU/SDSU provided information on ticket sale revenue from seven football games and concession sales at SDSU games in 2017. The revenue associated with other (non-university) events were also modeled assuming 23 other events would occur (the number of Stadium events in the last year at SDCCU Stadium) with an average ticket price of \$50, and average merchandise and concession sales of \$20 per person. Attendance at these other events was assumed to be at 85% capacity, or 29,750 attendees.
- Residential/parking: Residential and parking properties have minimal employment impacts and have not been included here.

Based on the above campus components, the direct employment at project buildout is estimated to be 7,809 jobs. The indirect economic contribution attributable to the proposed project buildout is estimated to be an additional 4,314 jobs. Thus, the total direct and indirect annual employment contribution at project buildout is estimated to be 12,123 jobs (Appendix 4.13-1).

Planned Growth

San Diego Association of Governments Population Projections

As discussed previously, SANDAG has produced long-range forecasts of population, housing, and employment for the San Diego region that are used as a resource for numerous purposes, including planning. The forecast represents an assessment of the changes that SANDAG anticipates for the San Diego region based on the best available information and computer modeling. The forecast is not intended to be a prescription for growth; however, it provides a reasonable basis of analysis.

Table 4.13-5 compares SANDAG's projected growth in the Mission Valley CPA to the City of San Diego and the overall County. As the geographic scope increases, the share of forecasted growth is reduced, as the City and the region are anticipated to experience substantial growth by year 2050. Specifically, the City of San Diego's population is expected to increase by approximately 456,621 residents by 2050, and the number of housing units is projected to go up by 177,566 homes. Countywide, SANDAG projects the County's population to increase by approximately 925,330 and the number of housing units to increase by 326,117.

Table 4.13-5. SANDAG 2013 Growth Forecast

Location	2012	2050	Total Increase (2012 to 2050)
<i>Mission Valley CPA</i>			
Population	19,038	36,340	17,302
Housing Units	11,233	20,734	9,501
Employment (Jobs)	45,197	59,447	14,250
Employment Density*	37.5	48.2	10.6
<i>City of San Diego</i>			
Population	1,321,315	1,777,936	456,621
Housing Units	518,137	695,703	177,566
Employment (Jobs)	780,252	1,008,793	228,541
Employment Density*	22.2	27.5	5.4
<i>County of San Diego</i>			
Population	3,143,429	4,068,759	925,330
Housing Units	1,165,818	1,491,935	326,117
Employment (Jobs)	1,450,913	1,911,405	460,492
Employment Density*	15.8	19.0	3.2

Sources: SANDAG 2013a, 2013b, 2013c, and 2016.

Note:

* The population estimate coincides with the persons per household rate for the 92108 zip code as of January 1, 2016.

Regional Housing Needs Assessment

The City of San Diego was previously allocated 88,096 RHNA units for the Fifth Housing Element Cycle (2010 to 2020). Between 2010 and 2017, the City of San Diego had permitted 33,159 units. This total represents approximately 37.6% of the total required units in 8 years for the 11-year cycle (2010 to 2020). Using an average of 8,008 units/year to achieve the 11-year goal, the City of San Diego was approximately 30,910 units behind,

permitting at an average pace of only 4,149 units/year. This is consistent with the regionwide shortage in housing across the SANDAG service area.

The proposed project would not commence vertical construction until the Sixth Housing Element Cycle begins. Based on the City's share of the 2010 RHNA allocation, which amounted to approximately 54.4% of the total in the SANDAG region, for the pending Sixth Housing Element Cycle, the City of San Diego would be expected to provide approximately 93,317 housing units between 2021 and 2028.

1984 Mission Valley Community Plan (Adopted)

Under the existing land use and zoning designations, no residential or school/university uses are assumed in the MVPD-MV-CV zone. The Multiple Use Zone (MV-M) provides options for including residential uses within commercial zones, as specified by SDMC Section 1514.0307(c). As provided in Section 1514.0307(c), all commercially zoned sites can utilize the multiple use option, subject to including the required mix of commercial and residential use categories. The current zoning does not permit school/university uses. Under the adopted Mission Valley Community Plan, redevelopment and growth within the project site is not planned or contemplated by the City.

Mission Valley Community Plan Update (Proposed)

The Mission Valley Community Plan Update contemplates the project site being subject to future redevelopment under a Campus Master Plan, as proposed by the project. The Mission Valley Community Plan Update anticipates the following uses in the project site.

- 4,800 dwelling units
- 2,000,000 square feet of office space
- 300,000 square feet of retail space
- 38.1 acres of active park
- 4.9 acres of open space

The assumptions for the project site in the final draft Mission Valley Community Plan Update would result in approximately 10,368 new residents.

SDSU Full-Time Equivalent Students

The 2007 SDSU Campus Master Plan Revision, adopted by the CSU Board of Trustees In May 2018, provides for 35,000 FTES. The current Campus Master Plan does not account for any campus uses at the project site.

Analysis

As shown in Tables 4.13-4a and 4.13-6, both the most recent SANDAG projections and City of San Diego planning documents expect population and employment growth within Mission Valley. While the amount of anticipated growth by both agencies varies, the analysis below demonstrates the proposed project would not be inconsistent with the regional and local projections.

SANDAG Population Projections

Table 4.13-5 shows that SANDAG projected an increase of over 17,000 new residents and 9,500 housing units and 14,250 new jobs in the Mission Valley area. As explained above, the proposed project would include 8,510 residents, 4,600 housing units, and approximately 8,332 jobs. Accordingly, the proposed project would accommodate the planned growth projected by SANDAG.

As of 2016, some of this planned growth had occurred as shown in Table 4.13-6, below. Specifically, the population in the Mission Valley CPA increased by approximately 6,355 residents and approximately 1,343 residential units were built. The remaining planned growth based on SANDAG's 2013 projections would accommodate 10,947 residents and 8,158 housing units, which are both more than the proposed project; thus, the proposed project would not result in growth beyond planned growth in the Mission Valley CPA.

Table 4.13-6. SANDAG 2016 Population and Housing Estimates

Location	2012	2016	Increase (2012 to 2016)	Remaining Planned Growth
Mission Valley CPA				
Population	19,038	25,393	6,355	10,947
Housing Units	11,233	12,576	1,343	8,158

The proposed project would account for 2.1% of the total increase in the City's population and 2.6% of the increase in housing units in the City of San Diego by 2050. At the County level, the proposed project would account for approximately 1.1% of the forecasted 925,330 new residents and 1.4% of the expected 326,117 new housing units.

While the proposed project would result in growth, it would not represent a significant total of the projected regional growth over the next 30 years. Further, the location of the project site within an infill, transit-priority location identified by SANDAG as a Smart Growth Opportunity Area near existing public services and infrastructure would reduce development pressures in other outlying areas around San Diego County.

Regional Housing Needs Assessment

The proposed project would comply with the City's affordable housing requirements by building the required affordable units on-site. These units would assist the City in attaining its future RHNA requirements expected under the Sixth Housing Element Cycle (2021 to 2028).

Draft Mission Valley Community Plan Update (Proposed)

The proposed project would represent the differences between the assumptions in the proposed Mission Valley Community Plan Update, as presented in Table 4.13-7, Mission Valley Community Plan Update EIR versus Proposed Project.

Table 4.13-7. Mission Valley Community Plan Update EIR versus Proposed Project

Project Component	Unit Count or Square Feet		Difference	% Increase/ (Decrease)
	<i>Mission Valley CPU</i>	<i>Proposed Project</i>		
Residential	4,800 units	4,600 units	(200) units	(4.17%)
Office	2,000,000 square feet	1,565,000 square feet	(435,000) square feet	(21.8%)
Retail/Hotel	300,000 square feet	310,415* square feet	10,415 square feet	3.5%
Parks and Recreation	43 acres	86.1 acres	43.1 acres	100%
Stadium	40,000	35,000 capacity	(5,000 seats)	(12.5%)
Residential Population	8,880	8,510	(170)	(1.9%)

Notes:

* Includes campus hotel uses

Overall, the proposed project includes less intensity and development compared to the uses contained in the Final Draft of the Mission Valley Community Plan Update and; therefore, overall lower projected growth.

SDSU Campus Master Plan

In completing the SDSU Campus Master Plan, SDSU prepared the SDSU Mission Valley Campus Guidelines (Guidelines), using the content requirements of a specific plan pursuant to Government Code Section 65451, subdivision (a), as contemplated by SDMC Section 22.0908(g). The Guidelines and Campus Master Plan would be able to accommodate up to 15,000 FTES in the campus and would provide adequate classroom space and housing units as determined appropriate by CSU/SDSU to accommodate demand for higher education.

Conclusion

The proposed project would directly induce growth through the development of the campus components, including residential, office, innovation, research and development, hospitality, and commercial land uses, which would introduce new residents, students, and jobs to the area. However, the proposed project population of 8,510 would be accommodated under the projected population growth in the Mission Valley area based on SANDAG's projections as shown in Table 4.13-6 above. The proposed project would also provide affordable housing on-site, which would assist with meeting the region's housing needs at all income levels.

In consideration of SDMC Section 22.0908 (Sale of Real Property to SDSU), the proposed project would include a Campus Master Plan (See Figure 2-8 in EIR Chapter 2) and the SDSU Mission Valley Campus Guidelines, which have been prepared using the content requirements of Government Code Section 65451, subdivision (a) and includes the distribution, location, and extent of the proposed uses within the project site; the distribution, location, and extent of major components of public and infrastructure, public services, and other essential facilities proposed to be located within the project site needed to support the proposed project; development guidelines and design expectations by which development will proceed; and a program of implementation measures and financing measures necessary to carry out the proposed project. This SDSU Mission Valley Campus Master Plan and the Campus Guidelines would permit up to 15,000 FTES on the SDSU Mission Valley site. The Final EIR for the Mission Valley Community Plan Update contemplates the project site being subject to future redevelopment under a Campus Master Plan and anticipated similar or slightly more intensive land uses than those proposed by the project.

Thus, the projected increase in population of the project site would be consistent with the anticipated overall growth of the City of San Diego and County of San Diego, and impacts would be **less than significant**.

4.13.4.1.2 Indirect Growth Inducement

The project site is located within a highly urbanized area that is currently served by existing roadway/access infrastructure. The proposed project would include circulation improvements. While the proposed project may increase roadway capacity, such off-site improvements would facilitate traffic circulation to existing developed areas. The project site is located within a highly urbanized area that is currently served by existing roadway/access infrastructure. The proposed project would not result in the extension or expansion of roadways in previously undeveloped or underdeveloped areas such that surrounding land uses could be encouraged to intensify.

The proposed project would result in an incremental increase in demand of water and wastewater services. It is anticipated that the proposed project would require new points of connection for domestic water, fire water, and sewer from the existing utility lines. All proposed connections to existing utility infrastructure would be sized to adequately serve anticipated project buildout. Similarly, all existing water, sewer facilities that the proposed project would connect to are adequately sized to serve the proposed project without the need to expand (refer Section 4.17, Utilities and Service Systems). Further, the project site and surrounding areas are highly urbanized and currently served by existing utility infrastructure. The proposed project would not be extending any utility or service system into undeveloped areas that are currently unserved by utilities.

In addition to the direct job growth modeled in Appendix 4.13-1, indirect job growth was also calculated. Indirect economic contributions are attributable to purchases from suppliers within San Diego County. The indirect contribution also captures the additional input purchases from local suppliers by the suppliers. These additional purchases create subsequent rounds of indirect effects. As calculated in Appendix 4.13-1, the number of employees indirectly created by the proposed project is estimated at 4,314. This total would be considered as part of the overall employment within San Diego County. As shown in Table 4.13-5, employment in San Diego County is estimated to increase by 460,492 by 2050. The proposed project's indirect contribution to this total of 4,314 jobs represents .9% of the increased employment in San Diego County over the next 30 years.

Therefore, the proposed project would not result in indirect growth inducement through the removal of barriers of growth, extension of utility and service systems and encouragement of growth. Impacts would be **less than significant**.

4.13.4.2 Displacement of People or Housing

Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

There are no existing homes or dwelling units on the project site, therefore, no existing housing would be affected by the implementation of the proposed project.

The introduction of new development to an area may have in indirect effect on existing surrounding communities due to increased traffic and other impacts. As it relates to the proposed project, surrounding neighborhoods include Serra Mesa (north of the project site); Grantville (East of the project site), and Normal Heights (south of the project site). While the development of the proposed project would have impacts as a result of increased population and employment on the project site, it would not be expected to displace substantial numbers of existing people in these communities. The proposed project does not include new or extended infrastructure through existing residential

areas. The proposed project does not include oversized facilities that may result in inducements to additional growth outside the project site, which could result in demolition of existing housing. Rather, the proposed project would consume additional capacity within existing utility systems. Lastly, the proposed project does not involve any amendments to land use plans or policies, rezones, or annexations, which may result in additional future growth that could displace substantial numbers of existing people or housing and necessitate the construction of replacement housing elsewhere.

While no permitted or official dwelling units exist on site, the San Diego River and Murphy Canyon area has been documented to have a persistent homeless population. Every year, the San Diego Regional Task Force on the Homeless conducts a census known as the “Point-in-Time-Count” meant to serve as a one-day count of persons living on the streets or in short-term shelters. A total of 4,912 homeless persons were counted in the City in 2018, with concentrations in areas such as downtown, Pacific Beach, Mission Valley, the mid-city areas, and east/southeast of downtown (Regional Task Force on the Homeless 2018). It is likely that construction and operation of the proposed project would displace homeless persons on the fringes of the project site, particularly in the San Diego River and Murphy Canyon Creek. However, due to the transient and nonpermanent nature of these dwellings as well as general fluctuations in the homeless population, the exact homeless population in these areas can vary at any given time. Further, the overall issue regarding homelessness and provision of housing for this population is a separate matter from the proposed project. Any potential displacement of homeless persons due to the proposed project in the areas surrounding the project site would not necessitate the construction of replacement housing elsewhere. Therefore, **no impact** would occur.

4.13.4.3 Cumulative Impact Analysis

Would the project result in a cumulative impact to population and housing?

The growth analysis presented previously is inherently a cumulative discussion because it accounts for Citywide and regional growth projections that are based on adopted plans and potential future changes in land use. As previously discussed, the proposed project would directly induce growth through the development of campus residential, employment lands, including educational, innovation, research and development, hospitality and commercial land uses, which would introduce new residents, students, and jobs to the area. There is not a hardline number or percentage available to determine whether this growth would be considered a substantial unplanned increase in population.

Various other projects included in the cumulative projects table (Table 3-1 in EIR Chapter 3) propose residential and mixed-use developments in Mission Valley that would induce growth in the area, similar to the proposed project. The larger of these cumulative projects include the Civita (Quarry Falls) mixed-use project currently under construction, which includes 4,780 residential units; the approved Town & Country Specific Plan project, which includes 840 residential units; the proposed Riverwalk Commercial Center project, which would include 4,000 multifamily housing units; and the proposed Shawnee LLC/CG 7600 Master Plan, which would include 1,023 multifamily residential units. Although these projects would add cumulative growth to Mission Valley and the greater City of San Diego, SANDAG and the City are projecting significant population growth in Mission Valley.

SANDAG projected an increase of over 17,000 new residents and 9,500 housing units and 14,250 new jobs in the Mission Valley area (Table 4.13-5). The proposed project would include 8,510 residents, 4,600 housing units, and approximately 8,332 jobs. The Riverwalk Commercial Center project alone is projected to introduce 4,000 housing units. Although the population estimates have yet to be determined for the Riverwalk Commercial Center project, it can be reasonably estimated that with 4,000 proposed residential units, this project would result in approximately 7,400 new residents, when using the 1.85 persons per household for the Mission Valley Community Planning Area.

Combined with the proposed project, this would result in an increase of 8,600 housing units and approximately 15,910 new residents in the Mission Valley area, just under the SANDAG 2050 projections. While the proposed project would accommodate the planned growth projected by SANDAG, other cumulative projects including the above mentioned, would together exceed SANDAG's projections by approximately 7,166 units and 15,260 residents. While these projects would exceed the outdated SANDAG projections, (1) the Final Mission Valley Community Plan Update EIR includes a mitigation measure, MM-AQ-1, which requires the City to provide a revised land use map for Mission Valley planning area to SANDAG "to ensure that any revisions to the population and employment projections used by the SDAPCD in updating the RAQS [Regional Air Quality Strategy] and the SIP [State Implementation Plan] will accurately reflect anticipated growth due to the proposed CPU [Community Plan Update]" (City of San Diego 2019a) and (2) the cumulative increase would assist the City with meeting its requirements under the to-be released Sixth Housing Element Cycle by providing for approximately 716 units of affordable housing.

As of 2016, some of this planned growth had occurred as shown in Table 4.13-6. Specifically, the population in the Mission Valley CPA increased by approximately 6,355 residents, and approximately 1,343 residential units were built. The remaining planned growth based on SANDAG's 2013 projections would accommodate 10,947 residents and 8,158 housing units. Again, when combined with cumulative projects, the proposed project would result in population growth in excess of SANDAG's projected growth.

As previously discussed, the Mission Valley Community Plan Update proposes additional residential uses in the Mission Valley Community Planning Area that exceed SANDAG's population and housing estimates for the area. Table 4.13-4b shows the Buildout Summary from the Mission Valley Community Plan Update Final Program EIR, including a net increase of 27,910 housing units and 51,600 new residents in the Mission Valley area between 2012 and 2050. These projections allow for more growth in the area than the SANDAG growth projections, and would account for the proposed project, the Riverwalk Commercial Center project, and other cumulative projects.

Finally, as discussed the proposed project would account for only 2.1% of the total increase in the City's population and 2.6% of the increase in housing units in the City of San Diego by 2050. At the County level, the proposed project would account for approximately 1.1% of the forecasted 925,330 new residents and 1.4% of the expected 326,117 new housing units.

While the proposed project, and those aforementioned cumulative projects, would not represent a significant total of the projected regional growth over the next 30 years, they would represent a significant total of projected growth within the Mission Valley area. However, the most recent regional planning effort for Mission Valley, the Final Draft Mission Valley Community Plan Update, would accommodate the cumulative growth and would also be integrated into future SANDAG projections. These updated unit counts would also provide for additional housing to facilitate the City meeting its requirements under the Sixth Housing Element Cycle. Nonetheless, the Mission Valley Community Plan Update and Final EIR has yet to be adopted. Thus, to be conservative, the SANDAG 2013 projections are the most recently adopted projections and were used to evaluate cumulative growth in the Mission Valley area. Therefore, given that there are other projects proposing the development of housing units in the Mission Valley area, as shown in Table 3-1 in EIR Chapter 3, implementation of the proposed project **would result in a cumulatively considerable significant impact** related to growth inducement in the Mission Valley area, when compared to SANDAG's current projections.

However, to the extent the proposed Mission Valley Community Plan Update is adopted in its current form, the proposed project and other cumulative projects considered would be accounted for in the updated population and housing projections and this cumulative impact would be reduced to a less than significant level.

4.13.5 Summary of Impacts Prior to Mitigation

While the proposed project would result in growth, the future residents and employees generated would be within the projected growth anticipated by SANDAG and planned growth under the proposed Mission Valley Community Plan Update. The proposed project would comply with the City's affordable housing requirements by building the required affordable units on-site, which would assist with meeting the region's housing needs at all income levels. Finally, through the Campus Master Plan and comprehensive set of Design Guidelines the proposed project would accommodate future demand for university education. Proposed project impacts would be considered **less than significant**.

At a cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects, would result in a significant total of the projected growth anticipated in the Mission Valley area by SANDAG projections. Therefore, the proposed project would result in a **cumulatively considerable significant impact** related to growth inducement.

4.13.6 Mitigation Measures

No mitigation is required as project specific impacts would be considered **less than significant**.

No mitigation is feasible to reduce cumulative impacts and therefore cumulative impacts related to growth inducement would be **significant and unavoidable**. It should be noted that the Final Draft Mission Valley Community Plan Update EIR includes a mitigation measure, MM-AQ-1, which requires that "Within six months of the certification of the Final PEIR, the City shall provide a revised land use map for the CPU area to SANDAG to ensure that any revisions to the population and employment projections used by the SDAPCD [San Diego County Air Pollution Control District] in updating the RAQS and the SIP will accurately reflect anticipated growth due to the proposed CPU" (City of San Diego 2019a). While this measure is not within the discretion of CSU, should the City implement MM-AQ-1, impacts as a result of the proposed project would be reduced to less than significant.

4.13.7 Level of Significance After Mitigation

While the specific development proposed by the project has not been identified in currently adopted regional projections specific to Mission Valley, the projected increase in population of the project site would be consistent with the Final Draft Mission Valley Community Plan Update and within the anticipated overall growth of the City of San Diego and County of San Diego. Thus, project specific impacts related to growth inducement would be **less than significant**.

The proposed project would not displace any existing housing or people such that it would necessitate the construction of replacement housing elsewhere; therefore, **no impact** would occur.

The proposed project, in conjunction with cumulative projects, would exceed the currently adopted SANDAG projections for housing units and new residents in the Mission Valley area. Although the proposed Mission Valley Community Plan Update would accommodate this cumulative growth, it has not been adopted as of this Draft EIR. Further, no mitigation is possible to reduce cumulative impacts. Therefore, cumulative impacts related to growth inducement would remain **significant and unavoidable**.

To the extent the proposed Mission Valley Community Plan Update is adopted in its current form, the proposed project and other cumulative projects considered would be accounted for in these updated population and housing projections and with the City's implementation of MM-AQ-1, this cumulative impact would be reduced to a less than significant level.

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4.14 Public Services and Recreation

This section describes the existing public services conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

A Notice of Preparation (NOP) was circulated from January 19, 2019 to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to public services focused on the provision of additional park acreage for the River Park and integrating a more natural design, impacts on existing schools, required law enforcement and emergency service responses, and physical impacts associated with new public facilities. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.14.1 Existing Conditions

This section describes the existing conditions in the project area and identifies the proposed project's impact, if any, on public services.

4.14.1.1 Fire Protection and Emergency Medical Services

The City of San Diego Fire-Rescue Department (SDFD) is the primary responder to fires to the project site. San Diego Fire-Rescue Department Station 45 is located adjacent to the project site, north of Friars Road, and serves the Mission Valley Community area, along with San Diego Fire-Rescue Department Station 5 (City of San Diego 2019a). Nearby existing fire stations that would serve the project site are outlined in Table 4.14-1 and shown in Figure 4.14-1, Existing Public Services.

Table 4.14-1. Existing Fire Stations

Station	Address/Location	Apparatus*	Distance from Project Site
45	9366 Friars Road	Battalion 4, Engine 45, Truck 45, HazMat 1, HazMat 2	Adjacent (immediately north of Project Site)
18	4676 Felton Street	Engine 18, Paramedic 18, OES 1	1.1 miles
14	4011 32nd Street	Engine 14, Truck 14, Brush 14	2 miles
17	4206 Chamoune Avenue	Engine 17	2 miles
23	2190 Comstock Street	Engine 23	2 miles
28	388 Kearny Villa Road	Engine 28, Truck 28, Crash 28, Foam 28, Water Tender 28	2.5 miles
5	3902 9th Avenue	Battalion 2, Engine 5	2.8 miles
25	1972 Chicago Street	Battalion 3, Engine 25	4.8 miles
20	3305 Kemper Street	Engine 20, Truck 20, Medic 20	5.6 miles

Source: City of San Diego 2019b.

Notes:

* see paragraph below for a description of each apparatus listed in table

Station 45 is located adjacent to the project site, north of Friars Road, while Station 18 is located within 1.1 miles of the project site. Station 45 is equipped with a battalion, fire engine, fire truck and HazMat Response Units 1 and 2. According to the Fire-Rescue Department, battalions consist of a red SUV equipped with lights and sirens, while

fire trucks consist of an aerial apparatus or a telescopic ladder tower and a passenger-carrying platform. Truck 45, located at Station 45, is an aerial ladder truck. Lastly, each of the HazMat Response Units is a specialized emergency response vehicle equipped to handle hazardous material incidents (chemical spills, fuel spills, compressed gas releases, etc.) and staffed with specially trained personnel. Station 18 is equipped with a fire engine and paramedic. An office of emergency services (OES) is also located in Station 18, which helps coordinate the overall County of San Diego response to disasters.

As a state agency, CSU is sovereign and is not subject to local land use regulatory/planning documents, ordinances, regulations, policies, rules, fees, or exactions such as those described in this chapter. However, CSU is willing to purchase the project site pursuant to the framework set forth in Section 22.0908, which will be more fully described in a future Purchase and Sale Agreement, in order to implement the overriding purpose of the proposed project. In addition, CSU will evaluate the proposed project's consistency with adopted, applicable state and federal regulatory/planning documents; and though not required by law, CSU will also consider the proposed project's consistency with adopted, applicable local regulatory/planning documents.

The City of San Diego General Plan's Public Facilities, Services, and Safety Element includes response time goals for fire and rescue services (City of San Diego 2015a). For instance, Policy PF-D.1 of the City's General Plan sets the following response times (City of San Diego 2015a):

- To treat medical patients and control small fires, the first-due unit should arrive within 7.5 minutes, 90% of the time from the receipt of the 911 call in fire dispatch.
- To provide an effective response force for serious emergencies, a multiple-unit response of at least 17 personnel should arrive within 10.5 minutes from the time of 911-call receipt in fire dispatch, 90% of the time.

According to the General Plan, the City reports that a 3-mile distance between fire stations is typically sufficient to achieve response time objectives. Fire service delivery depends on a number of factors, including the availability of adequate equipment and number of qualified personnel (City of San Diego 2015a).

The San Diego Fire Rescue Department Standards of Response Cover Review commissioned by the City and prepared by Citygate Associates (Citygate Study) assessed the current fire station resource deployment system (Citygate 2017). The Citygate Study identified six of the largest "gap" areas within the City and recommended additional fire stations. The project site is not located within any of the service coverage gaps identified in the Citygate Study and; thus, the Citygate Study did not recommend any new fire stations in the project's service area (Citygate 2017). However, as described in the Citygate Study, seven out of 48 stations currently meet a 90% best practice goal of 7.5 minutes from fire dispatch to first unit on scene. As of 2016, Fire Station 45 had an average dispatch and crew turnout time of about nine minutes from the time of the 911 call to the time of arrival – exceeding the City's established goal of 7.5 minutes by 1 minute and 26 seconds. (Citygate Associates 2017). As of 2015, Station 18 had an average dispatch and crew turnout time of 7 minutes 48 seconds, thus exceeding the City's response time goal by 18 seconds (Citygate 2017).

Policy PF-D.2 of the City's General Plan Public Services, Facilities, and Safety Element sets a first-due travel time goal of 5 minutes for urban-suburban areas (City of San Diego 2015a). The Citygate study also noted that Fire Station 45 has an average travel time of about seven minutes, approximately 2 minutes above this five-minute goal (Citygate 2017). Across the entire city, four out of 47 stations met the five-minute travel time goal (Citygate Associates 2017); none of which serve the Mission Valley Community Plan area.

As discussed in the Mission Valley Community Plan Update (City of San Diego 2019c), although no new fire stations are planned within the Mission Valley Community Plan area, a joint police and fire station is proposed at the existing San Diego Police Department (SDPD) Western Division facility, located at 5215 Gaines Street, approximately 4.3 miles west of the project site.

Emergency medical services are provided to the Mission Valley Community Plan area and the project site through a public/private partnership between the City's Emergency Medical Services (EMS) and Rural Metro Corporation, which provides additional personnel and some ambulances. EMS has ambulances, paramedics, and emergency medical technicians (EMTs), which respond to emergency calls. Calls are prioritized from Level 1 (most serious) to Level 4 (non-emergency) (City of San Diego 2019c). SDFD's medical emergency service capacity consists of a daily on-duty response force of 256 personnel staffing and 70 response apparatus from 47 fire stations. All SDFD response personnel are trained to either the Emergency Medical Technician (EMT) level, able to provide Basic Life Support (BLS) pre-hospital emergency care, or Paramedic (EMT-P) level, which means they are able to provide Advance Life Support (ALS) pre-hospital emergency medical care. Minimum daily staffing includes at least one paramedic on all staffed emergency response apparatus except command vehicles (Citygate 2017).

The City requires ambulances to arrive at acute emergencies within 12 minutes, urgent situations within 15 minutes and non-emergencies within 25 minutes. From July 1 through September 30, 2018, ambulances met the goal for acute emergencies 93 percent of time, for urgent situations 95 percent of the time and for non-emergencies 97 percent of the time.

4.14.1.2 Police Protection

Law enforcement within the City of San Diego is provided by the San Diego Police Department (SDPD) for most general law enforcement, while the California Highway Patrol (CHP) responds to incidents on state property or freeways/state highways for most traffic-related incidents. The project site is located within the Eastern Neighborhood Division (Eastern Division) (City of San Diego 2015a), which serves the neighborhood of Mission Valley East, as well as Allied Gardens, Birdland, College East, College West, Del Cerro, Grantville, Kearny Mesa, Lake Murray, Qualcomm, San Carlos, Serra Mesa and Tierrasanta. The Eastern Division serves a population of 155,982, encompasses 47.1 square miles (City of San Diego 2019d), and is currently staffed with 76 sworn personnel (City of San Diego 2019d). The SDPD station nearest to the project site is the SDPD Eastern Division, which is located at 9225 Aero Drive, approximately 1.6 miles north of the project site (see Figure 4.14-1, Existing Public Services), while the SDPD North Park Storefront Office is located at 2745 Howard Avenue, approximately 1.7 miles southwest of the project site. The SDPD North Park Storefront Office is located in the Mid-City Neighborhood Division.

SDPD services include patrol, traffic, investigative, records, laboratory, and support services (City of San Diego 2015a). SDPD also runs the San Diego Family Justice Centers, which is a public safety initiative launched by the City of San Diego to assist victims of family violence (City of San Diego 2019e). The project site is patrolled by Beats 315 and 316 in the Eastern Division. Beat 315 covers the majority of the eastern portion of the Mission Valley Community Plan area, while Beat 316 covers the majority of the area that makes up the project site (i.e., the stadium site) (SDPD 2018).

Response Times

The City of San Diego uses various priority levels to set response time goals based on the severity of a particular incident. Priority E Calls are ranked highest and are designated for calls where there is an imminent threat to life. There are also Priority Calls 1 through 4, which range from serious crimes in progress to minor requests for police

service, respectively (City of San Diego 2015a). Table 4.14-2 indicates the most recent response times in the project area, for Beats 315 and 316. As shown in this table, the Eastern Division meets response time goals for Priority E calls in Beat 316 but does not meet any citywide response time goals for other calls in Beat 316 or any calls in Beat 315 (pers. Comm., Haley, 7/24/19).

Table 4.14-2. Beats 315 and 316 Call Priority Response Times

Call Priority ¹	General Plan Average Response Time Guidelines	2018 Average Response Times (Beat 315)	2018 Average Response Times (Beat 316)	2017 Actual Average Response Times (City-Wide)	2016 Actual Average Response Times (Eastern Division)
Priority E – Imminent threat to life	Within 7 minutes	7.4	6.9	6.9	8.2
Priority 1 – Serious crimes in progress	Within 12 minutes	18.5	17.9	16.3	18
Priority 2 – Less serious crimes with no threat to life	Within 30 minutes	50.2	32.4	43.7	45
Priority 3 – Minor crimes/requests that are not urgent	Within 90 minutes	132.7	11.2	102.6	102.7
Priority 4 – Minor requests for police services	Within 90 minutes	170.9	5.2	151.0	177

Sources: City of San Diego 2015a, 2018; 2019c. Haley, pers. comm., 7/24/19.

Sworn Personnel

Further, the SDPD's service goal for the entire SDPD service area is to maintain a ratio of 1.48 sworn officers per 1,000 residents. As of 2018, the ratio across the entire service area was 1.3 sworn officers per 1,000 residents, based on the 2016 estimated residential population of about 1,391,700. Further, based on a population of about 155,900 people and 76 sworn officers, the Eastern Division, as of 2017, had a service ratio of 0.48 (City of San Diego 2019c). As such, the Eastern Division does not meet SDUPD's service goal for sworn officers.

SDSU/CSU University Police Department

The University Police Department (UPD) provides on-campus police services to the SDSU main campus, and has concurrent statewide jurisdiction as well. The UPD operates 24 hours a day, 7 days a week, and includes a staff of 40 sworn personnel and 53 non-sworn support employees (SDSU 2018). UPD has an administrative agreement with the City of San Diego Police Department (SDPD) to provide mutual assistance, as appropriate, at sites in the vicinity of the SDSU campus (Harrison pers. comm. 2018). As authorized by Penal Code section 830.2(c), members of the CSU UPDs, when so appointed and duly sworn, are peace officers whose authority extends to any place in the state. However, such peace officers shall not exercise their powers or authority except upon CSU facilities and in an area within one mile of the exterior boundaries of CSU facilities, or as provided in Penal Code section 830.2 (Education Code section 89560). Therefore, the City and UPD have a strong professional working relationship and often assist one another when one department is closer to the incident or is better equipped to respond. For

example, large-scale incidents that could escalate into violence would require collaborative resources and unified command between UPD and SDPD and others (Harrison pers. comm. 2018).

4.14.1.3 Schools

The project area is served by the San Diego Unified School District (SDUSD), which serves students from pre-school through 12th grade. The SDUSD serves more than 121,000 students in pre-school through grade 12. Schools within SDUSD include 117 elementary schools (including K–8), 24 middle schools, 13 atypical/alternative schools, 22 high schools, and 49 charter schools (SDUSD 2018a). According to the City of San Diego General Plan Public Services, Facilities, and Safety Element (City of San Diego 2015a), the SDUSD applies the following enrollment limits to guide the planning of future school facilities:

- Maximum enrollment at elementary schools: 700
- Maximum enrollment at junior high/middle schools: 1,500
- Maximum enrollment at high schools: 2,000

Several SDUSD schools (including elementary, middle, and high schools) are located in the general vicinity of the proposed project. These existing schools, their current enrollment, and capacities, are outlined in Table 4.14-3, below. Existing schools are also shown on Figure 4.14-1, Existing Public Services.

Table 4.14-3 Project Area Public Schools and Enrollment (2018)

School ¹	Location	Distance from Project Site (miles)	Capacity	Enrollment (2007-2008)	Enrollment (2016-2017)	Excess Capacity
<i>Elementary Schools</i>						
Juarez Elementary (K–5)*	2633 Melbourne Drive	0.38	371	314	249	122
Jones Elementary (K-5)	2751 Greyling Drive	1.22	406	320	312	94
Adams Elementary (K-5)	4672 35 th Street	1.3	609	387	297	312
Garfield Elementary (K–5)	4487 Oregon Street	1.46	471	397	310	161
Franklin Elementary (K–5)	4481 Copeland Avenue	1.7	332	288	326	6
Stephen C. Foster Elementary (K-5)	6559 51 st Street	1.86	506	425	379	127
Alice Birney Elementary (K-5)	4345 Campus Avenue	2.0	432	339	557	-125
Fletcher Elementary (K–5)*	7666 Bobolink Way	2.0	278	258	200	78
Carson Elementary (K–5)*	6905 Kramer Street	2.7	643	498	418	225
Grant Elementary (K–5)	1425 Washington Place	3.4	632	531	731	-99
Bay Park Elementary (K–5)	2433 Denver Street	4.6	497	456	455	42

Table 4.14-3 Project Area Public Schools and Enrollment (2018)

School ¹	Location	Distance from Project Site (miles)	Capacity	Enrollment (2007-2008)	Enrollment (2016-2017)	Excess Capacity
Total (Elementary School)			5,177	4,213	4,234	943
Middle School						
Lewis Middle School (6-8)	5170 Greenbrier Avenue	1.0	1,184	1,052	1,159	25
Taft Middle School (6-8)*	9191 Gramercy Drive	1.2	863	734	507	356
Wilson Middle School (6-8)	3838 Orange Avenue	1.9	1,795	782	663	1,132
Montgomery Middle School (6-8)*	2470 Ulric Street	2.8	969	620	450	519
Roosevelt Middle School (6-8)	3366 Park Boulevard	3.1	1,174	969	1,020	154
Marston Middle School (6-8)	3799 Clairemont Drive	4.7	1,205	1,098	689	516
Total (Middle School)			7,190	5,255	4,488	2,702
Senior High Schools						
Herbert Hoover High School (9-12)	4474 El Cajon Boulevard	2.1	2,321	2,163	2,122	119
Kearny Senior High School (also known as Kearny Complex) (9-12)*	1954 Komet Way	2.0	1,961	1,828	1,480	481
Patrick Henry High School (9-12)	6702 Wandermere Drive	3.8	1,961	1,828	1,480	481
San Diego High School (9-12)	1405 Park Boulevard	4.3	2,993	2,900	2,414	579
Clairemont High School (9-12)	4150 Ute Drive	4.8	1,607	1,527	960	647
Total (High School)			10,843	10,246	8,456	2,307
Total (Elementary, Middle, High School)			23,210	19,714	17,178	5,952

Source: City of San Diego 2019c

Notes:

* Part of “Kearney Cluster”

Elevate Elementary School is also located within the vicinity of the project site, approximately 1.3 miles to the northeast. However, no data regarding capacity is available.

As shown in Table 4.14-3, above, and discussed in the Mission Valley Community Plan Update, schools in the vicinity of the project site have experienced a decrease in student enrollment in recent years. Most public schools serving the Mission Valley Community Plan area have decreased enrollment by at least 10% between the 2007-2008 and 2016-2017 school years, resulting in excess capacity in area schools (City of San Diego 2019c).

SDUSD's Vision 2020, is a community-based school reform plan that engages parents, staff, students, and community members. Vision 2020 states that schools will be organized into clusters for greater community cohesion, which would do the following:

- Clusters will consist of a high school and the middle and elementary schools that feed into it.
- Clusters will ensure that there is a continuity for the neighborhood students in the pre-K-to-12 program.
- Cluster councils will promote the schools in their communities.
- Cluster councils will work with schools, community and district staff to improve the quality of their neighborhood schools.
- Cluster councils will be a democratic representation of the school community including teachers, administrators, support staff, students, parents and community members.

Further, as of 2018, SDUSD is in the process of planning a new technology-oriented elementary school to be located at the intersection of Via Alta and Civita Boulevard within the Mission Valley Community Plan area, which is approximately 1.4 miles west of the project site. The school would serve students in grades pre-K through 5th grade, and accommodate up to 500 students and a staff of up to 40 individuals (City of San Diego 2019c).

4.14.1.4 Libraries

There are several libraries in the vicinity of the project area. These libraries are part of the San Diego Public Library System, which includes the Central Library and 35 branch libraries. Each of the libraries near the project area is listed in Table 4.14-4, along with its distance from the project area and its size (City of San Diego 2019f).

Table 4.14-4. Existing Libraries

Library	Address	Library Size	Distance from Project Site
Mission Valley Library	2123 Fenton Parkway	19,760 square feet	Adjacent
Kensington-Normal Heights Library	4120 Adams Avenue	2,300 square feet	1.4 miles
Allied Gardens/Benjamin Library	5188 Zion Avenue	Unknown	1.4 miles
Serra Mesa-Kearny Mesa Branch Library	9005 Aero Drive	15,626 square feet	1.7 miles
University Heights Library	4193 Park Boulevard	3,749 square feet	2 miles
North Park Library	3795 31st Street	8,000 square feet	2.1 miles
Linda Vista Library	2160 Ulric Street	10,000 square feet	2.6 miles
Clairemont Library	2920 Burgener Boulevard	4,437 square feet	4.1 miles

Source: City of San Diego 2019f.

As discussed in the Mission Valley Community Plan, a new 15,000-square foot Mission Hills/Hillcrest Library was proposed to replace the existing 3,850 square-foot facility at this location; and the Mission Hills/Hillcrest Library opened in January 2019. Currently, there are no other plans to build new or expand upon existing libraries in or near the Mission Valley Community Plan area (City of San Diego 2019c). Additionally, CSU/SDSU includes the Love Library, located within the SDSU main campus, approximately 2.5 miles east of the campus site, which is open to the public and has capacity to serve students in the SDSU Mission Valley campus.

4.14.1.5 Parks and Recreation

Project Site

Existing recreational facilities on site include the SDCCU Stadium, a 70,500-seat facility located in the middle of the project site. SDCCU Stadium holds a variety of sporting and recreational events, including SDSU football games and the annual Holiday Bowl football game. Although SDCCU Stadium can be reserved for special events (City of San Diego 2019a), the stadium is not open for public use. However, according to the Mission Valley Community Plan, the City leases the parking lot of the stadium, making it available to various sports organizations (City of San Diego 2013a).

Further, Little Q Field, an approximately 3-acre field, is located at the southwestern corner of the project site. Little Q Field is currently used by the San Diego OMBAC Wallabies Youth Rugby group. Public use of Little Q field is restricted (San Diego OMBAC Wallabies Youth Rugby 2019).

Local and Regional Parks

The City's Parks and Recreation Department is responsible for operation and maintenance of approximately 40,000 acres of developed and undeveloped parkland and open space within the City (City of San Diego 2015a). Development of public park space within the City is governed by the population-based park and recreation facilities guidelines provided in the Recreation Element of the City's General Plan. The guidelines associated with the development of population-based parks "provide a means to measure the degree to which park and recreational facilities are developed and to equitably provide facilities throughout the City" (City of San Diego 2015a).

The closest parks to the project site are the North Mountain View Mini Park, located 0.6 miles south of the site; Kenmore Terrace Mini-Park, located approximately 0.77 miles south of the site; and Normal Heights Open Space Park, located approximately 0.8 miles south of the site (City of San Diego 2019g). Table 4.14-5, Local and Regional Parks, identifies the nearest parks and recreation facilities to the project site, the size of each facility, and the distance from the project site. These facilities are also shown in Figure 4.14-1, Existing Public Services.

Table 4.14-5. Local and Regional Parks

Park	Acres	Distance from Project Site
San Diego River Garden	16.13	370 feet
Serra Mesa/Ruffin Canyon Open Space	84	0.43 miles
North Mountain View Mini-Park	0.04	0.6 miles
Kenmore Terrace Mini-Park	0.15	0.77 miles
Normal Heights Open Space Park	19.65	0.8 miles
Grantville Neighborhood Park	3.12	1.2 miles
Adams Recreation Center	2	1.20 miles
Adams School Joint Use	0.6	1.25 miles
Murray Ridge Park	13.55	1.26 miles
Normal Heights Elementary School Joint Use	1.1	1.33 miles
Civita Park	14.3	1.4 miles
Old Trolley Barn Neighborhood Park	2.9	1.46 miles

Table 4.14-5. Local and Regional Parks

Park	Acres	Distance from Project Site
Garfield Elementary School Joint Use	0.71	1.47 miles
Mission Trails Regional Park	7,220	4.3 miles

Source: City of San Diego 2019g.

Mission Valley Community Plan Area Parks

The project site is located within the Mission Valley Community Plan area. Four resource-based parks are located within or near the Mission Valley Community Plan area. These include Presidio Community Park, located in Old San Diego at the western end of Mission Valley, approximately 4.3 miles west of the project site; Sefton Field, located approximately 3.9 miles west of the site; Town and Country Park, located 2.6 miles west of the project site; and Civita Park, located 1.3 miles east of the site. There are over 125 acres of planned and planned proposed-based and joint use parks within the Mission Valley Community Plan Area (City of San Diego 2019c). The River Park, proposed on-site, is included as a proposed park in the Mission Valley Community Plan Update, and designated as the “Stadium Park”.

4.14.2 Relevant Plans, Policies, and Ordinances

Federal

National Trails System Act of 1968 (Public Law 90-543)

The National Trails System Act of 1968 instituted a nationwide system of interstate riding and hiking trails. This act reflects the federal government’s goals of preserving and developing new riding and hiking trails, and aims to protect existing trails and provide for new trails and related facilities.

State

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8, Sections 1270 and 6773, the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance and use of all firefighting and emergency medical equipment.

Emergency Response/Evacuation Plans

The state of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the state withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

California Building, Fire, and Health and Safety Codes

The State University Administrative Manual (SUAM) provides required procedures to be used during planning, design and construction of buildings and other facilities on CSU campuses (CSU 2004). SDSU is required to comply with existing California Building, Fire and Health and Safety Code regulations intended to reduce risk of damage to property and persons for all new development, based on procedures in the SUAM. Applicable regulations address building standards including roofing and roof access, fire flow (water) infrastructure, design of hydrant systems, fire protection systems (sprinklers and alarms), fire extinguishers, and structure egress. New development must also comply with access requirements (primary and secondary), provide adequate fire lanes, and maintain defensible space. The State Fire Marshal is responsible for reviewing plans to ensure compliance with applicable California Fire Code standards (CSU 2004).

California Fire Code

California Code of Regulations, Title 24, Part 9, incorporates adoption of the 2015 International Fire Code of the International Code Council with necessary California amendments. The California Fire Code establishes minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. The California Fire Code applies to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure within the State of California (24 CCR Part 9).

Senate Bill 50

Senate Bill (SB) 50, or the Leroy F. Greene School Facilities Act of 1998, relates to the financing of school facilities and the mitigation of the impacts of land use approvals on the need for school facilities (see Government Code sections 65995 and 65996, and Education Code section 17620). SB 50 authorizes school districts to levy a fee, charge, dedication, or other requirement against applicable construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities. The provisions of SB 50 are the exclusive methods of considering and mitigating impacts on school facilities that occur or might occur as a result of the planning, use, or development of real property. The payment or satisfaction of the statutory fees are deemed full and complete mitigation of impacts on the provision of adequate school facilities. A state or local agency may not deny or refuse to approve a project involving the planning, use, or development of real property on the basis of a person's refusal to provide school facilities mitigation that exceeds the authorized statutory fee amounts. For purposes of SB 50, "school facilities" means any school-related consideration relating to a school district's ability to accommodate enrollment. SB 50 does not limit or prohibit the ability of a local agency to mitigate the impacts of land use approvals other than on the need for school facilities.

California Government Code Section 66477 (The Quimby Act)

Although not directly applicable to the proposed project, Section 66477 of the California Government Code provides cities and counties with the authority to require, by ordinance, land dedications and/or fee payments for recreation facilities as a condition of approval for tentative and parcel maps. The Quimby Act outlines a number of items that must be contained in the local ordinance, including standards from which calculations can be made for the amount of land or fee that must be given for recreation purposes. In addition, the dedications and fees can only be used for creating or rehabilitating recreational facilities, and the city/county must develop a timeline for construction of those facilities. The Quimby Act sets forth a standard ratio of dedicated park area within a city to the number of

residents. Based on the average number of people per household and an approved or tentatively approved map, the Quimby Act requires a dedication of at least 3 acres of park land and/or cash in-lieu fees for every 1,000 residents generated by a proposed residential project.

Local

As stated, CSU as a state agency is sovereign and is not subject to local land use regulatory/planning documents, ordinances, regulations, policies, rules, fees, or exactions such as those described in this chapter. However, CSU is willing to purchase the project site pursuant to the framework set forth in Section 22.0908, which will be negotiated and memorialized in a future Purchase and Sale Agreement, in order to implement the overriding purpose of the proposed project. In addition, CSU will evaluate the proposed project's consistency with adopted, applicable state and federal regulatory/planning documents; and though not required by law, CSU also will consider the proposed project's consistency with adopted, applicable local regulatory/planning documents.

City of San Diego Municipal Code Section 22.0908

SDMC Section 22.0908 was approved by City of San Diego voters on November 6, 2018, directing the sale of real property to SDSU. This municipal code section provides that the sale of the existing SDCCU Stadium site is required to provide for certain uses, including the following:

- A River Park, public trails, walking and biking paths or trails, and associated open space for use by all members of the public;
- Passive and active recreation space, community and neighborhood parks;
- Practice, intramural, intermural, and recreation fields;
- Such sale shall cause the approximate 34-acre San Diego River Park south of the Existing Stadium Site to be revitalized and restored as envisioned by past community planning efforts so as to integrate the Mission Valley's urban setting with the natural environment; the River Park will incorporate active and passive park uses, 8- to 10-foot-wide linear walking and biking trails; a river buffer of native vegetation, and measures to mitigate drainage impacts and ensure compliance with water quality standards. River Park improvements shall be made at no cost to the City General Fund and completed not later than seven years from the date of execution of the sales agreement. The City shall designate or set aside for park purposes the River Park pursuant to City Charter Section 55. In addition, the Existing Stadium Site shall reserve and improve an additional minimum of 22 acres as publicly-accessible active recreation space.
- Such sale and ultimate development shall require development within the Existing Stadium Site to comply with the City's development impact fee requirements, parkland dedication requirements, and housing impact fees/affordable housing requirements.

Further, SDMC Section 22.0908 defines the River Park as follows:

"River Park" means approximately 34-acres of land south of the Existing Stadium Site to be revitalized and restored as envisioned by past community planning efforts so as to integrate the Mission Valley's urban setting with the natural environment (see Site Map, attached hereto as Section 8, Exhibit "A"); the River Park will incorporate active and passive park/recreation uses, 8- to 10-foot wide linear walking and biking trails; a river buffer of native vegetation, and measures to mitigate drainage impacts and ensure compliance with water quality standards.

City of San Diego Charter Section 55

The City adopted its Policy on Dedication and Designation of Park Lands in August 1985 to establish a policy for the protection of parklands by dedication or designation. The Policy on Dedication and Designation of Park Lands is included in Section 55 of the City Charter and allows all land acquired for open space park purposes and owned in fee by the City to be dedicated by ordinance, if it meets the following conditions:

- A. The land either fits the criteria of resource-based parks, in that it is the site of distinctive scenic or natural or cultural features, and is intended for City-wide use; is a complete open space system or sub-system; or at a minimum is a portion of a sub-system sufficient to stand on its own. (Isolated properties designated as open space shall be dedicated only upon the City's obtaining sufficient additional adjacent land to meet this requirement.)
- B. The land does not include areas which are undesirable for park purposes, would be more suitable for other purposes, or which could be traded or sold to obtain more desirable park lands or to fund park improvements. In these cases, to provide flexibility in making revisions which would be beneficial to meeting the City's open space goals, the land shall not be dedicated.
- C. The deed to the property is free of restrictions which might preclude dedication as park land.

City of San Diego General Plan

Although not applicable to a state agency like CSU/SDSU, the City's General Plan Public Facilities, Services, and Safety Element (City of San Diego 2015a) includes response time goals, objectives, and policies for fire and rescue services, including the following:

Fire-Rescue

- Policy PF-D.1 Locate, staff, and equip fire stations to meet established response times as follows:
 - To treat medical patients and control small fires, the first-due unit should arrive within 7.5 minutes, 90% of the time from the receipt of the 911 call in fire dispatch. This equates to 1-minute dispatch time, 1.5 minutes company turnaround time, and 5 minutes drive time in the most populated areas.
 - To provide an effective response force for serious emergencies, a multiple-unit response of at least 17 personnel should arrive within 10.5 minutes from the time of 911-call receipt in fire dispatch, 90% of the time.
- Policy PF-D.2. Determine fire station needs, location, crew size and timing of implementation as the community grows.
 - Use the fire unit development performance measures (based on population density per square mile) shown in Table PF-D.1 of the General Plan to plan for needed facilities. Where more than one square mile is not populated at similar densities, and/or a contiguous area with different density types aggregates into a population cluster area, use the measures provided in Table PF-D.2 of the General Plan.
 - Reflected needed fire-rescue facilities in community plans and associated facilities financing plans as a part of community plan updates and amendments.
- Policy PF-D.3. Monitor and maintain adopted service delivery objectives based on time standards for all fire, rescue, emergency response, and lifeguard services.

- Policy PF-D.4. Provide a 3/4-acre fire station site area and allow room for station expansion with additional considerations:
 - Consider the inclusion of fire station facilities in villages or development projects as an alternative method to the acreage guideline;
 - Where density and development preclude a ¾ acre site, consider a multistory station;
 - Acquire adjacent sites that would allow for station expansion as opportunities allow; and;
 - Gain greater utility of fire facilities by pursuing joint use opportunities such as community meeting rooms or collocating with police, libraries, or parks where appropriate.
- Policy-D.5. Maintain service levels to meet the demands of continued growth and development, tourism, and other events requiring fire-rescue services.
 - Provide additional response units, and related capital improvements as necessary, whenever the yearly emergency incident volume of a single unit providing coverage for an area increases to the extent that availability of that unit for additional emergency responses and/or non-emergency training and maintenance activities is compromised. An excess of 2,500 responses annually requires analysis to determine the need for additional services or facilities.
- Policy PF-D.6. Provide public safety related facilities and services to assure that adequate levels of service are provided to existing and future development.

Police Protection

- Policy PF-E.1. Provide a sufficient level of police services to all areas of the City by enforcing the law, investigating crimes, and working with the community to prevent crime.
- PF-E.2. Maintain average response time goals as development and population growth occurs. Average response time guidelines are as follows:
 - Priority E Calls (imminent threat to life) within seven minutes.
 - Priority 1 Calls (serious crimes in progress) within 12 minutes.
 - Priority 2 Calls (less serious crimes with no threat to life) within 30 minutes.
 - Priority 3 Calls (minor crimes/requests that are not urgent) within 90 minutes.
 - Priority 4 Calls (minor requests for police service) within 90 minutes.
- Policy PF-E.7. Maintain service levels to meet demands of continued growth and development, tourism, and other events requiring police services.
 - Analyze the need for additional resources and related capital improvements when total annual police force out-of-service time incrementally increases by 125,000 hours over the baseline of 740,000 in a given year. Out-of-service time is defined as the time it takes a police unit to resolve a call for service after it has been dispatched to an officer.

Schools

According to the City's General Plan Public Services, Facilities, and Safety Element (City of San Diego 2015a), the SDUSD applies the following enrollment limits to guide the planning of future school facilities:

- Maximum enrollment at elementary schools: 700
- Maximum enrollment at junior high/middle schools: 1,500
- Maximum enrollment at high schools: 2,000

Parks and Recreation

The Recreation Element of the City's General Plan contains policies to address the City's challenges to meet the public's park and recreational needs as resident and visitor populations grow and the availability of vacant land decreases, including the following:

- RE-A.8 Provide population-based parks at a minimum ratio of 2.8 usable acres per 1,000 residents (see also Table RE-2, Parks Guidelines).
 - a. All park types within the Population-based Park Category could satisfy population-based park requirements.
 - b. The allowable amount of useable acres exceeding two percent grade at any given park site would be determined on a case-by-case basis by the City.
 - c. Include military family housing populations when calculating population-based park requirements.
 - d. Ensure that parks are located adjacent to a public right-of-way.
 - e. All parks to be designed and constructed consistent with the "Consultant's Guide to Park Design & Development."
- RE-A.15. Ensure that adequate funding is identified in public facilities financing plans for the acquisition and development of sufficient land necessary to achieve a minimum ratio of 2.8 useable acres per 1,000 residents or appropriate equivalencies, including any unmet existing/future needs.
- RE-A.17. Ensure that all development impact fees and assessments collected for the acquisition and development of population-based parks and recreation facilities be used for appropriate purposes in a timely manner.
- RE-A.18. Pursue joint use agreements for recreational facilities on other public agency-owned land to help implement the population-based park acreage requirements if they meet the criteria for equivalencies.

Libraries

The Public Facilities, Services, and Safety Element of the City's General Plan contains policies to address the City's challenges to meet the public's library needs, including the following:

- PF-J.2. Design all libraries with a minimum of 15,000 square feet of dedicated library space, with adjustments for community-specific needs. Library design should incorporate public input to address the needs of the intended service area.

City of San Diego Council Policy 600-33

San Diego City Council Policy 600-33 is intended to establish guidelines to assure the public has advanced notification and opportunity to participate in the input process of park projects. This Council Policy generally applies to entities performing proposed improvements to the City's park facilities. While park development within the project site will not be subject to this policy due to sovereign immunity, CSU/SDSU has formed a park advisory committee to discuss and provide input on the project's park planning process in consideration of this Council Policy.

Mission Valley Community Plan

Although not applicable to a project owned by the state, the Mission Valley Community Plan, which serves as a blueprint for the future development of the neighborhood, was adopted by the City Council in 1984; and last amended in 2013. The Final Draft of the Mission Valley Community Plan Update, as well as the Final Program EIR, was released on May 31, 2019 (City of San Diego 2019c and 2019h). The Mission Valley Community Plan Update includes various implementation actions (IA) and policies for development that relate to parks and recreation, including the following:

Implementation Actions

Park Development

- IA-41 New Park Facilities. Pursue future park sites and park equivalencies identified in Table 5, Population-based Parks and Recreation Facilities Inventory and Recommendations [of the Mission Valley Community Plan Update] as opportunities arise.
- IA-42 Public Facility Integration. Public agency land or buildings are redeveloped, active or passive recreation should be incorporated on-site and into buildings, support facilities (e.g., parking structures), or the surrounding exterior lands, where space allows.
- IA-44 On Site Park Development. Encourage the development of parks within residential mixed-use developments and other public facilities.
- IA-45 Joint Use. Pursue lease agreements with public agencies (e.g., San Diego Unified School District, and Caltrans) to incorporate active or passive recreation into existing buildings or surrounding grounds where non-programmed space is available and appropriate for public use.
- IA-48 Non-traditional Parks. Support the development of non-traditional parks such as rooftop parks, bridge parks, and amenitized plazas to meet park needs. Park sites could also be added by acquiring and developing land through street/alley rights-of-way vacations (paper streets), where appropriate.
- IA-49 Preservation. Preserve, expand, and enhance existing park and future recreation facilities to increase their life span, or expand their uses and sustainability.
- IA-54 Mobility. Enhance existing park and recreation facilities in Mission Valley by optimizing pedestrian, bicycle, public transit, automobile, and alternative modes of travel.
- IA-55 Connectivity. Design all new recreation facilities for an interconnected park and open space system that is integrated into and accessible to Mission Valley community residents through the San Diego River Pathway and a network of paseos.

Public, Semi-Public, and Community Facilities and Services

- IA-68 Station Funding. Identify funding to support the development and regular upgrading of the police/fire stations within Mission Valley, as necessary, to adequately respond to fires and emergencies.
- IA-70 Satellite Police Station. Support the development of a satellite Police station on the Stadium site to serve a future dense, active area with limited connectivity and accessibility from existing stations.

Schools

- IA-76 Coordination. Coordinate with the San Diego Unified School District to explore options for the provision of pre-kindergarten to 12th grade educational facilities to serve future students within Mission Valley as needed.

Policies for Development**Park Development, Improvements, and Expansions**

- Policy PDI-1. Development should locate public parks on-site where feasible.
- Policy PDI-3. Any portion of a private development proposed to satisfy its population-based park requirements should:
 - Not restrict or limit the use of the park or facility to any person because of race, religion, or creed, or limit availability of the park or facility for the use of the general public.
 - Be permanent. This would mean that the project has an estimated useful life equivalent to that of similar installations on City-owned and developed parks.

Public Open Space on Private Development

- Policy POD-1. Calculate park acreage based on “usable acres” as defined in the General Plan Glossary.

Area-Specific: San Diego River

- Policy SDR-1. All development within the River Corridor Area and the River Influence Area should be consistent with the Land Use Development Code, Chapter 14, Article 3, Division 1, Special Flood Hazard Areas; Chapter 14, Article 3, Division 1, Environmentally Sensitive Lands; and the San Diego River Park Master Plan.
- Policy SDR-2. Trail entrances should be highly visible from the street and surrounding development, with recognizable and unified design elements at trail entrances, including landscaping, pedestrian-oriented amenities (e.g., drinking fountains and benches), signage, and pavers.
 - Where trails meet public roads, access points should be directly across from each other and the crossing should be signalized.
 - Wherever possible, pathways should be uninterrupted by conflicts with vehicles through grade separations.
- Policy SDR-3. All recreational areas and plazas, passive or active, should be visually and/or physically linked to the River Corridor’s passive recreation areas and facilities, so that they are integrated into the area-wide open space system.
- Policy SDR-5. Permanent best management practices, listed in the City’s Storm Water Standards Manual, must be implemented on all river area projects. Incorporate both mandatory structural practices (swales, infiltration basin) and mandatory non-structural practices (restricted irrigation, aggressive street cleaning).

Mission Valley Public Facilities Finance Plan

The current Mission Valley Public Facilities Financing Plan (PFFP), Fiscal Year 2013, was adopted by the City Council on May 2, 2013. The PFFP sets forth the major transportation (e.g., streets, traffic signals), libraries, park and

recreation, storm drains, and fire facilities needed to serve the community. The PFFP is a guide for future public facilities development within the community, serves to determine the public facility needs of the community, and sets forth Development Impact Fees to help mitigate the cost of the public facilities needed to serve development in the community. The PFFP provides the basis for a revision of the impact fees for the Mission Valley community (City of San Diego 2013b). As part of the Mission Valley Community Plan Update, the City of San Diego anticipates adopting an updated PFFP; however, the draft update of the PFFP is not available as of the writing of this EIR; therefore, the existing, adopted Mission Valley PFFP is considered in this analysis.

Navajo Community Plan

The San Diego City Council adopted the Navajo Community Plan in December 1982 and amended the plan in June 2015. The Navajo Community Plan area of San Diego is approximately 8,000 acres; located in the easterly portion of the City of San Diego; and includes the community areas of Allied Gardens, Del Cerro, Grantville, and San Carlos. The Plan's overriding objectives for the long-range development are to retain the residential character of the area; provide adequate community services, such as police and fire protection and rubbish collection; establish guidelines for the use of canyons and hillsides; and enhance the environment of the area as a pleasant, livable, walkable community (Navajo Community Planners and City of San Diego 2015).

The Navajo Community Plan outlines a future "Qualcomm Major Park and Recreation Center," planned to include 30 acres within the SDCCU Stadium site, adjacent to the San Diego River. This planned park was outlined in the Navajo Community Plan to serve both the Mission Valley and Navajo communities, with Navajo's portion estimated to use approximately 10 acres of active and passive recreation uses, including sports fields, picnic areas, children's play areas, multipurpose courts, walkways, landscaping, and parking. The Navajo Community Plan also outlines the need for a 25,000-square-foot recreation center to serve both the Navajo and Mission Valley communities with an indoor gymnasium, multipurpose courts, multipurpose rooms, a kitchen, and other community-serving facilities (Navajo Community Planners and City of San Diego 2015).

Navajo Public Facilities Financing Plan

The San Diego City Council approved the current Navajo PFFP, Fiscal Year 2015, was approved by the City Council on June 9, 2015, and the Mayor approved it on June 23, 2015. The Navajo PFFP identifies public facilities that are anticipated over the next 15 years (from the PFFP approval date) when full community build-out of the Navajo Community Plan area is anticipated, serves to establish a financing strategy for the provision of those facilities, and establishes a Development Impact Fee for new development (City of San Diego 2015b). The Navajo Public Facilities Financing Plan identified 10 acres of the project site for a community park.

San Diego River Park Master Plan

The San Diego City Council adopted the San Diego River Park Master Plan on May 20, 2013. The San Diego River Park Master Plan's goal is to provide the vision and guidance to reverse the San Diego River's threatened condition, and restore the symbiotic relationship between the river and surrounding communities. The San Diego River Park Master Plan's vision, principles, recommendations, and implementation strategy provide the City with a strong policy document for the future development along the river. Recommendations are divided into general recommendations for the entire river park area, extending from the City of Julian to the Pacific Ocean, and specific reach recommendations for the six distinct geographic areas of the river (City of San Diego 2013a). The project site is located within the Lower Valley geographic area.

The San Diego River Park Master Plan includes Design Guidelines, consistent with community plans such as the Mission Valley Community Plan, to support development regulations of the City's Land Development Code and community-specific regulations, such as the Mission Valley Planned District Ordinance. These design guidelines apply only to the River Corridor Area, which includes the 100-year floodway and 35 feet on both sides of the floodway, and the River Influence Area, which extends 200 feet beyond the River Corridor Area on both sides of the river. Guidelines as to how the River Corridor Area interfaces with the City's Multi-Habitat Planning Area (MHPA) and wetland buffer overlay are also discussed in the San Diego River Park Master Plan (City of San Diego 2013a).

The visions and principles of the San Diego River Park Master Plan, and the recommendations for achieving these, include the following (City of San Diego 2013a):

- Vision: Reclaim the valley as a common, a synergy of water, wildlife and people
- Principle One: Restore and maintain a healthy river system
 - Recommendation H. Future development projects should incorporate hydrology and water quality considerations in all planning and guidance documents and monitor water quality following implementation of the projects.
- Principle Two: Unify fragmented lands and habitats
 - Recommendation A. Establish appropriate corridors for the river, wildlife and people.
 - Recommendation B. Acquire open lands and/or pursue conservation easements.
 - Recommendation C. Eliminate invasive plant species and reintroduce native species.
 - Recommendation D. Naturalize floodway areas.
 - Recommendation E. Use biological systems to treat all storm water before it enters the river.
 - Recommendation F. Separate pedestrian/wildlife and vehicular river crossings.
 - Recommendation G. Create "Green Gateways"
 - Recommendation H. Establish habitat corridors as secondary gateways at side canyons and tributaries.
- Principle Three: Create a connected continuum, with a sequence of unique places and experiences
 - Recommendation E. Upgrade and link existing parks into San Diego River Park system.
 - Recommendation H. Provide San Diego River Park way-finding signs.
- Principle Four: Reveal the river valley history
- Principle Five: Reorient development toward the river to create value and opportunities for people to embrace the river
- Lower Valley Reach Recommendation I: Consider public recreation, the San Diego River Pathway and a naturalized open space along the river when planning any future use of the City's property at the Qualcomm Stadium site.

City of San Diego Municipal Code Land Development Code

Although not applicable to land and developments owned by a state agency, the San Diego Municipal Code (SDMC), Chapters 11 through 14, and a portion of Chapter 15, are referred to as the Land Development Code. These chapters contain the City's planning, zoning, subdivision, and building regulations. The Mission Valley Planned District Ordinance is included as Article 14 of Chapter 15 of the Land Development Code and includes special regulations that apply to development proposals subject to review under this ordinance. One of the purposes of the Mission Valley Planned District Ordinance is to support implementation of the River Park Master Plan. Section 1514.0302 of the Land Development Code also sets forth regulations to ensure that development along the San Diego River implements

the River Park Master Plan and the Mission Valley Community Plan. Additional purposes set forth in Section 1514.0302 are to preserve and enhance the character of the San Diego River Valley, to provide for sensitive rehabilitation and redevelopment, and to create the River Pathway. Where there is a conflict between the special regulations outlined in the Mission Valley Planned District Ordinance and those of Section 1514.0302 (San Diego River Park Subdistrict), the provisions of Section 1514.0302 shall apply.

4.14.3 Significance Criteria

The significance criteria used to evaluate the project impacts to public services are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to public services would occur if the project would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - a. Fire protection.
 - b. Police protection.
 - c. Schools.
 - d. Parks.
 - e. Other public facilities.

In addition, because recreation facilities are similar to parks, and because the significance criteria and analysis are related to the physical effects that a project may cause to existing parkland, this section also considers the following criteria from Appendix G of the CEQA Guidelines, which states that that a project would result in a potentially significant impact related to recreation if the project would:

2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
3. Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

4.14.4 Impacts Analysis

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

4.14.4.1 Fire Protection and Emergency Medical Services

Implementation of the proposed project would result in an increase in population and visitors to the project site, which would result in increased demand for fire protection services. The population growth generated by the proposed project would increase the call volume for fire protection in the area.

Emergency call volumes related to typical projects can be reliably estimated based on the historical per-capita call volume from a particular fire jurisdiction. As stated in the Citygate Study, the SDFD responds to more than 91,000 calls for service annually, or an average of 250 calls per day (Citygate 2017) for a City-wide total population of 1.4 million (U.S. Census Bureau 2019). As such, the City's per capita call volume is roughly 65 calls per year per 1,000 persons.

The proposed project would include approximately 4,600 residential units for the benefit of students, faculty, staff, and others interested in residing in a transit-oriented university campus setting. As discussed in Section 4.13, Population and Housing, the population generated by the proposed project is calculated as 8,510 residents. The proposed project's 8,510 residents would generate roughly 553 calls per year or 1.527 calls per day.

Station 45 was constructed in 2015 and is equipped with Battalion 4, Engine 45, Truck 45, HazMat 1, HazMat 2 which would respond to the project site in the event of a fire or other emergency. Fire Station 45, located adjacent to the project site north of Friars Road, responded to approximately 3,684 calls in 2017, or approximately 10 calls per day (SDFD 2017). As discussed in Section 4.14.1.1, Fire Station 45, has an average travel time of about seven minutes, above the five-minute goal. Further, Fire Station 45 has an average dispatch and crew turnout time of about nine minutes from the time of the 911 call to the time of arrival, above the City's established goal of 7.5 minutes (Citygate Associates, 2017). As shown in Figure 4.14-2, Station 45 can respond to the project site in less than three minutes, or half of the City's 7.5-minutes response threshold. Additionally, stations 17, 18 and 28 can respond to the entire project site in under 7 minutes, and stations 5, 14 and 23 can respond to portions of the project site in less than 7.5 minutes. No additional facilities are anticipated to be needed for the first responding unit to serve the project site within 7.5 minutes. Therefore, there would be no need for construction of new facilities, or additions to existing fire protection facilities, that could impact the physical environment. Therefore, a **less than significant** impact would occur.

Effective Fighting Force

As shown in Figure 4.14-1, Existing Public Services, and Table 4.14-1, Nearby Fire Stations, there are seven fire stations within approximately three miles of the project site to assemble the effective fighting force of 17 personnel within 10.5 minutes from the time of 911-call receipt in fire dispatch. To understand fire department response capabilities, Dudek conducted an analysis of the travel-time response coverage from the closest, existing stations. This modeling analysis was conducted using network analyst tools within GIS software, road data files, and proposed project development plan data. Response travel speed for this analysis was held constant at 35 mph, consistent with the Insurance Services Office (ISO) Public Protection Classification Program's Response Time Standard, and incorporated impedances (slowdowns) for intersections and turns by the model. This average speed has been validated for the ISO as still applicable as a predictive tool and considers average terrain, average traffic, weather, and slowing down for intersections. The proposed project's circulation systems include certain traffic-calming tools to improve pedestrian safety, and a 35 mph response travel speed is considered appropriate because the proposed street sections comply with fire access travel width requirements. Model output files were used to analyze the quantity and percentage of individual proposed project units that could be reached by fire response personnel from each station, assuming travel time and speed constraints.

Once the network data set parameters were finalized, Dudek ran network models to depict the response coverage from the permanent public safety site location. The model results provided in Figures 4.14-2 and 4.14-3 depict the geographic limits that can be reached within travel time intervals.

Station response times across the project site are shown in Figures 4.14-2 and 4.14-3. No additional facilities are anticipated to be needed for the first responding unit (highly likely to come from Station 45, adjacent to the site) to

serve the project site within 7.5 minutes. As shown in these figures, fire stations 5, 14, 17, 18, 23, 28, and 45 can respond within 10.5 minutes. Thus, no additional facilities are anticipated to be needed to assemble the effective fighting force to serve the project site within 10.5 minutes. Because there is an effective fighting force to serve the proposed project, there would be no need to expand existing fire service facilities, therefore no impacts to the physical environment would occur. Therefore, there would be no need for construction of new facilities, or additions to existing fire protection facilities, that could impact the physical environment. Therefore, a **less than significant** impact would occur.

Specialty Equipment

The proposed project includes two uses, the stadium and high-rise campus-related residential towers, which present unique requirements for fighting potential structural fires. Because one of these is an existing use on the project site (SDCCU Stadium), SDFD Station 45 is already equipped with the appropriate equipment.

Similarly, while the project site does not currently consist of high-rise towers, the larger service area under SDFD Station 45 contains several high rise office and residential buildings. Accordingly, Station 45 houses a ladder truck, which would be used to service the proposed project. Station 45 was constructed to house these specialty apparatus; and, accordingly, no expansion of the fire station is anticipated as a result of the proposed project.

Staffing

Lastly, with respect to staffing and service rations, the proposed project would introduce 8,510 new campus-related residents to the project site, as described in Section 4.13. This increase in population, as described above, would result in additional calls for service totaling approximately 1.52 calls/day. To achieve response time goals and objectives, the San Diego Fire Department would potentially have to increase staffing in the fire department. The San Diego Fire Department is funded through the City of San Diego's municipal budget. Ernst & Young prepared an economic impact analysis for the proposed project (EY 2019, EIR Appendix 4.13-1), which analyzes the increased tax and other revenues generated by the proposed project. As calculated by the Ernst & Young report, the proposed project would generate approximately \$4.0 million annually to the City of San Diego and an additional \$22.1 million annually in other taxes. The City would be able to use these funds for the provision of public services, including fire protection and emergency services, to maintain and improve staffing ratios to the extent necessary.

As such, although the increase in population and additional campus office/research, recreational, retail and hospitality uses associated with the proposed project would result in an increase in demand for fire services, due to the location of the project site and proximity of existing fire stations, no new or physically altered governmental facilities which could cause significant environmental impacts beyond those analyzed in herein, are required. Impacts to fire protection services would be **less than significant**.

Emergency medical services are provided to the Mission Valley Community Plan area and the project site through a public/private partnership between the City's Emergency Medical Services (EMS) and a private ambulance contractor, which provides additional personnel and some ambulances. EMS has ambulances, paramedics, and emergency medical technicians (EMTs) who respond to emergency calls. Medical emergency service demand over the previous three years involved 199,630 calls for service comprising 82.64% of total service demand over the same period (Citygate Associates 2017).

As noted above, the City requires ambulances to arrive at acute emergencies within 12 minutes, urgent situations within 15 minutes and non-emergencies within 25 minutes. From July 1 through September 30, 2018, ambulances

met the goal for acute emergencies 93 percent of time, for urgent situations 95 percent of the time and for non-emergencies 97 percent of the time. Although the increase in population and additional campus office/research, recreational, retail and hospitality uses associated with the proposed project would result in an increase in calls for fire and emergency medical services by roughly 553 calls per year or 1.527 calls per day, due to the location of the project site and proximity of existing fire stations, and because emergency medical facilities also include non-physical structures (i.e., ambulances stationed around the City and not necessarily housed within a physical structure), no new or physically altered governmental facilities the construction of which could cause significant environmental impacts beyond those analyzed in herein, are required. In addition, as described above, the proposed project would generate approximately \$4.0 million annually to the City of San Diego, and an additional \$22 million annually in other taxes. The City would be able to use these funds for the provision of public services, including fire protection and emergency medical services, to maintain and improve staffing ratios to the extent necessary. Impacts to emergency medical services would be **less than significant**.

4.14.4.2 Police Protection

As discussed above, the proposed project would introduce approximately 8,510 campus residents to the project site, which would result in increased demand of police protection services. Further, the introduction of additional campus office/research, recreational, retail, hospitality and other uses would result in an increased need for enhanced police services. The population growth generated by the proposed project would increase the call volume for police protection in the area.

The proposed project would be served by UPD, which will enter into a mutual aid agreement with local law enforcement agencies, including the San Diego Police Department, as appropriate. A new SDSU University Police Department substation also can be accommodated on the SDSU Mission Valley Campus Master Plan site. This substation would be staffed with all necessary public safety personnel to support the campus residential, office/research, recreational, retail, hospitality, and special event needs and serve as an extension of the central UPD station on the main campus. All services available on the main campus would be available at the Mission Valley campus and be provided in close coordination with main campus personnel and leadership.

Through the mutual aid agreement, UPD would serve as the primary law enforcement provider on the project site and respond to the majority of calls for service; however, SDPD or other entities (i.e., San Diego County Sheriff) may provide additional support as UPD requests.

Further, with respect to staffing and service ratios, the proposed project would introduce 8,510 new campus residents to the project site, as described in Section 4.13. This increase in population would result in additional demand for 12.6 sworn officers based on achieving the City's goal of 1.48 sworn officers per 1,000 population. To achieve response time objectives and keep staffing ratios, the San Diego Police Department would potentially increase staffing. The San Diego Police Department is funded through the City of San Diego's municipal budget. As calculated by the Ernst & Young report, the proposed project would generate approximately \$4.0 million annually to the City of San Diego and an additional \$22.1 million annually in other taxes. The City would be able to use these funds for the provision of public services, including law enforcement services, to maintain and improve staffing ratios.

With incorporation of a new substation on-site, service provided by UPD and execution of the mutual aid agreement with local law enforcement agencies, and through the increase tax revenues realized by the City through improved property values and sales taxes and other uses, police protection services to the project site would be provided and service to the remaining community would be ensured. No new or physically altered

governmental facilities for police protection beyond those analyzed herein would be required. Impacts to police protection would be **less than significant**.

4.14.4.3 Schools

The need for new school facilities is typically associated with a population increase that generates an increase in enrollment large enough to cause new schools to be constructed or existing schools to be expanded. The Mission Valley Community Plan Update includes student generation rates per housing unit, which were determined per correspondence with SDUSD. The student generation rates provided by SDUSD, and included in Table 4.14-8, were used to determine the projected number of elementary, middle, and high school students per housing unit generated by the proposed project. Student generation rates are based on the type of project, number of units, bedroom mix, affordable or senior housing in the community, proximity to schools and other amenities, the neighborhood, and other factors, based at buildout of the Mission Valley Community Plan Update, which was assumed to be 2050 (City of San Diego 2019c).

Table 4.14-8. Students Generated by the Proposed Project

	Low Student Generation Rate	High Student Generation Rate	Proposed Dwelling Units	Students Generated by the Project Using Low Student Generation Rate	Students Generated by the Project Using High Student Generation Rate
Elementary Schools (K-5)	0.038	0.076	4,600	175	350
Middle Schools (6-8)	0.013	0.026	4,600	60	120
High Schools (9-12)	0.016	0.032	4,600	74	148

Source: SDUSD 2018b.

Notes:

Generation rates were assumed per housing unit at buildout of the project.

* The high student generation was calculated by doubling the low student generation rate.

The proposed project would include the development of 4,600 campus-related residential units to the project site. Although it is expected that initially approximately 300 of these units would be university student housing (and would therefore not be likely to generate any elementary, middle or high school students), for a conservative analysis, this report assumed that all 4,600 units would be publicly available units in order to provide the highest total potential K-12 student generation. In addition, the number of K-12 students generated by the proposed project was calculated using both the low and high student generation rates provided in the Mission Valley Community Plan Update. As shown in Table 4.14-8, the proposed project has the potential to generate approximately 175 to 350 elementary school students, 60 to 120 middle school students, and 74 to 148 high school students.

A comparison between the potential K-12 students generated by the proposed project and existing school capacities is included in Table 4.14-9, K-12 Students Generated by the Proposed Project.

Table 4.14-9. K-12 Students Generated by the Proposed Project

	Total Enrollment Capacity (2016-2017)	Excess Enrollment Capacity (2016-2017)	Low Estimate		High Estimate	
			Potential Students	Difference	Potential Students	Difference
Elementary Schools (K-5)	5,940	1,117	175	942	350	767
Middle Schools (6-8)	9,308	3,232	60	3,172	120	3,112
High Schools (9-12)	13,453	2,119	74	2,045	148	1,971
Total (K-12)	28,701	6,468	309	6,159	618	5,850

Source: City of San Diego 2019c.

As shown in Table 4.14-9, K-12 Students Generated by the Proposed Project, elementary, middle, and high school students generated by the proposed project could be accommodated by available excess capacity at existing school facilities.

The elementary school capacity shown in Table 4.14-9 does not include Elevate Elementary School, which is located approximately 1.7 miles northwest of the proposed project site, for which data is not available. The elementary school capacity shown in Table 4.14-9 also does not include enrollment capacity for the planned Civita Elementary School, a 500-student capacity elementary school that is currently in the planning stage and that would be located approximately two miles west of the proposed project site (City of San Diego 2019c).

As discussed in Section 4.14.1.3, above, SDUSD's Vision 2020 states that schools will be organized into clusters, in order to provide greater community cohesion. Each cluster would include a high school as well as a middle school and elementary schools that feed into it (SDUSD 2019). The project site is located within the Kearney Cluster, which includes several of the schools listed in Table 4.14-3, Project Area Public Schools and Enrollment. SDUSD identified the elementary, middle and high school attendance boundaries within which the project site is located. Table 4.14-10 identifies the schools that currently serve the proposed project site, as well as the estimated capacity, existing enrollment, and projected enrollment for these schools; the table also shows the estimated students from the proposed project.

Table 4.14-10. Schools That Currently Serve the Project Site

School	Estimated Capacity	Enrollment (2018-2019)	Enrollment Projection (2019-2020)	Project Students	Difference
Juarez Elementary	328	274	272	175-300	(244)
Taft Middle School	718	462	457	60-120	141
Kearney High Complex	1,737	1,456	1,433	74-148	156

While individual schools (i.e., Juarez Elementary) may exceed capacity based on exiting attendance boundaries, within the Kearney Cluster, there is sufficient capacity to accommodate the increase in students from the proposed project at the elementary, middle and high school levels. In addition, as indicated by SDUSD, attendance boundaries are reviewed annually and subject to change, and the proposed project is likely to result in the need to adjust attendance boundaries at the elementary level.

Further, as calculated by the Ernst & Young report (EIR, Appendix 4.13-1), the proposed project would generate approximately \$10.0 million annually to the SDUSD in property and other sales and use taxes. SDUSD would be able to use these funds for the provision of educational services throughout the district.

Overall, there is sufficient capacity in schools surrounding the project site to accommodate K-12 students generated by the proposed project. SDUSD may adjust attendance boundaries for area elementary schools. However, impacts to schools would be **less than significant**.

4.14.4.4 Libraries

The proposed project would include the development of 4,600 campus residential units to the project site, which would result in the addition of approximately 8,510 residents that would increase demand for library services. The City's General Plan, Public Facilities, Services, and Safety Element sets a standard of a minimum of 15,000 square feet of dedicated library space for branch libraries (City of San Diego 2015a). As discussed in the Mission Valley Community Plan Update Final Program EIR, libraries have an approximately two-mile service radius. Accordingly, the Mission Valley Community Plan area is generally served by existing libraries including Mission Valley Branch (which particularly services the eastern portion of Mission Valley Community Plan area), the Mission Hills/Hillcrest, Linda Vista, and University Heights branches (City of San Diego 2019c). Additionally, CSU/SDSU includes the Love Library, located within the SDSU main campus, approximately 2.5 miles east of the project site, which is open to the public and has capacity to serve students from the SDSU Mission Valley campus.

In addition, it is anticipated that part of the development of the proposed project would include library services to serve the student population attending the future SDSU classrooms within the proposed project. While the ultimate size and configuration has yet to be determined, a new facility based largely on providing internet and other technological devices (computers, docking stations, etc.) is anticipated as part of the SDSU Mission Valley Campus Master Plan, all of which can be provided as part of the project's land uses. Impacts to library services would be **less than significant**.

4.14.4.5 Parks and Recreation

As explained in Section 4.14.3, because recreation facilities are similar to parks, and because the significance criteria and analyses are related to the physical effects a project may cause to existing parkland, this section also considers the following criteria from Appendix G of the CEQA Guidelines. The analysis determines the proposed project's estimated park demand and then analyzes whether the proposed project provides sufficient park acreage to meet the expected demand. Based on this analysis, the following section then determines whether the proposed project would result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts.

Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Under this significance criterion, an impact would occur if the project would increase the use of existing park and recreational facilities to the point where substantial physical deterioration of such facilities would occur or be accelerated. More specifically, this criterion addresses impacts in relation to off-site, existing recreational facilities that would experience an increase in usage resulting from the proposed project that may result in physical deterioration of the facility. To avoid such impacts, the construction of new parks and recreational facilities may be required by a project to reduce the impacts to existing facilities.

Relatedly, an impact would occur if the project would result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered governmental park facilities, the construction of which could cause significant environmental impacts.

4.14.4.5.1 Park Demand

The proposed project would introduce new residents on the project site, which would increase demand for park and recreational facilities. Table 4.14-11, Park Demand Generated by the Proposed Project, illustrates the projected park demand associated with the proposed project under various scenarios. The projected park demand was calculated using the persons per household (PPH) generation factor to forecast future populations of the proposed project area.

Table 4.14-11. Park Demand Generated by the Proposed Project

Dwelling Units	Persons Per Household	Population	General Plan Usable Park Standard (Acres/Residents)	Park Demand (Usable Acres)
4,600 units	1.85 ¹	8,510	2.8/1,000	23.83

¹ Mission Valley Community Plan Update Final Program EIR, City of San Diego, in progress

The City reports a parks standard of a minimum ratio of 2.8 useable acres per 1,000 residents (City of San Diego 2015a). As shown in Table 4.14-11, the addition of 8,510 residents to the project site would result in the increased demand of 23.8 useable acres of park area. As discussed in Section 4.14.1.5, Existing Conditions, the project site is located within the Mission Valley Community Plan area, which is primarily an urbanized commercial center that contains public parks. Some parks are located in the vicinity of the site; however, absent the development of parks within the project site, the proposed project would have a potentially significant impact on recreation.

4.14.4.5.2 Proposed Parks, Recreation, and Open Space Facilities

The proposed project would include approximately 86 acres of parks, recreational facilities, and open space, including the construction of additional parks and recreational facilities to accommodate the increase in population (see Figure 2-1, Concept Design Site Plan). A description of each of the proposed park and recreational facilities is provided below.

The proposed project would develop approximately 60 acres of parks, recreation and open space along the south, southeast, and eastern edges of the project site (the “River Park”). This area would include the 34-acre San Diego River Park contemplated by SDMC section 22.0908, as planned and envisioned by past community planning efforts, including the San Diego River Park Master Plan and Mission Valley Community Plan Update, to integrate Mission Valley’s urban setting with the natural. The 34-acre San Diego River Park area would be retained in fee ownership by the City of San Diego.

The parks and recreation portion of the River Park would be located north of the San Diego River floodway, south of the proposed academic uses, and south and east of the proposed residential uses. This area may include flexible use turf event/play areas, play structures, basketball courts, sand volleyball courts, baseball/softball field(s), and/or soccer field(s). Specific details of park facilities are being determined with the River Park Advisory Committee which as of the writing of this EIR, is currently involved with a comprehensive and inclusive planning process. Additionally, fixed bench seating, bike racks, and outdoor assembly/shared plaza space would be constructed. All

of these facilities would be open to the public, but some would be owned/maintained by SDSU and SDSU programs and affiliates would receive first priority for programming needs at those facilities.

The River Park may also include a dog park that would be located south of San Diego Mission Road and north of the proposed residential uses; a hike and bike trail that would be located throughout the parks and recreation portions of the River Park; a 2-mile hike and bike loop that would connect to the proposed hike and bike trail at multiple points and would circle the project site; and a building pad for a Community Recreation Center, as generally depicted in the Mission Valley Community Plan Update. Construction of vertical improvements at the Community Recreation Center is not part of the proposed project; instead, such improvements would be constructed by the City with appropriate City funding.

According to the City’s Policy on Dedication and Designation of Park Leases, all land acquired for resource-based park and recreation purposes and owned in fee by the City shall be dedicated by ordinance pursuant to Section 55 of the City Charter within 1 year of the date that the City accepts the property deed (City of San Diego 1985). Therefore, the 34-acre River Park would be dedicated in accordance with this policy. The proposed project would contribute to the construction of the 34-acre River Park, and the .85-acre Recreation Center Pad, in accordance with Municipal Code Section 22.0908, to serve the project site and neighboring communities.

The proposed SDSU campus parks and recreation features would include multi-use recreation fields and tailgate park, which would include an open turf area on approximately 7.2 acres in the northwest corner of the project site. This area would be used for recreational fields (i.e., soccer fields) during typical operation of the proposed project. Only during major events within the proposed stadium would this area be converted to temporary parking. Further, a 2-acre green area would provide a north/south connection between the stadium and the River Park area, and would provide access points to parking garages. An approximate 2-acre mall running east/west intersecting the center of the green would also be provided.

Other park and recreation areas within the SDSU campus would include courtyards and green space, which would be located throughout the SDSU campus/academic building areas serving as traditional “quad” features between buildings. This area would feature raised planters, bike racks, pedestal paver systems, moveable tables and chairs, shade structures, and outdoor assembly space with built-in seating and shared plaza space. Lastly, approximately paseos and bike lanes and paths would be provided within the campus/academic areas.

The proposed recreational and open space elements that would be part of the proposed project are outlined in Table 4.14-12, Proposed Parks and Recreation Facilities Summary. Table 4.14-12 identifies parks and recreational uses by different components, including active park uses, passive park uses, and open space areas.

Table 4.14-12. Proposed Park and Recreation Facilities Summary

Proposed Facility	Acreage
<i>San Diego River Park</i>	
Active Park, Recreation Fields, and Green Space	22.0
Passive Park and Green Space	18.8
Active Park, Recreation Fields, and Green Space at River Park	14.8
Open Space (Murphy Canyon Creek)	2.6
San Diego River Park Total Area	58.2

Table 4.14-12. Proposed Park and Recreation Facilities Summary

Proposed Facility	Acreage
<i>Campus/Academic Component and Community Recreation Center</i>	
Hike and Bike Loop	4.1
Community Hike and Bike Trail	3.8
<i>Campus/Academic Component and Community Recreation Center</i>	
Recreation Center (pad)	.85
Shared Campus/Community Recreational Field and Tailgate Park or Open Turf Area	7.2
Campus Green	2.1
Campus Mall	2.2
Courtyards	3.9
Paseos	2.0
Bike Lane and Paths*	0.9 miles
50-yard line Park	0.3
Total SDSU Campus/Academic Component Area	17.7
<i>Other Parks, Recreation and Open Space</i>	
Residential Paseos, Sidewalks and Landscape Areas within right-of-way	2.4
Total Park, Recreation, and Open Space Provided	86.1 acres
Total Population-Based Parks Required at 4,600 Units	23.8 acres
Park Excess (Deficit)	62.3 acres

PLDO = Park Lands Dedication Ordinance

* Does not include community hike/bike trail included in the San Diego River Park

As shown in Table 4.14-12, the proposed project would include approximately 86 acres of parks, recreation, and open space areas, including passive, active, and open space areas. This total would exceed the City's General Plan population-based park requirement of 23.8 acres by approximately 62 acres.

In conformance with SDMC Section 22.0908, the 34-acre San Diego River Park would be constructed within 7 years of the execution of the Purchase and Sale Agreement between SDSU and the City of San Diego. Further, as a project design feature, SDSU has committed that the River Park would be constructed prior to the occupancy of any vertical building on the project site, except for the stadium. Thus, no additional residents would be introduced on site before the River Park is fully constructed. Accordingly, the proposed project would not result in an immediate increase in demand for recreational facilities on site that may result in degradation of off-site recreational facilities or require additional off-site recreational facilities. Construction of additional parks and recreational facilities on site would be phased in over the remaining build-out of the proposed project.

It is expected that the proposed River Park would serve the Mission Valley Community Plan area and the Navajo Community Plan area, located east of the site. The Mission Valley PFFP identifies Project P-3, Mission Valley Community Park Design and Construction, as an approximately 20-acre community park in a location to be determined, with facilities including athletic fields, picnic areas, children's play areas, and nature trails (City of San Diego 2013b). The provision of the River Park would fulfill this project in the Mission Valley PFFP. Similarly, as discussed in the Navajo Community Plan, the Navajo Community is anticipated to benefit from 10 acres of the River Park (Navajo Community Planners and City of San Diego 2015). The proposed project would exceed the City's requirement by approximately 5 acres; as such, there is sufficient acreage to serve the cumulative demand from both the Mission Valley and Navajo communities.

The Mission Valley PFFP also identifies Projects P-4, Mission Valley Community Park – Recreation Center, and P-5, Mission Valley Community Park – Aquatic Complex. These facilities call for a 20,000-square-foot recreation building and a swimming pool to serve the Mission Valley community (City of San Diego 2013b). The proposed project would include a 0.85-acre, fully graded building pad with all utilities stubbed to the pad, which would be available for the construction of the Recreation Center and/or Aquatic Complex by the City using available City funds as appropriate.

The proposed project, in accordance with SDMC Section 22.0908, would comply with the City's development impact fee requirements and parkland dedication requirements. As discussed above, the proposed project would comply with the City's park dedication requirements through the provision of approximately 86 acres of parks, recreation and open space. Relative to the City's development impact fee requirements, the fee obligation associated with the proposed project would be satisfied through credits for costs of improvements performed in relation to on-site recreational facilities that are part of the Mission Valley PFFP. The following park facilities are from the Mission Valley PFFP and Navajo PFFP, which are summarized below.

Mission Valley Community Plan PFFP

P-2

Facility P-2 in the Mission Valley Community Plan Area PFFP is described as park acquisition and development of 51.05 acres of population-based parkland within the community plan area at one or more locations to be determined. Uses would include sports fields, children's play areas, picnic areas and nature trails. The proposed project would provide for such uses within the larger River Park, and as explained above, the proposed project meets the population-based park demand as calculated by the City's park dedication requirements.

P-3

Facility P-3 in the Mission Valley Community Plan Area PFFP provides for the development of a 20-acre community park, the location of which was to be determined. The proposed project, in compliance with SDMC section 22.0908, would provide for a community park as part of the 34-River Park.

P-4

Facility P-4 would provide for the construction of a 20,000 sq. ft. community recreation center at a location to be determined. The proposed project would provide for a .85-acre pad, fully grading and with utilities stubbed to the border, for the future construction of a community recreation center.

Navajo Community Plan PFFP

P-26

Facility P-26 is described as the Qualcomm Major Park-Development and would provide for a 10-acre community park on the project site. The proposed project, in compliance with SDMC section 22.0908, would provide for a community park as part of the 34-River Park.

Based upon the above, the proposed project would include sufficient park and recreational space such that it would not result in an increased use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. As a result, impacts would be **less than significant**.

Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As previously discussed, the proposed project would increase the population and generate demand for additional park and recreational facilities in the area. However, the proposed project would construct 86 acres of parks and recreation facilities, which would exceed the demand created by project residents; thus, no additional recreation facilities would be required beyond those constructed by the proposed project.

The impacts of the proposed project are analyzed in this EIR and would include construction and operation of several parks and recreational facilities that could potentially result in adverse physical effects on the environment. For instance, the project site is bounded on the south by the San Diego River and the San Diego MHPA, as designated in the City's Multiple Species Conservation Program Subarea Plan (City of San Diego 1997). The River Park should comply with the adjacency guidelines detailed for the MHPA. The proposed project's impacts on the MHPA are analyzed in detail in Section 4.3, Biological Resources, and the associated Biological Resources Technical Report, Appendix 4.3-1. Consistent with adjacency guidelines, the proposed project would result in a passive, naturally landscaped area within the River Park, which would serve as a buffer to the San Diego River. Within this 100-foot buffer area, passive park uses would be provided. However, development of the River Park would adhere to the Land Use Adjacency Guidelines set forth in the City's Multiple Species Conservation Program Subarea Plan, which provide guidelines for drainage, toxics, lighting, noise, barriers, invasives, brush management, and grading/land development for projects located adjacent to the MHPA (see also Appendix 4.3-1 for a more complete evaluation of the proposed project's consistency with MHPA Adjacency Guidelines). Consistency with the City's Land Use Adjacency Guidelines for the portions of the River Park that are adjacent to the MHPA may require installation of barriers to prevent public access into certain areas, lighting requirements to direct light away from the MHPA, and installation of drainage basins to prevent release of toxins into the MHPA (City of San Diego 1997).

As discussed above, no additional off-site recreation facilities are required to serve the proposed project to meet the demand of the proposed project's population. All proposed facilities are analyzed throughout the proposed project's EIR, and it is anticipated there will be no additional environmental impacts as a result of recreational facilities. Potential impacts for all environmental issues associated with the proposed project, including all park and recreational facilities, are addressed throughout the applicable chapters of the proposed project's EIR. No other impacts associated with the construction of parks, recreational facilities, or trails would occur beyond what is identified throughout the EIR. Accordingly, impacts related to adverse physical effects on the environment resulting from construction of new recreational facilities would be **less than significant**.

As discussed above, although the proposed project would result in the addition of approximately 8,510 residents on-site, the proposed project would provide approximately 86 acres of parks, recreation, and open space, the impacts of which are considered throughout this Draft EIR. Further, the proposed project would provide parkland beyond the amounts identified in SDMC 22.0908 and the City of San Diego's Park Dedication ordinance; therefore, no off-site parkland would be required, the impacts of which have not been analyzed. Impacts due to the on-site construction of park facilities, including the River Park and other on-site park and open space amenities, would not result in additional significant impacts beyond those analyzed throughout this EIR. As such, impacts related to the provision of new or physically altered parks and recreation, or the need for new or physically altered parks and recreation facilities would be **less than significant**.

4.14.4.6 Cumulative Impacts

Would the project contribute to a cumulatively considerable impact to public services or recreation?

Cumulative projects are listed in Table 3-1 and shown in Figure 3-1. The following analyses are based on the potential for the proposed project to contribute to cumulatively considerable impacts to public services.

4.14.4.6.1 Fire Protection and Emergency Medical Services

The cumulative impact area for fire protection and emergency medical service is the City of San Diego because SDFD provides service throughout the City.

Implementation of the proposed project would introduce approximately 8,510 residents at the project site, which would generate roughly 553 calls for service per year, or 1.52 calls for service per day. As analyzed in Section 4.14.4.1, the proposed project's impacts to SDFD's services, including medical emergency services, would be less than significant.

The Mission Valley Community Plan Update Final Program EIR determined that, even with collection of impact fees from future development to fund needed infrastructure, such as fire stations, and with implementation of policies outlined in the Community Plan Update for supporting development and upgrades of fire stations in Mission Valley, impacts to fire protection services would be significant and unavoidable because impacts associated with the construction and operation of any future new or expanded facility or facilities are not known at the time. The specific locations or plans for future fire stations are not yet determined; therefore, project-specific impacts of new or expanded fire facilities are not known at this time. However, the construction or expansion of future fire stations would be subject to separate CEQA reviews and applicable regulatory requirements and permits at the time that the fire stations are proposed. It is expected that any impacts associated with such new fire stations would be reduced to less than significant with mitigation measures imposed through the subsequent CEQA process. Nonetheless, given that the implementation of such new government facilities are outside the control of CSU and because impacts associated with the construction and operation of any future new or expanded facility or facilities are not known at the time, the cumulative impact to fire protection and emergency medical services is conservatively determined to be significant. Accordingly, the proposed project would contribute to a **cumulatively considerable impact** to fire protection and emergency medical services.

4.14.4.6.2 Police Protection

The cumulative impacts area for police protection is the project site and the SDSU Main Campus because the proposed project would be served by UPD; however, SDPD would also serve the project site through an automatic aid agreement with CSU/SDSU. As discussed above, the population growth generated by the proposed project would increase the call volume for police protection in the area. The Mission Valley Community Plan Update EIR determined that, although the City would collect fees from future development to fund needed infrastructure, such as police stations, and the Mission Valley Community Plan Update contains policies that support identifying funding for the development and upgrading of police stations within Mission Valley, impacts to police protection would be significant and unavoidable because construction and operation of future police facilities are not known at this time. However, a new SDSU University Police Department substation could be located on the SDSU Mission Valley campus. As such, with incorporation of a new substation on-site and establishment of police services on the Mission Valley Campus such as afforded on the SDSU main campus, police protection services to the project site would be provided and service to the remaining community would be maintained. The potential environmental impacts of constructing a

police station on site have been addressed throughout this EIR. As such, the proposed project would not contribute to a cumulatively considerable impact to police protection. Cumulative impacts would be **less than significant**.

4.14.4.6.3 Schools

The proposed project would generate up to 298 elementary school students at buildout in 2037. As shown in Table 4.15-13, the Mission Valley Community Plan Update Final Program EIR determined that buildout of the Mission Valley Community Plan Update may result in insufficient classroom capacity in elementary schools under the high and low estimate scenarios to serve cumulative development and that new or expanded government facilities would be required, and identified a cumulatively considerable impact to schools. The Mission Valley Community Plan Update Final Program EIR did not anticipate construction of the Civita Elementary School site, which could provide for approximately 500 elementary students. If constructed, there would be sufficient capacity to accommodate elementary students under the low estimate scenario; however, there would still be up to approximately 589 elementary students projected beyond the planned capacity.

Table 4.14-13: Potential Students and School Capacity at Buildout

	<i>Total Enrollment Capacity (2016-2017)</i>	<i>Excess Enrollment Capacity (2016-2017)</i>	<i>Low Estimate</i>		<i>High Estimate</i>	
			<i>Potential Students</i>	<i>Difference</i>	<i>Potential Students</i>	<i>Difference</i>
Elementary Schools (K-5)	5,940	1,117	1,252	-136	2,506	-1,389
Middle Schools	9,308	3,232	352	2,880	705	2,527
High Schools	13,453	2,119	470	1,649	940	1,179
TOTAL (K-12)	28,701	6,468	2,074	4,393	4,151	2,317

Note: Total enrollment capacity does not include planned elementary school at Civita

Sources: City of San Diego 2018; City of San Diego 2019c; SDUSD 2018.

The Mission Valley Community Plan Update Final Program EIR concluded that, even with collection of fees from future development to fund school facilities, if needed, impacts to schools from the implementation of the Mission Valley Community Plan Update would be significant and unavoidable because the construction and operation of any future facility is not known at this time. The specific locations or plans for future schools are not yet determined; therefore, project-specific impacts of new or expanded school facilities are not known at this time. However, the construction or expansion of future schools would be subject to separate CEQA reviews and applicable regulatory requirements and permits at the time that the school facilities are proposed. It is expected that impacts associated with such new schools would be reduced to less than significant with mitigation measures imposed through the subsequent CEQA process.

Nonetheless, given that the implementation of such new government facilities is outside the control of CSU and because impacts associated with the construction and operation of any future new or expanded facility or facilities are not known at the time, the cumulative impact to schools is conservatively determined to be significant. As such, although the proposed project would be slightly reduced compared to the anticipated uses for the project site in the Mission Valley Community Plan Update Final Program EIR (a reduction of 200 homes), and there is sufficient capacity in schools within the Mission Valley Community Plan area to accommodate students generated by the proposed project, in conjunction with other related projects within the Mission Valley Community Plan Update, the proposed project would contribute to a **cumulatively considerable impact** to schools.

4.14.4.6.4 Libraries

The Mission Valley Community Plan Update Final Program EIR determined that impacts to libraries would be significant and unavoidable, since impacts associated with the construction and operation of any future facility are not known at this time. However, the proposed project would include library services to serve the student population attending the future SDSU classrooms within the proposed project. While the ultimate size and configuration has yet to be determined, a new facility based largely on providing internet and other technological devices (computers, docking stations, etc.) is anticipated as part of the SDSU Mission Valley Campus Master Plan. As such, the potential environmental impacts of the proposed library has been analyzed throughout this EIR. Thus, the proposed project would not contribute to a cumulative impact to libraries.

4.14.4.6.5 Parks and Recreation

The cumulative impact area for recreation facilities is the Mission Valley Community Plan area. The Mission Valley Community Plan Update Final Program EIR determined that the community plan area would be approximately 50.2 acres short of the projected parkland necessary to meet the City's 2.85 acres per 1,000 population standard and determined that such impacts were significant and unavoidable.

The proposed project would provide approximately 86 acres of parks, recreation and open space facilities. The Mission Valley Community Plan Update anticipated the project site would provide approximately 38.1 acres of active park and 4.9 acres of open space as part of the Community Plan Update EIR (San Diego 2019); thus, the proposed project would provide approximately 41 acres of parks, recreation and open space in excess of the projected amounts included in the Mission Valley Community Plan Update EIR. Further, because the proposed project includes 200 fewer units than anticipated in the Community Plan Update EIR, it would generate approximately 370 fewer residents, reducing park demand by approximately 1.1-acres based on the 1.85 PPH factor used in the Mission Valley Community Plan Update Final Program EIR.

Because the proposed project would generate 41 acres of additional parkland compared to the Mission Valley Community Plan Update, and would reduce the shortfall of the community plan area from 50.2 acres to approximately 49.2 acres (due to 200 fewer homes than anticipated in the Mission Valley Community Plan Update), implementation of the proposed project would reduce the overall park shortfall in the Mission Valley Community Plan Area to approximately 8.2 acres. Accordingly, the proposed project would contribute an amount greater than the programmed amount of funding and improvements, and would help correct an existing park deficiency in the Mission Valley and Navajo Communities. Therefore, the proposed project would provide for additional facilities that would reduce the deterioration of existing park facilities, and would lessen the cumulative shortage of recreational facilities in the Mission Valley Community Plan Area by providing more recreational land than the City's park dedication ordinance would require. The proposed project's contribution to cumulative park services and recreation impacts would not be cumulatively considerable.

4.14.5 Significant Impacts Prior to Mitigation

As described in Section 4.16.4, above, direct impacts to public services and recreation would be less than significant. However, with implementation of the Mission Valley Community Plan Update, cumulative impacts to public services would be cumulatively considerable. Cumulative impacts resulting from the project are listed below:

Impact PS-1 The proposed project would contribute to a cumulatively considerable impact to fire protection and emergency medical services because the impacts associated with construction and operation of future fire protection and emergency medical services facilities within the Mission Valley Community Plan Area by the City of San Diego are not known at this time.

Impact PS-2 The proposed project would contribute to a cumulatively considerable impact to schools because the impacts associated with construction and operation of future school facilities within the Mission Valley Community Plan Area by SDUSD are not known at this time.

4.14.6 Mitigation Measures

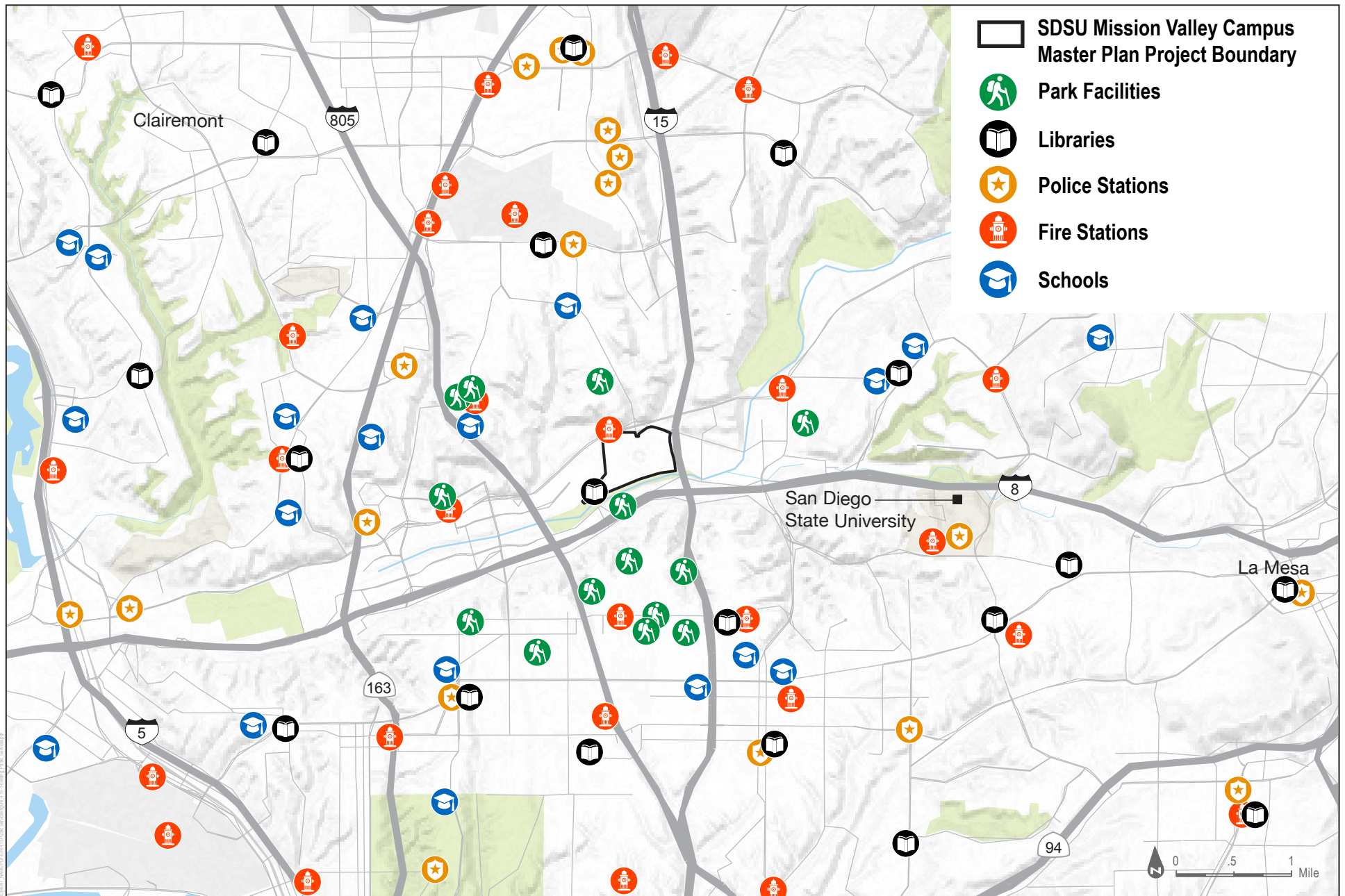
No mitigation measures are available at this time.

4.14.7 Level of Significance After Mitigation

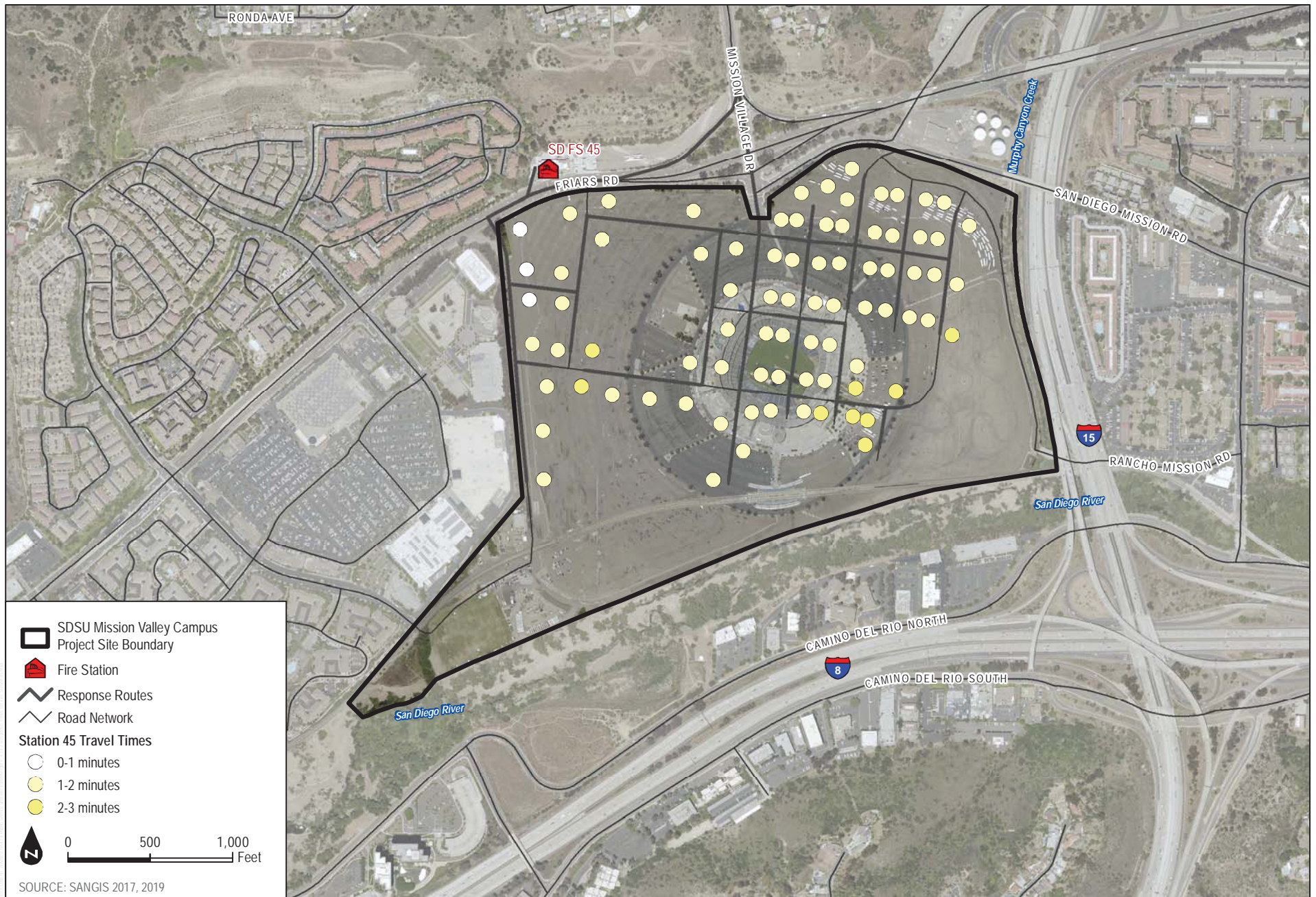
Direct impacts related to public services and recreation would be **less than significant**.

The proposed project's contribution to cumulatively considerable impacts to fire protection and emergency medical services **Impact PS-1** would be **significant and unavoidable**. As reported in the Mission Valley Community Plan Update Final Program EIR, while the City would collect fees from future development to fund needed infrastructure, such as fire stations, and the Mission Valley Community Plan Update contains policies that support identifying funding to support the development and upgrading of fire stations within Mission Valley, this impact would be significant and unavoidable since impacts associated with construction and operation of any future facility are not known at this time.

The proposed project's contribution to cumulatively considerable impacts to schools **Impact PS-2** would be **significant and unavoidable**. As reported in the Mission Valley Community Plan Update Final Program EIR, while SDUSD would collect fees from future development to fund school facilities, if needed, this impact would be significant and unavoidable since impacts associated with the construction and operation of any future facility are not known at this time.



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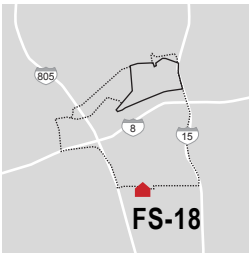
- SDSU Mission Valley Campus Project Site Boundary
- Fire Station
- Response Routes
- Road Network

Response Times

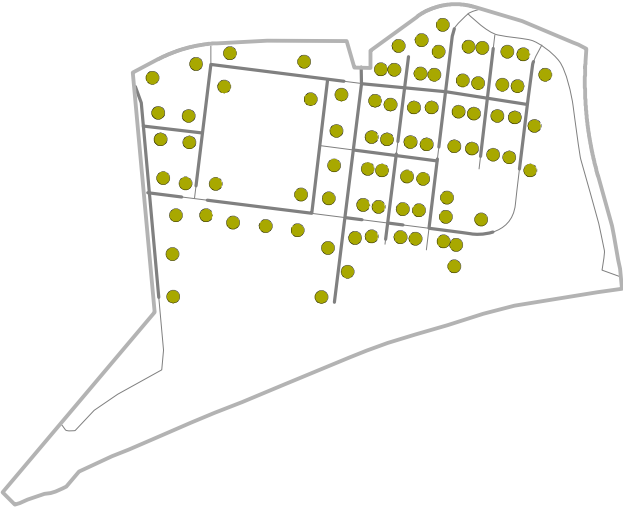
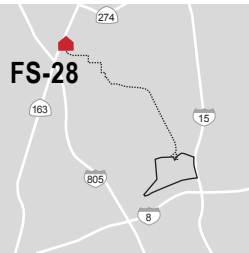
- 0-1 minutes
- 2-3
- 2-3
- 3-4
- 4-5
- 5-6
- 6-7
- 7-8
- 8-9
- 11-12
- 12-13
- 13-14

*Shortest distance to the project site from individual fire stations

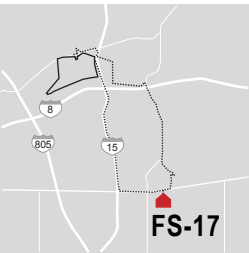
Fire Station 18
3.05 miles*



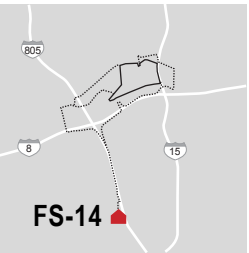
Fire Station 28
3.18 miles*



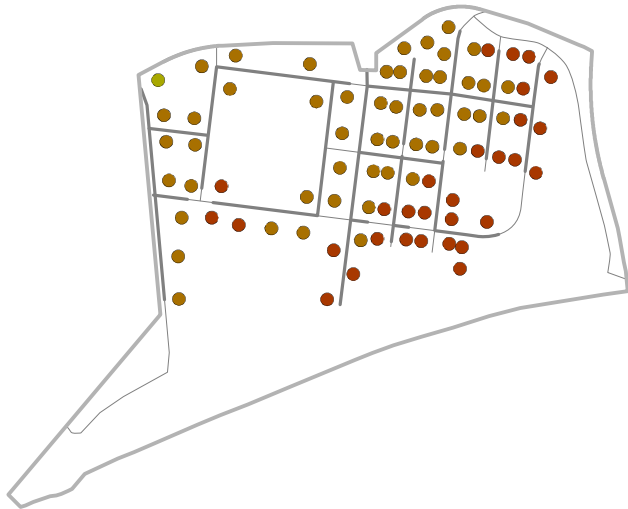
Fire Station 17
3.51 miles*



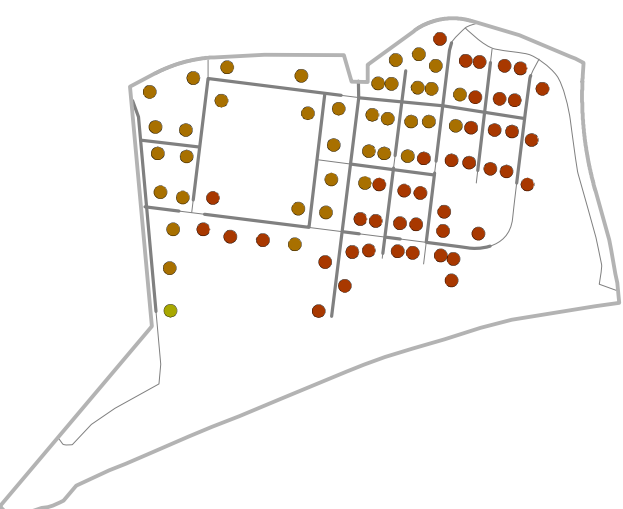
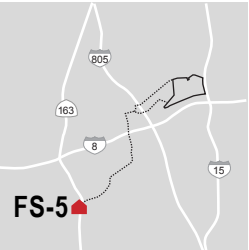
Fire Station 14
3.65 miles*



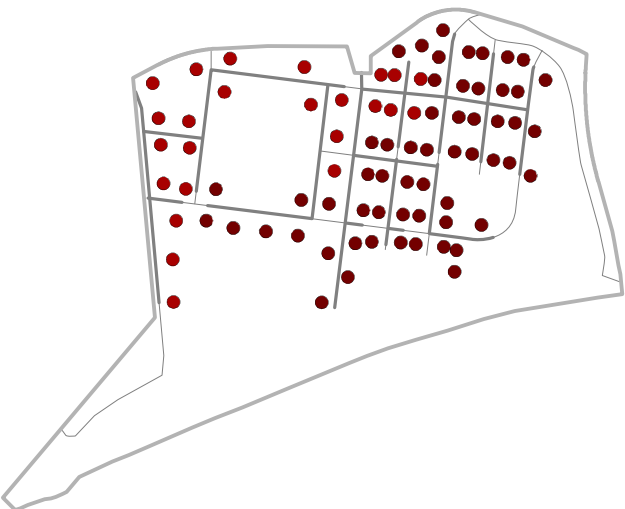
Fire Station 23
3.70 miles*



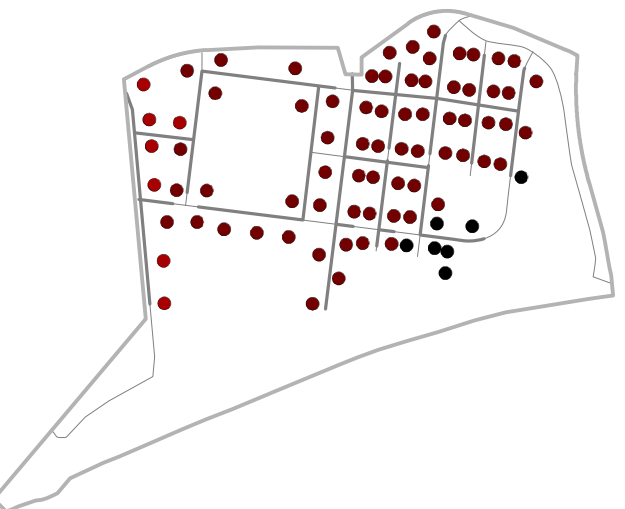
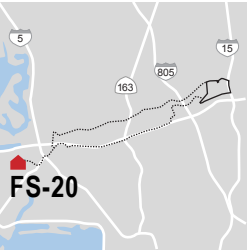
Fire Station 5
3.71 miles*



Fire Station 25
6.18 miles*



Fire Station 20
6.52 miles*



SOURCE: SANGIS 2017, 2019

Figure 4.14-3
Modeled Response Times

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4.15 Transportation

This section describes the project site and vicinity's existing transportation conditions, identifies associated regulatory requirements, evaluates potential impacts related to implementation of the proposed project, and identifies recommended mitigation measures where feasible to reduce the identified significant impacts to less than significant. The analysis presented here is based on the SDSU Mission Valley Campus Project Transportation Impact Analysis, July 2019 (TIA) prepared by Fehr & Peers. A copy of the TIA is included in Appendix 4.15-1 of this environmental impact report (EIR).

4.15.1 Introduction and Summary of Impacts

The project area includes a total of 172 acres bound by Friars Road to the north, Interstate 8 (I-8) to the south, Stadium Way (Street A) to the west, and Interstate 15 (I-15) to the east. The proposed site will transition to a 15,000-student university campus. Initially, the site will be developed with a mix of uses to facilitate building construction and funding of campus facilities. To that end, this analysis focuses on the potential transportation-related impacts resulting from implementation of the following initial land uses proposed for the site, which would generate greater traffic and impacts than the ultimate campus uses:

- Approximately 86 acres of parks, recreation and open space, which includes approximately 4 miles of pathways and trails for walking and biking
- 4,600 residential units
- 1.466 million square feet of campus office and lab space
- 100,000 square feet of medical office space
- 95,000 square feet of retail/restaurant space (including a 12,000-square-foot grocery store)
- a Stadium with a capacity of 35,000
- 400 hotel rooms
- 13,192 total parking spaces in structured, underground and surface parking areas

The site of the proposed project currently includes the San Diego County Credit Union (SDCCU) Stadium, with an existing capacity of 70,561, which will be demolished and replaced by the new development. Vehicle access to the site will be provided via existing connections at Stadium Way (Street A) and Friars Road, Mission Village Drive and Friars Road, San Diego Mission Road, and Rancho Mission Road. A new roadway connection to the southern terminus of Fenton Parkway is also proposed from the southwest corner of the site.

In accordance with California State University (CSU) Transportation Impact Study Manual (TISM) and the City of San Diego Traffic Impact Study Manual, vehicle trip generation rates from the San Diego Land Development Code were used to estimate the number of vehicle trips associated with the SDSU Mission Valley Campus project. Appropriate reductions to trip totals were made to account for pass-by trips, trip internalization, and non-automobile modes of transportation. To further reduce the number of vehicle trips, the proposed project would also implement a comprehensive transportation demand management (TDM) program for all uses within the site. The TDM program would include elements such as a transportation coordinator; bicycle racks and secure bicycle parking for all residents, visitors and employees; showers and lockers for employees; kiosks, website and coordination with the SANDAG iCommute program; guaranteed rides home; unbundled residential parking, metered and time-limited on-street parking; etc. The TDM program would reduce projected traffic volumes and project-generated vehicle miles

of travel (VMT) by an estimated 14.4%. After accounting for the appropriate reductions, the proposed project is expected to generate approximately 45,174 net new daily weekday trips, 3,716 net new AM peak hour trips, and 4,628 net new PM peak hour trips under conditions without a Stadium event. On any given Saturday, with a Stadium event taking place, the proposed project is expected to generate nearly 26% fewer trips than on a weekday. As such, the weekday peak hours are the time periods during which the proposed project would generate the most traffic on the adjacent study area roadways and, accordingly, the weekday peak hours are the focus of this impact analysis. Under a scenario in which a Stadium event occurs on a weekday, the proposed project would generate an additional 19,099 net new daily weekday trips and 2,178 new PM peak hour trips. A stadium event is expected to add only a negligible number of AM peak hour trips given a typical event starting time of 7PM or later.

The analysis presented here addressed the potential project-related impacts under typical weekday AM and PM peak hour traffic conditions under Existing 2018 Conditions and under Horizon Year (2037) Conditions, when the proposed project is scheduled to be fully built out and operational. The analysis evaluated weekday operations with and without the project, including with and without a Stadium event, at 40 existing intersections, three (3) new on-site intersections, 34 roadway segments, 23 bi-directional freeway segments, four (4) freeway on-ramp meters, and eight (8) freeway off-ramps for these two study scenarios.

Implementation of the proposed project under these scenarios is expected to result in the following significant transportation impacts under Horizon Year (2037) Plus Project Conditions:

- Horizon Year Plus Project Without Stadium Event – 13 intersections, 12 freeway segments, and four on-ramps.
- Horizon Year Plus Project With Stadium Event – 17 intersections, 17 freeway segments, and four on-ramps.

With City authorization and the necessary funding mechanisms in place, implementation of the proposed mitigation measures to enhance capacity and optimize operations would mitigate the project's identified significant traffic impacts with the exception of six intersections, 12 individual freeway segments, and four (4) metered on-ramps, which will remain significantly impacted under the Horizon Year Plus Project Without Stadium Event scenario as there are no feasible mitigation measures to eliminate the identified impacts. When a Stadium event occurs, an additional six intersections, five freeway segments, and the same four metered on-ramps would be significantly impacted. Although Stadium event traffic will be mitigated to a certain extent with a series of transportation and parking management strategies similar to, but improving upon, such strategies presently in place for Stadium events, there is no further feasible mitigation and, as such, these additional impacts will remain significant and unavoidable.

In addition to the above analyses, which were conducted under a future baseline scenario that did *not* include the future planned Fenton Parkway Bridge as part of the underlying roadway network. The Fenton Parkway Bridge is identified in the Mission Valley Community Plan; however, full funding for the bridge has not been identified, nor has the necessary environmental review been conducted, nor a construction schedule identified. Additional analyses were conducted for information purposes that included both a 2-lane and 4-lane bridge as part of the future baseline scenario. Specifically, at the request of the City of San Diego, an analysis of the proposed project's impacts relative to intersections, road segments, and freeway facilities under a baseline scenario that included a 4-lane bridge was conducted. That analysis determined that the addition of the 4-lane bridge as compared to the no bridge scenario would result in a total of four new significantly impacted intersection locations and one new City threshold exceedance location, and also would eliminate two significantly impacted intersection locations based on both CSU and City thresholds. As to roadway segments, the addition of the 4-lane bridge as compared to the no bridge scenario would cause one new threshold exceedance and would eliminate two threshold exceedances based on City thresholds. As to freeway segments and off-ramp queuing, there would be no change in the number of significantly impacted

locations as compared to the no bridge scenario. Lastly, as to freeway ramp meters, the addition of the 4-lane bridge would result in the elimination of one significant impact.

In addition to the 4-lane bridge scenario, an analysis also was conducted that assumed a 2-lane Fenton Parkway Bridge was in place as part of the future baseline scenario. That analysis determined that the addition of the 2-lane bridge as compared to the no bridge scenario would result in a total of four new significantly impacted intersection locations and one new City threshold exceedance location, and also would eliminate one significantly impacted intersection location based on CSU thresholds, though this location would still exceed the City threshold. As to roadway segments, the addition of the 2-lane bridge as compared to the no bridge scenario would cause one new threshold exceedance based on City thresholds. As to freeway segments, ramp meters, and off-ramp queuing, there would be no change in the number of significantly impacted locations as compared to the no bridge scenario.

The conclusions reached by the 2-Lane and 4-Lane bridge analyses support the results of the primary analysis that the extension is not required to reduce significant project impacts, and the the project's impacts can be reasonably mitigated with physical and other improvements without the bridge in place.

With respect to parking, the parking supplies for the proposed residential buildings and hotel rooms will be dedicated to those uses, while the parking for the campus office and supporting neighborhood retail uses will be shared and available for public use. The proposed parking supply would address weekday and weekend demand for the proposed residential, retail, and campus office uses, while also encouraging the use of non-automobile modes. The presence of a trolley station within an approximate 1,500-foot radius of nearly all of these uses, coupled with a robust bicycle and pedestrian network and a managed parking supply with time limits and parking fees, will help to minimize overall vehicle traffic and related parking demand.

For every Stadium event occurring on weekend days and weekdays, a comprehensive transportation and parking management plan (TPMP) will be implemented to expedite traffic flows, minimize delays, maximize parking and circulation efficiencies, and enhance safety. The TPMP includes manual traffic control, digital and static wayfinding, electronic communication to attendees and campus users, off-site parking, etc., and additional measures tailored to the anticipated event attendance as appropriate. The parking demand for the campus office uses will be very low on weekends and, as a result, the shared supply will be available for Stadium patrons on weekends, when most events with the highest attendance are expected to occur. Although when Stadium events occur on a weekday, the parking demand for campus office uses will substantially reduce the shared supply available for Stadium patrons, for those limited events with attendance levels exceeding 25,000 persons or more, off-site parking supplies near trolley stations will be provided to minimize the potential for Stadium patrons to park in adjacent neighborhoods. These off-site lots, plus communication with campus office users, will help to maximize the available parking supply (similar to what occurs for baseball games at Petco Park). However, even with TPMP measures in place, in combination with the project's Transportation Demand Management (TDM) Program, the parking supply will be inadequate for high attendance events and, on those limited occasions, traffic congestion will be exacerbated and the resulting impacts are expected to be significant and unavoidable.

As to pedestrian and bicycle facilities, the proposed project does not conflict with any planned pedestrian or bicycle facilities, and the substantial pedestrian and bicycle network across the project site will enhance multimodal connectivity and link neighborhoods that have previously had limited walk and bike access. For example, the proposed connection to Fenton Parkway that would be built as part of the proposed project would provide an attractive bicycle and pedestrian connection between the shops and restaurants at Fenton Marketplace and neighborhoods east of I-15. In addition, the proposed site connections will provide an alternative for bicyclists to using Friars Road, which has high vehicle volumes and speeds adjacent to its bike lanes.

With respect to transit facilities, the existing Green Line Stadium trolley station, which is located within the project site, presently serves a relatively low number of passengers, such that the addition of as many as 4,000 daily weekday boardings and alightings (or fewer than 60 riders per train during each peak hour) can be readily absorbed by the existing system. Increased frequency and reduced headways (time between trolley arrivals) planned as part of the Regional Transportation Plan (RTP) will further expand capacity to accommodate this increase in ridership. While additional ridership would be substantially higher before and after a Stadium event, the maximum capacity of the proposed Stadium is roughly 50 percent less than that of the existing Stadium meaning Stadium attendance necessarily will be substantially lower than at existing Stadium events, and special train service is anticipated to be provided consistent with current SDCCU Stadium events. Accordingly, a higher percentage of Stadium attendees at a sold-out event could be accommodated by the trolley, and the total trolley demand would be lower than for a sold-out event at the existing Stadium.

To reduce the number of vehicle trips that would be generated by the proposed project, the proposed project includes a comprehensive TDM program for all uses within the site. The proposed project TDM Program will include elements such as: bicycle racks and secure bicycle parking for all residents, visitors and employees; showers and lockers for employees; a TDM coordinator, website, and kiosks; coordination with the SANDAG iCommute program; guaranteed rides home; unbundled residential parking; and metered and time-limited on-street parking, etc. The TDM Program would reduce projected traffic volumes and project-generated vehicle miles of travel (VMT) by an estimated 14.4%, which would reduce congestion and significant impacts to the extent feasible.

For information purposes only, a project-level and cumulative VMT assessment consistent with recently revised CEQA Guidelines and the CSU TISM was performed for all three Fenton Parkway Bridge analysis scenarios. This evaluation showed that the proposed project would result in a less-than-significant project-level impact under all scenarios. From a cumulative impact perspective, the project's effect on overall VMT would be less than significant under all three scenarios because the forecasted future regional VMT per service population would decrease with buildout of the SDSU Mission Valley Campus Master Plan development.

4.15.1.1 Proposed Transportation Demand Management Program (PDF-TRA-1 and PDF-TRA-2)

The CSU system, including SDSU, has a focus on sustainability goals, including in the areas of transportation, energy, social responsibility, and water. For the new Mission Valley campus, SDSU intends to continue this practice of sustainable planning and operations. To minimize the number of project-generated vehicle trips on the surrounding roadway network, as previously noted, the SDSU Mission Valley Campus Project will include a comprehensive TDM Program. This program will serve to reduce vehicle traffic and related significant impacts to the extent feasible to selected freeway, ramp, intersection and roadway segments by reducing congestion during the peak travel periods and, to a lesser degree, during off-peak times.

Two separate TDM programs are proposed as part of the project: one to address the campus office, residential and retail uses that will generate traffic on primarily a weekday basis, and a second program designed to reduce vehicle trips to the proposed Stadium, which will occur primarily on weekends though intermittently on weekdays as well during the year. Both the non-Stadium and Stadium TDM programs are project design features, identified as **PDF-TRA-1** and **PDF-TRA-2**, respectively. This section identifies the specific elements of each of the proposed programs and describes the effects on the project trip generation.

4.15.1.1.1 Non-Stadium TDM Program (PDF-TRA-1)

TDM strategies have been used for over 30 years to reduce single-occupant vehicle (SOV) trips. The SDSU Mission Valley Campus TDM Program will work to reduce the project's impacts on the surrounding roadway network through four (4) primary categories of strategies: land use diversity, neighborhood site enhancement, commute/travel services, and parking policies and pricing; each category contains multiple individual strategies specific to the proposed project. The basis of all TDM elements is to create an environment that promotes mode choices alternative to SOV trips.

The following is an overview of the Non-Stadium TDM Program strategies; a detailed description of the Program strategies, and their effectiveness at reducing VMT, are presented thereafter:

- **Non-Stadium TDM 1 – Land Use Diversity**
- **Non-Stadium TDM 2 – Neighborhood Site Enhancements**
 - New bicycle facilities
 - Dedicated land for bicycle/multi-use trails
 - Bicycle parking
 - Showers and lockers in employment areas
 - Increased intersection density
 - Traffic calming
 - Car share service accommodations
 - Enhanced pedestrian network
- **Non-Stadium TDM 3 – Parking Policy and Pricing**
 - Unbundled residential parking
 - Metered on-street parking
 - Reduced parking supply
- **Non-Stadium TDM 4 – Commute Trip Reduction Services**
 - TDM Program Coordinator and marketing
 - Electric bike-share accommodations
 - Ridesharing support
 - School pool (K-12)
 - Hotel shuttle services
 - Transit Pass strategies

Non-Stadium TDM Program Elements

Each of the four main program elements, and their individual strategies, are further described as follows:

Non-Stadium TDM 1 – Land Use Diversity

Land use diversity strategies include mixed land uses and proximity of such uses to home that encourages residents/employees to walk, bike, or take transit within the project area:

- The proposed project would provide a mix of land uses, including residential, commercial, educational, and parks, so that residents of the proposed project have access to basic shopping, employment, and recreation opportunities without having to travel outside of the project site. This proximity would lower vehicle miles traveled because residents can use non-automobile transportation modes to reach the various uses available within the site, and if they do need to drive, the trip is very short. The VMT and trip reduction benefits of this strategy (i.e., trip internalization) is accounted for in the trip generation estimate for the proposed project (see Section 4.15.7.1).

Non-Stadium TDM 2 – Neighborhood Site Enhancements

Neighborhood site enhancement strategies support the ability of project residents, employees, customers and visitors to be able to walk, bike/scooter, or access transit within the project area without having to drive, and support the ability of residents (and potentially some employees) to not own a car:

- New bicycle facilities – The proposed project includes a network of bicycle lanes on key north-south streets, and connections to existing off-site facilities (e.g., Murphy Canyon Trail) as part of the proposed campus site plan. A total of nearly one lane-mile of on-street bike lanes within the site is proposed.
- Dedicated land for bicycle/multi-use trails – The site plan also includes a network of multi-use trails through the River Park, dedicated lanes throughout the office plaza area, plus a campus loop multi-use path that encircles the site. Multi-use trails and paths comprise a total of nearly two miles within the site.
- Bicycle parking – Residential units will include secure bicycle parking per City of San Diego standards (up to 0.6 spaces per dwelling unit anticipated based on units containing up to three bedrooms) unless otherwise noted. Similarly, short-term (racks) and long-term spaces (rooms, enclosures or lockers) will also be provided for non-residential uses per City of San Diego standards (0.1 short-term spaces per one (1) thousand square feet (ksf) and 5% of non-residential automobile parking provided in long-term spaces) unless otherwise noted.
- Showers and lockers – Changing facilities will be provided in at least one of the following locations to support bicycling and walking as commute modes for employees: the campus office or retail building areas.
- Increased intersection density – The on-site roadway network includes a relatively high intersection density of more than 69 spaces per square mile, which results in short block lengths and travel distances between complementary land uses. This intersection density strongly encourages walking, bicycling, or other micromobility modes to travel within the site and to adjacent neighborhoods.
- Traffic calming – Nearly all on-site intersections will include curb extensions and bulbouts, several on-site roadways will include raised crosswalks, and two roundabouts will help to manage travel speeds and enhance pedestrian safety.
- Car share service accommodations – Dedicated parking spaces for car sharing companies will be established in on-street spaces and/or within the campus and/or office parking structures.
- Enhanced pedestrian network – All streets within the project site either will include sidewalks on both sides of the street, or will include a multi-use path on one side of the street with enhanced pedestrian crossings. Separate pedestrian phases at signalized intersections to enhance safety and raise driver awareness will

also be included. As noted above, the campus loop and other paths will provide in excess of two miles of pedestrian paths in addition to sidewalks.

Non-Stadium TDM 3 – Parking Policy/Pricing

Managing parking is a key element in discouraging use of SOVs as it provides flexibility for residents to choose a car-free lifestyle, especially those residing in transit priority areas with high quality transit and extensive active transportation options and connections. The proposed parking management strategies for the SDSU Mission Valley Campus include:

- Unbundled parking – Parking in all residential buildings will be “unbundled” from units such that residents will have to request a parking space separate from their apartment/condominium unit and pay for that parking space separately. This approach is consistent with the recently adopted City of San Diego ordinance that requires all multi-family residential parking in Transit Priority Areas (TPAs) to be unbundled from units.
- Meter On-Street Parking – All on-street spaces within the campus core will be metered and require payment of an hourly charge during typical daytime hours (e.g., between 8am and 6pm). The parking spaces on the southwest and southeast edges of the site nearest the park/recreation facilities may also be metered, but at a minimum will include time limits to ensure parking turnover and prevent extended storage of resident vehicles.
- Limit parking supply – The proposed project will provide a maximum parking supply of 1.23 spaces per dwelling unit. This rate is lower in comparison to the parking provided at similar developments in the Mission Valley region.¹ The recently adopted City of San Diego ordinance regarding unbundled parking referenced above also allows for no parking to be provided for multi-family residential units in TPAs. In the event residential buildings are built with lower parking ratios that further reduce the overall parking supply, additional trip reductions and TDM benefits are expected.

Non-Stadium TDM 4 – Commute/Travel Services

Commute/Travel services strategies would provide residents with travel options other than private auto for trips to destinations inside and outside of the project area:

- TDM Program Coordinator and marketing - To ensure the TDM Program strategies are implemented and effective, a Campus TDM Program Coordinator will be identified to monitor the program. As part of overall campus management, a staff member or outside consultant will be designated to serve as the on-site Coordinator for employees and residents. Coordinators are responsible for developing, marketing, implementing, and evaluating TDM programs; dedicated personnel in this role make TDM programs more robust, consistent, and effective. Additionally, residents and employees would have a designated point of contact for questions about the various TDM strategies, which would allow them to easily stay informed of various TDM functions and eligibility.

The TDM Program Coordinator’s duties would include, but not be limited to, the following:

- Conduct transportation/mobility options orientation for new employees and new residents
- Assist with rideshare matching for employees commuting to the proposed project and residents commuting from their homes

¹ City of San Diego Parking Policy, TIA Appendix D (2018).

- Provide information on transit, bicycling, and walking to and from the project
- Act as a source of information regarding the TDM Program, including compliance with regulatory requirements and new potential TDM benefits
- Coordinate TDM Program monitoring (administer surveys and coordinate data collection)
- Promote available websites providing transportation options for residents, employees, customers and guests
- Create and distribute a “new resident” and “new employee” information packet addressing non-automobile modes of transportation
- Promote a transportation options app for use on mobile devices (tech enabled mobility app)
- Assist employees and residents in accessing existing or establishing future TDM strategies, such as transit discount or vanpool programs through existing programs such as MTS Ecopass or SANDAG’s iCommute.
- Electric bike-share accommodations –The proposed project site plan will provide areas for the temporary storage of e-bikes available for rental, and also identify specific locations for bike drop off, which would facilitate the use of e-bikes within the project site. Private vendors currently supply electric bicycles (e-bikes) for short-term rental in the San Diego area.
- Ridesharing support – As noted under the TDM Program Coordinator element above, rideshare support will be provided as part of the TDM Program. This support includes making connections with the SANDAG iCommute program for carpool, vanpool, and rideshare programs that are specific to the project’s residents and employees.
- K-12 school pool – As K-12 school facilities are not provided on the site, students will either need to be bused or driven by parents to off-site schools. A K-12 school pool strategy, which would be administered by the TDM Program Coordinator, would pair students traveling to the same school or area to limit the amount of small group school trips made from the project site.
- Hotel Shuttle Service – Shuttle service will be provided to and from the hotel on site. This shuttle service will be available to hotel guests and will service the airport and various other tourist locations.
- Transit Pass Strategies – At the Mission Valley campus, CSU will maintain the existing transit pass program for students in place at the College Area campus (passes are discounted by the Metropolitan Transit System (MTS) and subsidized by CSU/SDSU), and enable purchases by credit card. In addition, CSU/SDSU will establish a pre-tax payroll deduction program for faculty and staff purchase of MTS transit passes, vanpooling, and pooled on-demand rideshare services (e.g., uberPOOL and Lyft Line), provided SDSU meets the state/CSU required minimum participation level. Relatedly, CSU/SDSU will provide reduced cost transit passes for faculty and staff, provided SDSU meets the MTS required minimum participation level. The cost reduction will be between 10% and 25%, depending on participation level. Additionally, employers with a minimum of 20 employees will be required to provide up to 5 percent of their employees with a 100 percent MTS transit pass subsidy.

Effectiveness of Non-Stadium TDM Program

Fehr & Peers worked with the California Air Pollution Control Office Association (CAPCOA) to develop the transportation section of the report Quantifying Greenhouse Gas Mitigation Measures (August 2010). Hereinafter, referred to as the CAPCOA Report, this report is now used as a set of guidelines for quantifying the environmental benefits of TDM related strategies. The CAPCOA guidelines were developed by conducting a comprehensive literature review of studies documenting the effects of TDM strategies on reducing VMT and consequently vehicle

trips. The CAPCOA Report includes the most comprehensive set of calculations currently available for calculating TDM effectiveness.

To determine the amount of VMT and trip reduction that would be attributable to the SDSU Mission Valley Campus TDM Program, the proposed program elements were analyzed relative to the applicable CAPCOA standards. For those measures not addressed by the CAPCOA standards, Fehr & Peers utilized case studies to estimate vehicle trip and VMT reduction. The detailed calculations for each TDM strategy are described in TIA Appendix G. For each strategy that is based on the CAPCOA Report, the related CAPCOA strategy code (for example, CAPCOA TRT-6 or SDT-3) is provided.

The summary of the non-Stadium vehicle trip reductions attributable to the TDM Program are included in Table 4.15-1. As shown on the table, the TDM Program would result in an approximate 14 percent reduction in vehicle trips.

Table 4.15-1. Proposed Non-Stadium Transportation Demand Management (TDM) Trip Reductions

CAPCOA Category	TDM Measure	Individual Reduction	Combined Reduction ²
Neighborhood Site Enhancements	Improve Site Design including: New bicycle facilities Dedicated Land for Bicycle/Multi-use Trails Bicycle Parking Increased Intersection Density	11.08%	
	Traffic Calming	0.25%	
	Car Share	0.37%	
	Pedestrian Network	2.00%	
			5.00%
Parking Policy/ Pricing	Unbundle Parking	0.95%	
	Meter On-Street Parking	3.15%	
			4.07%
Commute Trip Reduction	TDM Marketing with Transportation Coordinator including: Shower and Locker Facilities	2.21%	
	Carpool Matching/Guaranteed Ride Home	2.80%	
	Bicycle Share	0.50%	
	School Pool (K-12)	0.70%	
	Hotel Shuttle Service	0.04%	
			6.09%
Combined Total Reduction			14.41%*

Source: Quantifying Greenhouse Gas Emissions (August 2010, CAPCOA) and Appendix 4.15-1.

* The campus employer Transit Pass Program is estimated to result in an additional reduction of 0.29%, which is not accounted for in any of the operational analyses or the Combined Total Reduction, and thereby results in an actual Combined Total Reduction of 14.70%.

² To account for inherent duplication and redundancies that occur when individual TDM strategies are implemented in unison, appropriate adjustments to the calculations are necessary to account for this occurrence. Accordingly, the Combined Reduction is not calculated by simply summing the Individual Reductions. Similarly, the Combined Total Reduction is not calculated by summing the individual Combined Reductions. For additional information, please see TIA Appendix G.

4.15.1.1.2 Stadium TDM Program (PDF-TRA-2)

Stadium TDM Program Elements

In light of the different trip generation characteristics associated with Stadium events, as compared to non-Stadium events, a separate TDM Program was designed for implementation during Stadium events. The TDM Program proposed for the Stadium (**PDF-TRA-2**) component of the proposed project consists of the following six (6) primary categories to reduce the number of vehicle trips, as well as air emissions, generated during events. As you will note, many of these categories and associated strategies are similar to those proposed for the other project land uses (i.e., non-Stadium event program), however the strategies discussed below are specifically directed towards the attendees and employees present during Stadium events. The six categories are listed immediately below; further detailed description of the individual strategies within each category follows thereafter.

- **Stadium TDM 1 – Encourage Alternative Modes of Transportation**
- **Stadium TDM 2 – Encourage Carpools and Zero-Emission Vehicles**
- **Stadium TDM 3 – Encourage Active Transportation**
- **Stadium TDM 4 – Encourage Off-Site Parking at College Area Campus**
- **Stadium TDM 5 – Provide Mobility and Parking Information Services**
- **Stadium TDM 6 – Online Parking Reservation System**

Stadium TDM 1 – Encourage Alternative Modes of Transportation (Light Rail and Vanpool)

The use of the trolley or bus/shuttle transit to and from Stadium events would be encouraged through the following suite of incentives:

- Discounted or free use of MTS transit services for attendees on the event date with proof of purchase of an event ticket
- Tchotchkes/giveaways for transit users (goods for attendees, free MTS tickets as raffle prizes for employees, etc.)
- Rewards/gaming opportunities for attendees and/or employees to compete for prizes or points based on their transportation choices
- Vanpool subsidy and administration via pre-tax commuter benefits for employees and administrative assistance with the coordination of third-party vanpool programs
- Marketing and outreach campaign for transit

Stadium TDM 2 – Encourage Carpools and Zero-Emission Vehicles (ZEVs)

The use of carpools and zero-emission vehicles by event attendees would be encouraged by implementing the following strategies:

- Provide preferential parking for carpools and ZEVs
- Provide variable parking price based on car occupancy (e.g., charge lower rates for vehicles with four or more occupants)

- Provide vehicle charging spaces in Stadium parking in excess of the typical requirement
- Charge reduced parking rates for ZEVs

Stadium TDM 3 – Encourage Active Transportation

Bicycling and walking would be encouraged by implementing the following strategies:

- Provide free access to secure bicycle parking spaces (these could be the same supply provided to campus office/retail/restaurant employees, ideally located in buildings immediately adjacent to the Stadium)
- Provide a bike valet to assist with bicycle drop-off and retrieval before and after events
- Provide showers and lockers for employees on the site (primarily for employees but available to attendees)
- Provide a bicycle fix-it station near the Stadium bicycle parking
- Coordinate bicycle and walk pools for employees
- Capitalize upon the multi-use trails and connections proposed on the site with clear wayfinding to the Stadium entrance and bicycle parking

Stadium TDM 4 – Encourage Off-Site Parking at College Area Campus

The highest parking demand on the project site will occur during high-attendance events (e.g., events with attendance exceeding 25,000), most of which events are expected to occur on a weekend day though some will occur on a weekday. Conditions will be exacerbated on a weekday, when some level of parking demand from non-Stadium uses will occupy spaces in the parking garage and reduce the available event supply. For larger weekday events and for high-attendance weekend events, parking at the main SDSU College Area campus would be encouraged through a marketing program, reduced rates for event attendees and employees (compared to Stadium garage parking rates), and possibly free MTS fare with proof of event ticket/parking payment or employee badge. This would allow all Stadium patrons to access the Stadium site via the trolley, thereby resulting in reduced parking and traffic demand near the site.

Stadium TDM 5 – Provide Mobility and Parking Information Services

Providing a number of information services at the site would help to educate event attendees about TDM activities and travel/parking options at the Stadium. These services would include:

- Multimodal signage and wayfinding to the trolley station, bicycle parking, and passenger drop-off and pick up areas
- Real-time travel/parking availability information, variable message signs (VMS) at key site entrances (e.g., Stadium Way (Street A) and Street D, and social media posts
- Welcome packets and on-going marketing for new employees
- External marketing campaign including advertisements on television, website, social media, radio, email blasts to season ticket holders, etc.
- Information kiosks or bulletin boards/TV monitors at multiple locations providing information about the TDM Program and transit options for Stadium employee

Stadium TDM 6 – Online Parking Reservation System

Providing an online parking reservation system will allow event attendees to choose and reserve parking spaces prior to the event. This system would allow attendees to make a decision on their preferred parking location – on-site or on the SDSU College Area campus as appropriate – and could provide varying parking costs for on-site and off-site parking locations. Attendees that choose to park at the SDSU College Area campus would be able to utilize transit to travel to and from the Stadium site. This would help to reduce trips at the site and encourage the use of transit.

Effectiveness of Stadium TDM Program

Unlike the Project Design Feature for non-Stadium uses (**PDF-TRA-1**) described in Section 4.15.1.2.1, very little information is available regarding the effectiveness of individual or combined Stadium TDM measures in reducing vehicle travel. While many event venues implement TDM strategies to reduce vehicle trips and parking demand, which reduces congestion and helps to improve the visitor experience and enhance project sustainability, neither operators of these facilities, jurisdictions, nor other third parties conduct surveys or collect data to reasonably quantify the actual reduction in vehicle trips. In addition, the effectiveness of TDM measures (individually or in combination) can vary depending on the site context, including the presence of parking in the surrounding area, transit quality and service frequency, congestion on adjacent freeways/surface streets, etc.

Based on the transportation engineers' professional experience and judgment, with implementation of a TDM program for Stadium events, the anticipated reduction in vehicle trips is estimated to be an additional 5% to 10% beyond the Stadium trip generation calculations used in this analysis. This estimate is based on engineering judgment and various site characteristics, including relatively limited public parking areas in close proximity to the site, the presence of a high-quality transit stop (i.e., the trolley) within a five-minute walk of the Stadium, and a limited on-site parking supply for sold-out events. Accordingly, in light of the limited information available and notwithstanding the likelihood of a 5-10% trip reduction, no trip reduction attributable to the Stadium TDM Program was applied to any of the "With Event" scenarios presented herein, and, as a result, the identified impacts likely are overstated.

4.15.1.2 Construction Traffic Management Plan (PDF-TRA-3)

As the proposed project builds out over time, there will be temporary construction related traffic on the study roadway network that may result in potential temporary impacts. To minimize these temporary impacts, CSU/SDSU, or their designee, will prepare a Construction Traffic Management Plan (CTMP) (**PDF-TRA-3**), in consultation with the City of San Diego and Caltrans and affected adjacent property owners as appropriate, prior to initiating any construction activities. The CTMP will specifically address project construction traffic and parking, and will address, among other subjects, truck haul routes, truck turning movements at the proposed project driveways, traffic control signage, accommodation of bicycle and pedestrian traffic, restriction of hauling activities to specific time periods, on-site circulation and staging areas, traffic control plans indicating temporary lane closures, and monitoring of traffic control to implement revisions, if necessary. The Plan also would require that CSU/SDSU, or its designee, obtain all necessary encroachment and transportation permits prior to construction.

Beyond site development and construction of the proposed Stadium, the timing of vertical construction of the residential, campus office/retail, and hotel buildings is not known at this time. Buildings may be constructed individually or in multiples and will involve varying levels of construction traffic. Accordingly, specific CTMPs will be developed for each specific phase of construction as site and building development progress, based on the proposed construction activities and then-current traffic conditions and transportation network.

4.15.1.3 Transportation and Parking Management Plan (PDF-TRA-4)

The proposed Stadium will be integrated with the other land uses within the overall project site as development progresses. As such, selected roadways such as Street D will be a “shared” facility where traffic generated by Stadium events will occur at the same time as residents and campus office users will travel to and from the site. Other roadways, such as Stadium Way (Street A) will primarily be used by Stadium patrons only. In addition, Stadium traffic will typically be concentrated during the one to two hours prior to an event, as well as during the hour immediately following an event. To ensure that traffic capacity is maximized during these periods and potential negative effects to non-Stadium uses within the campus and roadways adjacent to the site are minimized, the proposed project will include a transportation and parking management plan (TPMP) (**PDF-TRA-4**). The anticipated activity level at the Stadium is presented below followed by a description of the TPMP elements and their potential effectiveness relative to the “with Stadium event” analyses presented in this document.

Anticipated Stadium Activity Level

The existing SDCCU Stadium, which has a capacity of up to 70,561, hosts a variety of events over the course of the year with varying attendance levels. For very low attendance events such as a recycling event or regularly scheduled “swap meets”, no special traffic management has been required or provided. With higher attendance events (such as SDSU football games and concerts with 20,000 to 40,000 or more attendees), more formalized traffic control has been implemented using personnel to manage traffic flow, as well as signage to inform drivers of appropriate travel paths. In 2018, the highest attendance events included a concert with nearly 41,000 attendees, and a special in-season college football game between Navy and Notre Dame with nearly 57,000 attendees. Overall, a total of 13 events in 2018 included average attendance levels of 20,000 or more attendees (referred to as high attendance events for purposes of this analysis).

The proposed Stadium will have a capacity of 35,000, which will result in lower maximum attendance levels as compared to the existing Stadium with its 70,000-plus capacity. According to SDSU representatives, a total of 21 annual high attendance events (i.e., events with average patronage estimates of 20,000 or more) are anticipated. If a professional soccer team is approved for San Diego and uses the proposed Stadium, then an additional 17 high attendance events could occur, for a total of potentially 38 high attendance events.

Proposed TPMP Elements

The purpose of the TPMP (**PDF-TRA-4**) is to identify strategies to provide safe, convenient, and efficient access for all modes of travel to and from the proposed Stadium. The identified strategies are intended to minimize conflicts between vehicles, pedestrians, bicycles, and transit before, during, and after events. As a Project Design Feature, the strategies herein will be in place by opening day of the Stadium.

The proposed TPMP will include numerous elements related to managing vehicle traffic into and out of the Stadium area, minimizing vehicle demand, accommodating bicycle and pedestrian modes, and enhancing safety for all users during events. General descriptions of each program element and likely application locations are as follows:

- Variable TPMP Levels – Preliminary plans for various attendance levels will be prepared and modified based on actual event experience. Plans will address various attendance levels, time of day, and day of week.
- Roles and Responsibilities – The TPMP will delineate the roles and responsibilities for various public agencies

- **Traffic Control Personnel** – Key intersections will be controlled by trained traffic control personnel to delineate right-of-way as needed to expedite the flow of vehicles. Control may involve overriding traffic signal operations temporarily and/or instructing drivers to disregard stop sign control. These activities will help to reduce congestion, minimizing driver frustration, and enhancing safety overall. Locations where traffic control is likely to be implemented are illustrated on TIA Figure 13 and are subject to change as conditions warrant.
- **Dynamic Message Signs** – Signs will be located on major approaches to the Stadium site to communicate with vehicle drivers in real time on issues related to congestion, parking availability, optimal travel paths, upcoming events, etc. Signs will be both permanent and temporary. Preliminary sign locations are illustrated on TIA Figure 13 and are subject to change as conditions warrant.
- **Transportation and Parking Wayfinding** – Signs and other visual cue treatments will be installed to direct patrons to Stadium parking, passenger loading areas, and the trolley station (currently named Qualcomm). Signs will include directions for standard parking, VIP lots, bus/shuttle parking, and designated passenger loading areas (for private vehicles and transportation network companies (TNCs) such as Uber and Lyft). Initially, the passenger loading area is expected to occupy one or both sides of Promenade 2, the street north of the Stadium and south of the proposed hotel, which will allow for access to the proposed hotel property on the north side of the street. The TPMP will also include identification of appropriate pedestrian paths to and from the trolley station, plus bicycle paths leading to on-site bike parking areas.
- **Neighborhood Intrusion Prevention** – For moderate to high attendance events (i.e., 50-75% of capacity and greater), and possibly for lower attendance events dependent upon actual conditions, measures will be implemented to minimize traffic and parking intrusion into the residential areas of the project site. Selected streets will be closed to through or non-resident traffic and proof of residency may be required depending on compliance with signage and traffic control personnel. Preliminary locations for street closures are shown in TIA Figure 13 and subject to change as conditions warrant.
- **Designated Loading Zones and Activities** – Given the need for event-generated truck trips to use the same roadways as event patrons, the TPMP will identify specific loading areas and times for freight delivery and pick up activities. Smaller-scale activities may use one or both of the streets located along the west and east sides of the Stadium as conditions warrant.
- **Special Trolley Service** – SDSU will coordinate with MTS to determine when special train service will be needed to meet demand for high attendance events.
- **Communication and Public Information Strategies** – Communication strategies included in the TPMP will encompass internal communication among the Stadium management team related to event operations, as well as external communication to disseminate information to event attendees and the general public. SDSU will maintain an on-site Transportation Management Center at the Stadium to monitor conditions in and around the facility related to transportation and parking and will coordinate with other agency representatives (such as the City of San Diego and Caltrans) and public safety officials as appropriate.

4.15.2 Methodology

The purpose of the analysis presented in this section is to identify the potential significant impacts of the proposed project on the surrounding transportation system. Impacts to all modes of travel were evaluated including automobile, transit, bicycling, and pedestrian travel. The analysis includes a description of the assumptions and methods used to conduct the study, as well as a discussion of the results, and was conducted in compliance with the California State University (CSU) Transportation Impact Study Manual (TISM) and the California Environmental Quality Act (CEQA). To the extent possible, the study also presents analysis consistent with guidelines included in

the City of San Diego Traffic Impact Study Manual (San Diego TISM), the City of San Diego's California Environmental Quality Act Significance Determination Thresholds (San Diego CEQA Thresholds; City of San Diego 2016), the Caltrans Guide for the Preparation of Traffic Impact Studies, and the regionally accepted traffic study guidelines published by the San Diego Regional Traffic Engineers (SANTEC)/Institute of Transportation Engineers (ITE).

The analysis presented in this section addresses several scenarios, each with and without Stadium Event traffic. As the proposed project is anticipated to reach build-out in approximate year 2037, the identification of significant impacts and recommended mitigation is based upon a 2037. In addition, for information purposes, a hypothetical Existing plus Project scenario analysis also is provided, which is based on the hypothetical presumption that the proposed project would be fully built out immediately, with project traffic added to the existing road network and existing traffic levels.

In addition, while not yet required under CEQA, this section includes analysis of the proposed project's impacts relative to vehicle miles traveled (VMT) consistent with Senate Bill (SB) 743 and the recently revised CEQA Guidelines. The primary purpose of SB 743 is to facilitate the development of land uses and mobility infrastructure that reduce greenhouse gas emissions, encourage the use of active transportation and transit, and foster a more sustainable environment. While the revised CEQA Guidelines were effective December 2018, lead agencies such as CSU have until July 1, 2020, to comply with SB 743 requirements. Accordingly, the analysis presented in this section includes both the traditional capacity-based LOS operations analysis for purposes of identifying significant impacts and mitigation for CEQA compliance, and a VMT-focused analysis provided for information purposes only.

4.15.2.1 Project Study Area

Effective evaluation of the traffic impacts associated with the proposed project requires an understanding of the existing transportation system within the project area. Figure 4.15-1, Study Intersections and Segments, illustrates the locations of intersections and roadway segments that have been analyzed herein. The TIA analyzed potential project-related transportation impacts during typical weekday AM and PM peak hour traffic conditions under Existing 2018 Conditions and Horizon Year 2037 Conditions when the proposed project is scheduled to be fully built and occupied. The study area was determined in a manner that would identify all locations potentially significantly impacted by the proposed project, including intersections, roadway segments, freeway segments, and freeway on- and off-ramp meters and ramps, respectively. Specifically, this transportation analysis evaluates operations at 4 existing intersections, three (3) new on-site intersections, 34 roadway segments, 23 freeway segments, four (4) metered freeway on-ramps, and eight (8) signalized freeway off-ramps. The analyzed facilities are listed below and are shown on Figure 4.15-1:

Intersections

1. State Route 163 (SR-163) Southbound (SB) Ramp/Ulric St & Friars Rd
2. SR-163 Northbound (NB) Ramp & Friars Rd
3. Frazee Rd & Friars Rd
4. Mission Center Rd & Friars Rd Eastbound (EB) Ramps
5. Mission Center Rd & Friars Rd Westbound (WB) Ramps
6. Qualcomm Way & Friars Rd WB Ramps
7. Qualcomm Way & Friars Rd EB Ramps
8. River Run Dr & Friars Rd

9. Fenton Pkwy & Friars Rd
10. Northside Dr & Friars Rd
11. Stadium Way (Street A) & Friars Rd (only used during Stadium events under existing conditions)
12. Mission Village Dr & Friars Rd WB Ramps
13. Mission Village Dr/Street D & Friars Rd EB Ramps/San Diego Mission Rd
14. Street D & Street 4 (future intersection)
15. Street F & Street 4 (future intersection)
16. Street F/San Diego Mission Road & Street 6 (future intersection)
17. I-15 SB Ramps & Friars Rd
18. I-15 NB Ramps & Friars Rd
19. Rancho Mission Rd & Friars Rd
20. Santo Rd & Friars Rd
21. Riverdale St & Friars Rd
22. Mission Gorge Rd & Friars Rd
23. Qualcomm Way & Rio San Diego Dr
24. River Run Dr & Rio San Diego Dr
25. Fenton Pkwy & Rio San Diego Dr/Fenton Marketplace Dwy
26. Rancho Mission Rd & San Diego Mission Rd
27. Fairmount Ave & San Diego Mission Rd/Twain Ave
28. Qualcomm Way & Camino del Rio North (N)/Camino de la Reina
29. Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio N
30. Qualcomm Way/Texas St & I-8 EB Off-ramp
31. Texas St & Camino del Rio South (S)
32. Ward Rd & Rancho Mission Rd
33. Ward Rd & Camino del Rio N
34. Fairmount Ave/Mission Gorge Rd & Fairmount Ave
35. Fairmount Ave & Camino del Rio N
36. I-8 EB Off-ramp & Fairmount Avenue
37. Montezuma Rd & Collwood Blvd
38. Mission Village Dr & Shawn Ave
39. Mission Village Dr & Fermi Ave
40. Ruffin Rd & Mission Village Dr/Gramercy Dr
41. Ruffin Rd & Aero Dr
42. Gramercy Dr & Mobley St
43. Greyling Dr/Gramercy Dr & Sandrock Road

Roadway Segments

1. Friars Rd between Frazee Rd and Mission Center Rd

2. Friars Rd between Mission Center Rd and Qualcomm Way
3. Friars Rd between Qualcomm Way and River Run Dr
4. Friars Rd between River Run Dr and Fenton Pkwy
5. Friars Rd between Fenton Pkwy and Northside Dr
6. Friars Rd between Northside Dr and Stadium Way (Street A)
7. Friars Rd between Stadium Way (Street A) and Mission Village Dr
8. Friars Rd between Mission Village Dr and I-15 Ramps
9. Friars Rd between I-15 Ramps and Rancho Mission Rd
10. Friars Rd between Rancho Mission Rd and Santo Rd
11. Friars Rd between Santo Rd and Riverdale St
12. Friars Rd between Riverdale St and Mission Gorge Rd
13. Qualcomm Way between Friars Rd and Rio San Diego Dr
14. Rio San Diego Dr between Qualcomm Way and River Run Dr
15. Rio San Diego Dr between River Run Dr and Fenton Pkwy
16. Fenton Pkwy between Rio San Diego Dr/Fenton Marketplace Dwy and Northside Dr
17. San Diego Mission Rd between Mission Village Dr and Rancho Mission Rd
18. San Diego Mission Rd between Rancho Mission Rd and Fairmount Ave
19. Rancho Mission Rd between Friars Rd and San Diego Mission Rd
20. Rancho Mission Rd between San Diego Mission Rd and Ward Rd
21. Rancho Mission Rd west of Ward Rd
22. Ward Rd between Rancho Mission Rd and Camino del Rio N
23. Fairmount Ave between San Diego Mission Rd/Twain Ave and Mission Gorge Rd
24. Mission Village Dr between Ruffin Rd and Shawn Ave
25. Mission Village Dr between Shawn Ave and Ronda Ave
26. Mission Village Dr between Ronda Ave and Friars Rd
27. Ruffin Rd between Aero Dr and Mission Village Dr
28. Gramercy Dr between Mobley St and Ruffin Rd
29. Aero Dr between Sandrocks Rd and Ruffin Rd
30. Aero Dr between Ruffin Rd and Daley Center Dr
31. Camino del Rio North between Qualcomm Way and Mission City Pky
32. Camino del Rio North between Mission City Pky and Ward Road
33. Camino del Rio North between Ward Road and Fairmount Avenue
34. Camino del Rio North between Texas Street and Mission City Pky

Freeway Segments

1. SR-163 between 6th Ave and I-8
2. SR-163 between I-8 and Friars Rd

3. SR-163 between Friars Rd and Mesa College Dr (no data was available between Genesee Ave and Mesa College Dr; this segment is assumed to be equivalent to the segment from Friars Rd to Genesee Ave)
4. SR-163 between Mesa College Dr and I-805
5. I-805 between Madison Ave and I-8
6. I-805 between I-8 and Murray Ridge Rd/Phyllis Pl
7. I-805 between Murray Ridge Rd/Phyllis Pl and Mesa College Dr/Kearny Villa Rd
8. I-805 between Mesa College Dr/Kearny Villa Rd and SR-163 – for the northbound direction, only the auxiliary lanes to the northbound off-ramp to Friars Road was studied as project traffic would not travel along the mainline of this segment in the northbound direction
9. I-805 between SR-163 and Balboa Ave
10. I-15 between Adams Avenue and I-8
11. I-15 between I-8 and Friars Rd – only the auxiliary lanes to the northbound off-ramp to Friars Road, the southbound auxiliary lanes from the Friars Rd on-ramp to I-8, and the southbound auxiliary lane from the Friars Rd direct on-ramp to I-15 southbound were studied as project traffic would not travel along the mainline of this segment
12. I-15 between Friars Rd and Aero Dr
13. I-15 between Aero Dr and Balboa Ave/Tierrasanta Blvd
14. I-8 between Morena Blvd and Taylor St
15. I-8 between Taylor St and Hotel Cir
16. I-8 between Hotel Cir and SR-163
17. I-8 between SR-163 and Mission Center Rd
18. I-8 between Mission Center Rd and Texas St
19. I-8 between Texas St and I-805
20. I-8 between I-805 and I-15
21. I-8 between I-15 and Fairmount Ave
22. I-8 between Fairmount Ave and Waring Rd
23. I-8 between Waring Rd and College Ave

Freeway Ramp Meters

1. I-15 NB on-ramp at Friars Rd
2. I-15 SB loop on-ramp at Friars Rd (with access to I-8)
3. I-15 SB direct on-ramp at Friars Rd
4. I-8 EB loop on-ramp at Fairmount Ave SB

Off-Ramps (numbered to correlate with study area intersection)

1. SR-163 SB off-ramp at Friars Rd/Ulric St
2. SR-163 NB off-ramp at Friars Rd
17. I-15 SB off-ramp at Friars Rd
18. I-15 NB off-ramp at Friars Rd

- 29. I-8 WB off-ramp at Qualcomm Way & Camino del Rio N
- 30. I-8 EB off-ramp at Qualcomm Way/Texas Street
- 35. I-8 WB off-ramp at Fairmount Ave & Alvarado Canyon Rd/Camino del Rio N
- 36. I-8 EB off-ramp at Fairmount Ave

4.15.2.2 Analysis Scenarios

As stated above, the TIA (Appendix 4.15-1) analyzed the potential project-related traffic impacts during typical weekday AM and PM peak hour traffic conditions under Existing 2018 Conditions and Horizon Year 2037 Conditions when the proposed project is scheduled to be fully built and occupied. The operations of the study area were evaluated for the following scenarios:

- **Existing (2018) Conditions** – The analysis of existing traffic conditions is based on 2018 vehicle counts collected for the analyzed peak hours. The existing conditions analysis includes a description of streets and roadways within the study area, transit services, active transportation facilities, and an analysis of traffic volumes and intersection operating conditions.
- **Existing (2018) Plus Project Without Stadium Event Conditions** – This traffic scenario provides forecasts of traffic volumes and an assessment of operating conditions under existing baseline conditions with the addition of project-generated traffic, as though the proposed project were to be immediately built out. This hypothetical scenario isolates the potential impacts of the proposed project and the analysis eliminates the impacts of both ambient growth and other proposed projects, thereby potentially understating impacts. Additionally, the analysis does not account for future roadway improvements that would provide additional capacity and, in this regard, the analysis potentially overstates impacts. As such, the results of the analysis can be misleading, especially in the case of a project like this with a long-term build out horizon. For these reasons, the Existing Plus Project Conditions analysis presented here is for information purposes only; project impacts are assessed against the Horizon Year (2037) Plus Project Conditions, which considers the effects of future traffic growth, planned infrastructure improvements, and changing land uses.
- **Existing (2018) Plus Project with Saturday and Weekday Stadium Event Conditions** – The proposed Stadium is expected to host a variety of events including college football games, concerts, minor league sports competitions, graduation ceremonies, professional sporting games, etc., and, therefore, an analysis of the proposed project, with the addition of Stadium traffic, also is provided. However, because this scenario assumes immediate full buildout of the project's underlying residential, office, etc. land uses, the scenario is hypothetical only and also is presented for information purposes only..
- **Existing (2018) Plus Stadium Event Only Conditions** – Because the Stadium component of the proposed project would be built in the near-term (i.e., 2022), an Existing Plus Stadium analysis would provide the decision maker and the public with accurate information relative to impacts and mitigation related to the Stadium. For this reason, an Existing Plus Stadium analysis is presented against which significant impacts, if any, are identified and, as necessary, mitigation measures recommended.
- **Horizon Year (2037) Conditions Without the Project** – In order to provide an assessment of the project's impacts, a "without Project" scenario first must be developed. In this regard, future traffic forecasts without the project area were developed for a 2037 horizon year using forecasts based on the SANDAG Series 13 travel demand model. This is the cumulative baseline against which long-term project impacts are assessed.
- **Horizon Year (2037) Plus Project Without Stadium Event Conditions** – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under 2037 conditions with the

addition of the project-generated traffic. The impacts of the proposed project at buildout on future traffic conditions were identified under this scenario, significant impacts are identified, and appropriate mitigation recommended under this scenario.

- **Horizon Year (2037) Plus Project with Saturday and Weekday Stadium Event Conditions** – As noted above, the proposed Stadium is expected to host a variety of events, including college football games, concerts, minor league sports competitions, graduation ceremonies, professional sporting games, etc. Most of these events are expected to be held on weekend afternoons and evenings, and, therefore, an analysis of this scenario is provided. However, Stadium events also will occasionally be held on a weekday evening with a start time outside the typical PM peak commute hour. These weekend and weekday evening events are expected to add some traffic, with the weekday evening events adding traffic during the PM peak hour. This scenario analyzes the addition of Stadium traffic to the Horizon Year Plus Project volumes.

4.15.2.3 Analysis Methodology

The operational status of a given roadway facility is described in terms of level of service (LOS). LOS is a qualitative description of traffic flow based on several factors, including speed, travel time, delay, and freedom to maneuver. There are six LOS levels, from LOS A, which represents the least congested operating conditions, to LOS F, representing the most congested operating conditions. LOS E represents “at-capacity” operations. Operations are designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions.

4.15.2.4 Intersections

The analysis of significant impacts and corresponding mitigation presented in this section is based on an assessment of the project’s impacts on intersection operations, which is the industry standard of practice. The analysis of intersection operations is based on the procedures provided in the Highway Capacity Manual 6th Edition (HCM 6), published by the Transportation Research Board. In a limited number of cases where non-standard signal phasing is in operation, the HCM 6 methodology is not capable of evaluating the intersection and the Highway Capacity Manual 2000 Edition (HCM 2000) methodology was applied. The identification of significant impacts is based on the thresholds provided in the CSU TISM, with additional reference to the City thresholds, where applicable, provided for information purposes.

Signalized Intersections

The method described in the HCM 6 was used to prepare the LOS calculations for the signalized study area intersections. This LOS method analyzes a signalized intersection’s operation based on average control delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections is calculated using Synchro 10.0 analysis software and is correlated to a LOS designation as shown in Table 4.15-2.

Table 4.15-2. Signalized Intersection LOS Criteria

Level of Service	Description	Delay (seconds/vehicle)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	<10
B	Operations with low delay occurring with good progression and/or short cycle lengths.	>10– 20

Table 4.15-2. Signalized Intersection LOS Criteria

Level of Service	Description	Delay (seconds/vehicle)
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	>20 – 35
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	>35 – 55
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	>55 – 80
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	>80

Source: *Highway Capacity Manual 6th Edition*, Transportation Research Board, 2018.

All-Way Stop Controlled Intersections

The HCM 6 method for analyzing all-way stop-controlled intersections is based on conflicting traffic for motor vehicles stopped at an intersection. Average control delay is calculated using a weighted average of the delays by volume distributed across all motor vehicles entering the intersection.

Minor-Street or Side-Street Stop Controlled Intersections

The HCM 6 method for analyzing minor-street stop-controlled intersections is based on the concept of gap acceptance and the presence of conflicting traffic for motor vehicles stopped on the minor street approaches. Control delay and LOS for the “worst” movements are reported, as opposed to average intersection LOS and delay.

The average movement delay for all unsignalized intersections is calculated using Synchro 10.0 analysis software and is correlated to a LOS designation as shown in Table 4.15-3.

Table 4.15-3. Unsignalized Intersection LOS Criteria

Level of Service	Description	Delay (seconds/vehicle)
A	Little or no delay.	<10
B	Short traffic delay.	>10 – 15
C	Average traffic delays.	>15 – 25
D	Long traffic delays.	>25 – 35
E	Longer traffic delays.	>35 – 50
F	Longest traffic delays with intersection capacity exceeded.	>50

Source: *Highway Capacity Manual 6th Edition*, Transportation Research Board, 2018.

4.15.2.5 Roadway Segments

As previously noted, the assessment of the project’s significant impacts and corresponding mitigation is based on application of the CSU TISM, which does not recommend a roadway segment capacity analysis for those locations with adjacent (i.e., endpoint) intersections on the same roadway in order to avoid potentially conflicting results. Instead, the identification of significant impacts is to be based on intersection analysis, which is the standard of

practice throughout the industry as intersection operations are a more accurate indicator of roadway operations than segment operations. However, for information purposes, an analysis of segment operations was conducted consistent with City of San Diego impact guidelines.

The roadway segment capacity analysis presented here identifies the LOS results for each roadway segment in the project corridor by comparing the design capacity of each roadway in vehicles per day (VPD) or average daily traffic (ADT) as identified in the City of San Diego impact guidelines with the existing or future traffic volumes that occur or are expected to occur on that roadway segment. This volume-to-capacity (V/C) analysis then uses the volume criteria to determine the LOS score for each roadway segment based on the comparison of volume to capacity.

4.15.2.6 Freeway Segments

Freeway segment LOS and performance is based upon procedures developed by Caltrans District 11, which are derived from the HCM 2000 per the San Diego Regional Traffic Engineers' Council (SANTEC) regional impact analysis guidelines. The procedure for determining freeway LOS involves calculating a peak hour volume-to-capacity (V/C) ratio. Peak hour volumes were obtained from the Caltrans Performance Measurement System (PeMS) count data. Reported volumes were calculated by averaging the peak hour volumes from mid-week (Tuesday, Wednesday, and Thursday). Based on the SANTEC guidelines, the analysis uses a capacity of 1,800 vehicles per hour per lane (v/hr/ln) for freeway mainline segments and 1,200 v/hr/ln for auxiliary lanes. The reduced freeway mainline capacity (in lieu of the standard 2,200 v/hr/ln cited in the CSU TISM) was used to better reflect local freeway operations and, ultimately, provides more conservative results. The resulting V/C is then compared to the ranges of V/C values corresponding to the various LoS for each facility classification, as shown in Table 4.15-4.

Table 4.15-4. Freeway Segment LOS Criteria

LOS	V/C	Congestion/Delay	Traffic Description
"A"	<0.41	None	Free Flow.
"B"	0.42-0.62	None	Free to stable flow, light to moderate volumes.
"C"	0.63-0.79	None to Minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	0.80-0.92	Minimal to Substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
"F(0)"	1.01-1.25	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
"F(1)"	1.26-1.35	Severe 1-2 hour delay	Very heavy congestion, very long queues.
"F(2)"	1.36-1.45	Very Severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
"F(3)"	>1.46	Extremely Severe 3+ hours of delay	Gridlock.

Source: SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, 2002

4.15.2.7 Ramp Metering

The analysis of metered ramps for development projects is a standard practice in the San Diego region. Accordingly, ramp metering analyses to calculate delays at the study area freeway on-ramps were conducted based upon procedures outlined in the San Diego TISM. Ramp meter delays were calculated by dividing the Excess Ramp

Demand (Ramp Demand – Ramp Meter Rate) by the most restrictive meter rate provided by Caltrans, and multiplying the result by 60 minutes/hour (Delay = Excess Demand/Ramp Meter Rate x 60 minutes/hour). Ramp queue lengths were calculated by multiplying the Excess Ramp Demand by a conservative average car length of 29 feet, where many jurisdictions use an average car length of 25 feet.

4.15.2.8 Freeway Off-Ramps

The CSU TISM, SANTEC, and City of San Diego impact guidelines do not require, or provide guidance for, the analysis of off-ramp queuing. However, such analysis was performed for this study in order to determine the queue lengths at freeway off-ramps and whether the proposed project would result in operational issues on the freeway mainline.

4.15.2.9 Cumulative Projects

Baseline traffic forecasts for project buildout year 2037 were developed using projections from the SANDAG Series 13 Year 2035 travel demand model, which is regarded as the best available long-range planning tool for traffic volume forecasting in the San Diego region. The SANDAG model reflects the forecasted population and employment numbers from land uses based on the adopted General Plans of all 18 cities within the county, and the County of San Diego for the unincorporated areas.

Daily traffic volumes generated from the model for Year 2035 were compared to the volumes from the model for Year 2012 to determine an average annual growth rate along each roadway and freeway segment. Calculated growth rates ranged from -0.3% to 2.4%. The existing volumes on all facilities were increased to Year 2037 conditions using either the calculated growth rate or 1.0%, whichever was greater, to provide a conservative analysis of future traffic operations.

4.15.3 Existing Conditions

A comprehensive data collection effort was undertaken to identify existing transportation conditions in the vicinity of the proposed project. The assessment of existing conditions presented below includes an inventory of the street system, traffic volumes on these facilities, and operating conditions at area intersections. Existing public transit service and bicycle and pedestrian facilities are also described.

4.15.3.1 Existing Street System

Figure 4.15-1 illustrates the proposed project location and the surrounding roadway system. The primary roadways providing access to the site within the study area are described below. These facilities are studied as part of the intersection, roadway segment, or freeway segment analysis.

4.15.3.1.1 Primary East/West Study Area Roadways

Interstate 8 is an east-west freeway that extends from a western terminus at SeaWorld Drive and continues east into Imperial County. Near the project study area, I-8 has an interchange with SR-163, on- and off-ramps at Mission Center Road and Qualcomm Way/Texas Street, an interchange with I-805 and I-15, and on- and off-ramps at Fairmount Avenue. Near the project, I-8 has four to six mainline lanes in each direction, and the posted speed limit is 65 miles per hour (mph).

Friars Road is an east-west roadway that extends from SeaWorld Drive to Mission Gorge Road and is fronted by a combination of retail, commercial office, and residential uses. Within the study area, Friars Road is classified as a six-lane primary arterial between Ulric Street and Frazee Road; a six- to eight- lane expressway between Frazee Road and Rio Bonito Way; a six-lane primary arterial between Rio Bonito Way and Stadium Way (Street A); a six-lane expressway between Stadium Way (Street A) and the I-15 SB Ramps; a 7-lane primary arterial between the I-15 SB Ramps and Santo Road; and a 6-lane primary arterial between Santo Road and Mission Gorge Road. The posted speed limit ranges from 45 to 50 mph.

Rio San Diego Drive is an east-west roadway that extends from Gill Village Way to Fenton Parkway. It functions as a four-lane major arterial from Gill Village Way to River Run Drive, and as four-lane collector from River Run Drive to Fenton Parkway with some short segments with a raised median. Rio San Diego Drive is fronted by a combination of retail, hotel and residential uses. The posted speed limit ranges from 25 to 35 mph.

Camino de la Reina is an east-west roadway that extends from Hotel Circle to Qualcomm Way. It functions as a two-lane collector with a center left-turn lane between Hotel Circle and Camino de La Siesta, and as four-lane major arterial from Camino de La Siesta to Qualcomm Way. Camino de la Reina is fronted by a combination of commercial and residential uses. The posted speed limit ranges from 25 to 30 mph.

Camino del Rio North is an east-west roadway that extends from Camino de La Siesta to Fairmount Avenue where it connects with Alvarado Canyon Road. It functions as a two-lane collector with a center left-turn lane between Camino de La Siesta and Mission Center Road, as a three-lane major arterial (two lanes in the westbound direction and one in the eastbound direction) from Mission Center Road to Camino del Este, as a four-lane major arterial from Camino del Este to Mission City Parkway, as a two-lane collector with a center left-turn lane from Mission City Parkway to Ward Road, and as four-lane collector from Ward Road to Fairmount Avenue. Camino del Rio North is fronted by a combination of retail, hotel and residential uses. The posted speed limit ranges from 35 to 45 mph.

Camino del Rio South is an east-west roadway that extends from a cul-de-sac terminus adjacent to State Route 163 to Fairmount Avenue. It functions as a two-lane collector with a center left-turn lane between its western terminus and Mission Center Road, as a two-lane collector without a center left-turn lane between Mission Center Road and Mission City Parkway, as a three-lane collector (one lane in the westbound direction and two in the eastbound direction) with a center left-turn lane from Mission City Parkway to the I-15 Southbound ramps, as a four-lane collector from the I-15 Southbound ramps to the I-15 northbound ramps, and as two-lane collector with a center left-turn lane from the I-15 Northbound ramps to Fairmount Avenue. Camino del Rio South is fronted by a combination of commercial and residential uses. The posted speed limit ranges from 25 to 45 mph.

Montezuma Road is an east-west roadway that extends from Fairmount Avenue to El Cajon Boulevard. It functions as a four-lane major arterial from Fairmount Avenue to East Campus Drive, as a four-lane collector without a center left-turn lane from East Campus Drive to La Dorna Street, and as a four-lane collector from La Dorna Street to El Cajon Boulevard. Montezuma Road is fronted by primarily residential properties, as well as the San Diego State University College Area campus. The posted speed limit ranges from 35 to 50 mph.

San Diego Mission Road is an east-west roadway that extends from Mission Village Drive to Fairmount Avenue. It functions as a four-lane collector without a center left-turn lane between Mission Village Drive and Rancho Mission Road, and as a two-lane collector with a center left-turn lane between Rancho Mission Road and west of Fairmount Avenue, where it widens to four lanes. East of Fairmount Avenue, this street is designated as Twain Avenue. San Diego Mission Road is fronted primarily by residential properties along its central section, but also by some

commercial uses. The western section provides access to the existing Kinder Morgan tank farm, and its eastern segment is fronted by office and light industrial uses. The posted speed limit is 40 mph.

Gramercy Drive is an east-west roadway that functions as a four-lane collector and extends between Sandrock Road and Ruffin Road, where it connects with Mission Village Drive. It is fronted by primarily residential property and has a posted speed limit of 35 mph.

Aero Drive is an east-west roadway that functions as a four- to six- lane major arterial and extends from Convoy Street/Linda Vista Road to Santo Road. Within the study area, Aero Drive is a four-lane major arterial. Aero Drive is bounded primarily by commercial uses, and provides access to the Montgomery-Gibbs Airport to the north. The posted speed limit is 45 mph.

4.15.3.1.2 Primary North/South Study Area Roadways

State Route 163 is a north-south freeway that extends from a southern terminus at I-5 in downtown San Diego to a northern terminus at I-15 to the north of Kearny Mesa. Near the project study area, SR-163 has on- and off-ramps at Friars Road, an on-ramp from Ulric Street, and an interchange with I-8. There is also an interchange that allows northbound traffic on either SR-163 or I-805 to continue north on either freeway, and allows southbound traffic to continue south on either freeway. Near the project, SR-163 has three to five mainline lanes in each direction and the posted speed limit is 55 mph.

Interstate 805 is a north-south freeway that extends from a southern terminus at I-5 just north of the international border with Mexico and continues north to its terminus at I-5 to the north of Sorrento Valley. Near the project study area, I-805 has on- and off-ramps at Friars Road, on- and off-ramps at Aero Drive, and an interchange with I-8. Near the project, I-805 has four to six mainline lanes in each direction and the posted speed limit is 65 mph.

Interstate 15 is a north-south freeway that extends from a southern terminus at I-5 in Barrio Logan to a northern terminus to the north into Riverside County. Near the project study area, I-805 has an interchange with I-8 and a limited interchange with SR-163 as described above. Near the project, I-15 has three to five mainline lanes in each direction and the posted speed limit is 65 mph.

Ulric Street is a north-south roadway that extends from Friars Road to Ulric Court. It functions as a three-lane collector with a striped median from Friars Road to Lindbrook Drive, as a two-lane collector with a striped median from Lindbrook Drive to Tait Street, as a two-lane collector with a center left-turn lane from Tait Street to Linda Vista Road, and as a two-lane collector from Linda Vista Road to Ulric Court. Ulric Street generally has no fronting uses south of Tait Street, and is bounded by residential properties north of Tait Street. The posted speed limit ranges from 25 to 40 mph.

Frazee Road is a north-south roadway that extends from Hazard Center Drive to a terminus north of Murray Canyon Road. It functions as a four-lane major arterial and is fronted by commercial uses. There is no posted speed limit.

Mission Center Road is a north-south roadway that extends from I-8 to Murray Ridge Road. It functions as a five-lane major arterial from I-8 to Mission Valley Road/Civita Boulevard, as a four-lane major arterial from Mission Valley Road/Civita Boulevard to Sevan Court, and as a three-lane collector without a center left-turn lane from Sevan Court to Murray Ridge Road. Mission Center Road is fronted by a mixture of commercial and residential uses. The posted speed limit ranges from 40 to 45 mph.

Qualcomm Way is a north-south roadway that extends from I-8, where it connects with Texas Street, to Civita Boulevard. It functions as a six-lane major arterial from I-8 to Friars Road and as a four-lane major arterial from Friars Road to Civita Boulevard. It is bounded by a mixture of commercial and residential uses. There is no posted speed limit.

Texas Street is a north-south roadway that extends from a terminus south of Upas Street to I-8, where it connects with Qualcomm Way. It functions as a two-lane collector from its southern terminus to Lincoln Avenue, as a two-lane collector with a center left-turn lane from Lincoln Avenue to the alley north of Howard Avenue, a three-lane collector (one in the northbound direction and two in the southbound direction) without a center left-turn lane from the alley to Meade Avenue, and as a four-lane major arterial from Madison Avenue to I-8. It is primarily bounded by residential uses. The posted speed limit ranges from 25 to 40 mph.

River Run Drive is a north-south roadway that extends from Rio San Diego Drive to Friars Road. It functions as a two-lane collector and is bounded by residential uses. There is no posted speed limit.

Fenton Parkway is a north-south roadway that extends from the trolley line to a cul-de-sac with driveways to the Portofino and Escala residential complexes. It functions as a four-lane major arterial and is bounded by a combination of residential and commercial uses. There is no posted speed limit.

Northside Drive is a north-south roadway that extends from Fenton Marketplace to a cul-de-sac with a driveway to the Escala residential complex. It functions as a four-lane major arterial and is bounded by a combination of residential and commercial uses. There is no posted speed limit.

Mission Village Drive is a north-south roadway that extends from San Diego Mission Road to Ruffin Road where it connects with Gramercy Drive. It functions as a four-lane major arterial from San Diego Mission Road to Ronda Avenue, and a four-lane collector without a center left-turn lane from Ronda Avenue to Ruffin Road. It is primarily bounded by residential uses. The posted speed limit ranges from 40 to 45 mph.

Sandrock Road is a generally north-south roadway that functions as a two-lane collector with a center left-turn lane and extends between a cul-de-sac south of Greyling Drive/Gramercy Drive and Aero Drive, where it connects with John J Montgomery Drive. It has a raised median from Greyling Drive/Gramercy Drive to Hammond Drive and from Haveteur Way to Aero Drive. It is fronted by primarily residential property, but also by some commercial uses. The posted speed limit is 35 mph.

Rancho Mission Road is a north-south roadway that extends from the eastern Stadium driveway to Friars Road. It functions as a two-lane collector from the driveway to Ward Road, as a four-lane collector without a center left-turn lane from Ward Road to San Diego Mission Road, and as a three-lane collector with a center left-turn lane from San Diego Mission Road to Friars Road. Rancho Mission Road is bounded primarily by residential properties, but also by some commercial uses. The posted speed limit ranges from 30 to 35 mph.

Santo Road is a north-south roadway that extends from Friars Road to Ambrosia Drive. It functions as a two-lane collector and has no fronting uses. The posted speed limit is 35 mph.

Riverdale Street is a north-south roadway that extends from Vandever Avenue to Zion Avenue. It functions as a two-lane collector and is bounded primarily by commercial uses. There is no posted speed limit.

Fairmount Avenue is a north-south roadway that extends from Chollas Parkway, where it connects with 47th Street, to Vandever Avenue. It functions as a four-lane collector from Chollas Parkway to Home Avenue, as a four-lane collector with a raised median and no center left-turn lane from Home Avenue to Quince Street, as a four-lane collector from

Quince Street to Myrtle Avenue, as a three-lane collector with a center left-turn lane from Myrtle Avenue to El Cajon Boulevard, as a northbound one-way two-lane collector from El Cajon Boulevard to Meade Avenue (where southbound Fairmount connects with 43rd Street), as a four-lane expressway from Meade Avenue to Camino del Rio North/Alvarado Canyon Road, as a four-lane major arterial from Camino del Rio North/Alvarado Canyon Road to Mission Gorge Road, as a two-lane collector with a center left-turn lane from Mission Gorge Road to San Diego Mission Road/Twain Avenue, and as a two-lane collector from San Diego Mission Road/Twain Avenue to Vandever Avenue. Near the study area, Fairmount Avenue is fronted by commercial uses. It has a posted speed limit ranging from 25 to 55 mph.

Mission Gorge Road is a north-south roadway between Fairmount Avenue and Friars Road, where it continues as a northeast-southwest roadway and extends to Magnolia Avenue in Santee. It functions as a four-lane collector from Fairmount Avenue to Friars Road, as a six-lane major arterial from Friars Road to Old Cliffs Road, as a four-lane major arterial from Old Cliffs Road to Katelyn Court, as a five-lane major arterial from Katelyn Court to Conestoga Way, as a six-lane major arterial from Conestoga Way to Golfcrest Drive, as a five-lane major arterial from Golfcrest Drive to Father Junipero Serra Trail, as a four-lane major arterial from Father Junipero Serra Trail to the SR-52 Ramps, and as a six-lane major arterial from the SR-52 Ramps to Magnolia Avenue. Near the study area, Mission Gorge Road is fronted by commercial uses. It has a posted speed limit ranging from 25 to 55 mph.

Collwood Boulevard is a north-south roadway that extends from 54th Street to Montezuma Road. It functions as a two-lane collector with a center left-turn lane and is bounded primarily by residential property. It has a posted speed limit of 40 mph.

4.15.3.2 Existing and Planned Bicycle Circulation

Bicycle facilities generally consist of four types of facilities, which are outlined below:

- **Bike or Multi-Use Paths (Class I)** provide a separate right-of-way and are designated for the exclusive use of bicycles and pedestrians (or exclusively bicycles) with vehicle and pedestrian cross-flow minimized. Generally, the recommended pavement width for a two-directional bike or multi-use path is ten (10) feet.
- **Bike Lanes (Class II)** provide a restricted right-of-way and are designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.
- **Bike Route or Signed Shared Roadways (Class III)** provide for a right-of-way designated by signs or shared lane pavement markings, or “sharrows,” for shared use with pedestrians or motor vehicles.
- **Separated Bikeways or Cycle Tracks (Class IV)** provide a restricted right-of-way with physical separation and are designated for the use of bicycles with a raised barrier such as curbs or bollards. Separated bikeways are generally five (5) feet wide with a three (3) foot minimum horizontal and vertical separation area. Adjacent vehicle parking is permitted, and vehicle/pedestrian cross-flow is restricted to selected locations (e.g., driveways) indicated by breaks in the barrier and buffer.

The study area includes several bicycle facilities as shown on Figure 4.15-2, Bike Network. A *multi-use path* (the San Diego River Trail) is provided along the San Diego River between Fashion Valley Road and Qualcomm Way, as well as along the eastern edge of the project site, parallel to I-15, between Rancho Mission Road and Murphy Canyon Road. *Bike lanes* currently exist on Friars Road within most of the study area, often enhanced by a striped buffer and green conflict paint; however, the Friars Road facility is typically used only by the most experienced cyclists given the speed of adjacent traffic and the multiple conflicts/crossing points of vehicle traffic at ramps serving intersecting roadways. *Bike lanes* are also provided on:

- Mission Center Road, Qualcomm Way (between Camino del Rio N and Friars Road)
- Fenton Parkway
- Mission Village Drive (between San Diego Mission Road and Shawn Avenue)
- San Diego Mission Road (between Rancho Mission Road and Fairmount Avenue), and
- Camino del Rio N, Gramercy Drive, and Aero Drive.

Bike routes are designated on Ruffin Road and Mission Village Drive (between Shawn Avenue and Ruffin Road/Gramercy Drive).

4.15.3.3 Existing Pedestrian Circulation

Pedestrian facilities comprise sidewalks, crosswalks, pedestrian push buttons and indicators at signalized intersections, and paths. The existing pedestrian facilities are shown on Figure 4.15-3, Pedestrian Network. Sidewalks are present along both sides of all street segments located within the study area, except for:

- the westbound segment of Friars Road between Ulric Street/SR-163 SB Ramps and SR-163 NB Ramps (note that this road is currently under construction as part of the Friars Road/SR-163 interchange improvements),
- the eastbound segment of Friars Road between approximately 250 feet east of Frazee Road and Mission Center Road,
- the westbound segment of Friars Road between Russell Parkway and the private road west of River Run Drive,
- the eastbound segment of Friars Road between Mission Village Drive and approximately 360 feet west of Rancho Mission Road,
- the westbound segment of Friars Road between Mission Village Drive and approximately 90 feet east of the I-15 NB Ramps,
- the segment of Qualcomm Way in both directions between Friars Road EB and Friars Road WB,
- the segment of Qualcomm Way in both directions between Camino del Rio N/I-8 WB Ramps and Camino de la Reina/Camino del Rio N,
- the northbound segment of Qualcomm Way/Texas Street to the south of Camino del Rio N/I-8 WB Ramps (except for short lengths immediately north and south of Camino del Rio S),
- the driveway access at Stadium Way (Street A),
- the westbound segment of San Diego Mission Road between approximately 480 feet east of Mission Village Drive and the eastern driveway to Mission Terrace Apartments,
- the westbound segment of San Diego Mission Road between Nazareth Drive and the private road just west of the San Diego River Bridge,
- the eastbound segment of San Diego Mission Road between the San Diego River Bridge and Fairmount Avenue,
- the northbound segment of Riverdale Street between the alley to the south of Rainier Avenue and Friars Road
- the eastbound segment of Twain Avenue on the east leg of the San Diego Mission Road/Twain Avenue & Fairmount Avenue intersection,
- the eastbound segment of Camino del Rio N from the west leg of the Camino del Rio N & Ward Road intersection to Fairmount Avenue,
- the eastbound segment of Alvarado Canyon Road on the east leg of the Camino del Rio N/ Alvarado Canyon Road & Fairmount Avenue intersection,

- the southbound segment of Fairmount Avenue on the south leg of the Camino del Rio N/ Alvarado Canyon Road & Fairmount Avenue intersection,
- the westbound segment of Montezuma Road on the west leg of Montezuma Road & Collwood Boulevard,
- the northbound segment of Sandrock Road south of the point approximately 60 feet south of Gramercy Drive/Greyling Drive,
- the westbound segment of Aero Drive on the west leg of the Aero Drive & Ruffin Road intersection, and
- the westbound segment of Aero Drive to the east of the Aero Drive & Ruffin Road bus stop.

Each of the signalized study area intersections also provide pedestrian crossing push buttons, except at intersections on Friars Road at SR-163 NB Ramps, Stadium Way (Street A), I-15 SB Ramps, I-15 NB Ramps, and Mission Gorge Drive, where no pedestrian crossing is allowed. Additionally, at Friars Road & Stadium Way (Street A), an eastbound channelized right turn requires pedestrians to cross at an unmarked, uncontrolled location where vehicles are moving at unsafe speeds.

Dual right-turns exist without a posted No Right-Turn-On-Red indication and, as a result, pedestrians do not have a protected movement on at least one approach at each of the following locations:

3. Frazee Rd & Friars Rd
19. Rancho Mission Rd & Friars Rd
28. Qualcomm Way & Camino de la Reina/Camino del Rio N
30. Qualcomm Way/Texas Street & I-8 EB Ramps

Without a separate pedestrian phase and/or prohibition of right-turns on red, a multiple threat condition exists in that the visibility of a pedestrian may be blocked by a stopped vehicle and the driver of the vehicle in the adjacent right-turn lane may proceed without stopping. While providing a separate pedestrian phase or restricting right turns on red does have traffic delay implications, this existing condition raises potential safety concerns that should not be duplicated at any other locations where dual right-turn lanes are proposed.

Within the proposed project site, there is no separate or designated pedestrian connection from the Stadium trolley station to the surrounding roadways. Transit patrons accessing the existing station simply walk through the SDCCU Stadium parking lot.

4.15.3.4 Existing Transit Services

Existing transit service near the project site includes light rail/trolley and bus services provided by the Metropolitan Transit System (MTS). These services are described below, and the routes are shown on Figure 4.15-4, Transit Network. Only bus routes that serve roadways along the project site frontage or trolley service near the project site are described in this section.

MTS provides bus and trolley service within the Mission Valley community, including an existing Green Line trolley stop located at the south edge of the project site. The trolley's Green Line provides service along the San Diego River corridor, and several MTS bus routes provide service within the study area. Detailed descriptions of each service are presented below.

The MTS Green Line provides daily service from Santee to Downtown San Diego, extending along the San Diego River through the southern area of the project site. This route includes the Stadium station at the south end of the

project site, as well as, stations in the vicinity of the study area at Hazard Center near Friars Road & Frazee Road, Rio Vista near Qualcomm Way & Rio San Diego Drive, Fenton Parkway near Fenton Parkway & Rio San Diego Drive, Mission San Diego near Ward Road & Rancho Mission Road, and Grantville near Fairmount Avenue & Camino del Rio N/Alvarado Canyon Road. The MTS Green Line also provides service to the existing SDSU campus at the SDSU Transit Center, which is located just three stops east of the Stadium station at the project site. During weekdays, the Green Line operates from 4:50 AM to 1:10 AM in the westbound direction, and 3:50 AM to 12:15 AM in the eastbound direction. According to SANDAG January-June 2018 ridership data, the Stadium Station currently serves an average daily total of 391 boardings and alightings combined, with a directional distribution as follows: eastbound (71 average boardings/122 average alightings) and westbound (133 average boardings/65 average alightings). Observations at this station during the peak periods indicate numerous available seats on trains with few, if any, passengers standing.

Bus Route 11 provides daily service from the SDSU College Area campus to downtown San Diego. In the study area, this route travels along Fairmount Avenue south of I-8, along I-8 from Fairmount Avenue to I-15, and along I-15 south of I-8. This route has no stops in the study area. During weekdays, although the route operates from 4:40 AM to 11:00 PM in the southbound direction and from 5:10 AM to 11:10 PM in the northbound direction, the route only traces the route described previously during service after 9:50 PM.

Bus Route 14 provides weekday service from the Grantville Trolley Station to Baltimore Drive & Lake Murray Boulevard in La Mesa. In the study area, this route travels along Camino del Rio N, Ward Road, Rancho Mission Road, Friars Road, and Mission Gorge Road. In the study area, the route stops at Rancho Mission Road & Ward Road (approximately 1,300 feet from the project site boundary) and at Rancho Mission Road & San Diego Mission Road (approximately 1,650 feet from the project site boundary). According to SANDAG January-June 2018 ridership data, at Rancho Mission Road & Ward Road, there are typically seven (7) boardings and no alightings in the northbound direction, and one (1) boarding and nine (9) alightings in the southbound direction. At Rancho Mission Road & San Diego Mission Road, there are typically two (2) boardings and one (1) alighting in the northbound direction, and one (1) boarding and one (1) alighting in the southbound direction. This route operates from 5:45 AM to 7:30 PM in the eastbound direction and 6:30 AM to 6:30 PM in the westbound direction.

Bus Route 18 provides weekday service from the Grantville Trolley Station to Qualcomm Way/Texas Street. In the study area, this route travels along Camino del Rio N and Qualcomm Way and includes a stop at Camino del Rio N & Ward Road in the westbound direction (approximately 1,900 feet from the project site boundary). According to SANDAG January-June 2018 ridership data, this bus stop typically serves four (4) boardings and one (1) alighting. This route operates from 7:00 AM to 5:30 PM in a loop beginning and ending at the Grantville Trolley Station.

Bus Route 60 provides weekday service from the Euclid Transit Center to City Heights, Kearny Mesa, and the UTC Transit Center. In the study area, this route travels along I-15, but does not stop in the study area. This route operates from 5:00 AM to 8:00 AM in the northbound direction and from 3:30 PM to 7:00 PM in the southbound direction.

Bus Route 235 provides daily service from Escondido to Downtown San Diego. In the study area, this route travels along I-15, but does not stop in the study area. During weekdays, this route operates from 5:00 AM to 11:50 PM in the southbound direction and from 4:40 AM to 11:50 PM in the northbound direction.

4.15.3.5 Existing Network and Intersection Volumes

Figure 4.15-5, Existing Conditions Diagram, illustrates the existing road conditions in the project study area, including signalized intersections and lane configurations. The operations of 39 of the 41 existing study area

intersections were evaluated during weekday morning (7:00 to 9:00 AM) and weekday evening (4:00 to 6:00 PM) peak period conditions. The remaining intersection, Friars Road & Stadium Way (Street A), is only used during special events at SDCCU Stadium and, otherwise, does not serve any side street traffic. Therefore, typical weekday AM and PM peak hour operations at this intersection were not evaluated.

Intersection turning movement volumes were obtained in 2018 and 2019. Existing lane configurations and signal controls were obtained through field observations. Figure 4.15-5 presents the study area's existing AM and PM peak-hour turning movement volumes, corresponding lane configurations, and traffic control devices. The unadjusted or raw traffic count data sheets are provided in TIA Appendix A.

4.15.3.5.1 Intersection Analysis

Existing peak-hour volumes and lane configurations were used to calculate existing levels of service for each of the study area intersections. The results of the existing LOS analysis are presented in Table 4.15-5 and the corresponding LOS calculation sheets are included in TIA Appendix B.

The analysis results indicate that 33 of the study area intersections operate at LOS D or better under Existing Conditions. Six (6) of the remaining study area intersections, listed below, operate at LOS E during one or both peak hours:

1. SR-163 SB Ramps/Ulric Street & Friars Road – LOS E (PM peak hour)
2. SR-163 NB Ramps & Friars Road – LOS E (PM peak hour)
13. Mission Village Drive & Friars Road Eastbound Ramps/San Diego Mission Road – LOS E (AM peak hour)
28. Qualcomm Way & Camino del Rio N/Camino de la Reina – LOS E (PM peak hour)
31. Texas Street & Camino del Rio S – LOS E (PM peak hour)
35. Fairmount Avenue & Camino del Rio N – LOS E (PM peak hour)

The calculated LOS presented in Table 4.15-5 generally corresponds to observations made in the field. The one exception applies to the remaining two intersections (Intersections 17 and 18) near the I-15 on-ramps where ramp metering during the peak hours results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation. Based on these observations, operations at the intersection are assumed to be LOS D or E as indicated in the table.

Table 4.15-5. Existing Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Delay	LOS ^{2,3}
			(sec/veh) ¹	
1. SR-163 SB Ramps/Ulric St & Friars Rd	Signalized	AM	22.5	C
		PM	57.9	E
2. SR-163 NB Ramps & Friars Rd	Signalized	AM	11.2	B
		PM	60.9	E
3. Frazee Rd & Friars Rd	Signalized	AM	26.9	C
		PM	51.0	D
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	10.5	B
		PM	11.1	B
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	15.9	B
		PM	25.1	C

Table 4.15-5. Existing Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Delay	LOS ^{2,3}
			(sec/veh) ¹	
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	17.4	B
		PM	22.1	C
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.9	A
		PM	9.6	A
8. River Run Dr & Friars Rd	Signalized	AM	17.7	B
		PM	37.1	D
9. Fenton Pkwy & Friars Rd	Signalized	AM	25.3	C
		PM	30.2	C
10. Northside Dr & Friars Rd	Signalized	AM	28.0	C
		PM	39.9	D
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A
		PM	-	N/A
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	18.5	B
		PM	32.6	C
13. Mission Village Dr & Friars Rd EB Ramps/ San Diego Mission Rd*	Signalized	AM	59.9	E
		PM	54.2	D
14. Street D & Street 4	Signalized	AM	DNE	N/A
		PM		N/A
15. Street B & Street 2	Signalized	AM	DNE	N/A
		PM		N/A
16. F & Street 6/San Diego Mission Rd	Roundabout	AM	DNE	N/A
		PM		N/A
17. I-15 SB Ramps & Friars Rd	Signalized	AM	38.0	D
		PM	49.3	D** (E)
18. I-15 NB Ramps & Friars Rd	Signalized	AM	34.2	C** (E)
		PM	47.8	D** (E)
19. Rancho Mission Rd & Friars Rd	Signalized	AM	23.1	C** (D)
		PM	17.7	B** (D)
20. Santo Rd & Friars Rd	Signalized	AM	25.4	C
		PM	13.3	B
21. Riverdale St & Friars Rd	Signalized	AM	21.1	C
		PM	20.7	C
22. Mission Gorge Rd & Friars Rd	Signalized	AM	33.4	C
		PM	32.2	C
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	14.6	B
		PM	23.0	C
24. Rio San Diego Dr & River Run Dr	AWSC	AM	9.5	A
		PM	12.1	B
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	15.2	B
		PM	21.7	C
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	21.5	C
		PM	22.1	C
27. Fairmount Ave & San Diego Mission Rd/ Twain Ave	Signalized	AM	13.7	B
		PM	13.0	B

Table 4.15-5. Existing Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Delay	LOS ^{2,3}
			(sec/veh) ¹	
28. Qualcomm Way & Camino del Rio N/ Camino de la Reina	Signalized	AM	18.2	B
		PM	61.2	E
29. Qualcomm Way & I-8 WB Off-Ramp/ Camino del Rio N	Signalized	AM	10.7	B
		PM	42.8	D
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.1	A
		PM	4.0	A
31. Texas St & Camino del Rio S	Signalized	AM	39.0	D
		PM	55.6	E
32. Ward Rd & Rancho Mission Rd	SSSC	AM	19.9	C
		PM	19.7	C
33. Camino del Rio N & Ward Ave	Signalized	AM	11.9	B
		PM	13.8	B
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	20.7	C
		PM	25.3	C
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	53.8	D
		PM	61.0	E
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	12.7	B
		PM	21.3	C
37. Montezuma Rd & Collwood Blvd	Signalized	AM	39.4	D
		PM	25.1	C
38. Mission Village Dr & Shawn Ave	Signalized	AM	5.1	A
		PM	6.6	A
39. Mission Village Dr & Fermi Ave	Signalized	AM	11.1	B
		PM	7.5	A
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	14.2	B
		PM	16.0	B
41. Ruffin Rd & Aero Dr	Signalized	AM	30.8	C
		PM	31.3	C
42. Gramercy Dr & Mobley St	Signalized	AM	6.3	A
		PM	5.3	A
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	8.9	A
		PM	10.4	B

Source: Appendix 4.15-1.

Notes:

- ¹ Whole intersection weighted average stopped delay reported for signalized and the all-way stop control (AWSC) intersection. Worst movement delay reported for the side-street stop-control (SSSC) intersection.
- ² LOS calculations performed using the Highway Capacity Manual 6th Edition (HCM 6) method.
- ³ LOS E or F operations highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way & Friars Road intersection is only used during Stadium events.
- * Due to limitations of the HCM 6 method, LOS calculations performed using the HCM 2000 method.
- ** Ramp metering during the peak hours results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation. This additional delay is estimated to result in operations as shown in parentheses.

4.15.3.5.2 Roadway Segment Analysis

As previously noted, the roadway segment LOS analysis is presented for information purposes only and is based on the City of San Diego impact thresholds. Where available, roadway segment volumes were obtained from the City of San Diego database dated April 2018. Where database volumes were not available or segments were not recently counted, new counts were obtained in 2018. For the volumes obtained prior to 2018, an annual growth factor of approximately one percent³ was applied to increase volumes to Year 2018 levels.

Table 4.15-6 displays the LOS analysis for the project study area roadway segments under Existing Conditions. As shown in the table, all roadway segments currently operate acceptably at LOS D or better, except for Camino del Rio South from Texas Street to Mission City Parkway, which operates at LOS F.

Table 4.15-6. Existing Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	ADT	V/C ²	LOS ^{3,4}
ID	Extent (from/to)						
Friars Rd							
1	Frazee Rd	Mission Center Rd	7E	93,330	43,540	0.47	B
2	Mission Center Rd	Qualcomm Way	6E	80,000	40,223	0.43	B
3	Qualcomm Way	River Run Dr	6E	80,000	35,187	0.44	B
4	River Run Dr	Fenton Pkwy	6P	60,000	35,757	0.60	C
5	Fenton Pkwy	Northside Dr	6P	60,000	35,037	0.58	C
6	Northside Dr	Stadium Way (Street A)	6E	80,000	45,076	0.56	C
7	Stadium Way (Street A)	Mission Village Dr	6E	80,000	45,076	0.56	C
8	Mission Village Dr	I-15 Ramps	6E	80,000	43,746	0.55	C
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	60,400	0.86	D
10	Rancho Mission Rd	Santo Rd	7P	70,000	50,773	0.73	C
11	Santo Rd	Riverdale St	6P	60,000	49,805	0.83	C
12	Riverdale St	Mission Gorge Rd	6P	60,000	45,257	0.75	C
Qualcomm Way							
13	Friars Rd	Rio San Diego Dr	6M	50,000	14,616	0.29	A
Rio San Diego Dr							
14	Qualcomm Way	River Run Dr	4M	40,000	11,301	0.28	A
15	River Run Dr	Fenton Pkwy	4C/M	30,000	9,264	0.31	A
Fenton Pkwy							
16	Rio San Diego Dr/Fenton Marketplace Dwy	Northside Dr	4M	40,000	5,165	0.13	A
San Diego Mission Rd							
17	Mission Village Dr	Rancho Mission Rd	4C w/o CLTL	15,000	7,660	0.51	C
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	8,819	0.59	C
Rancho Mission Rd							
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	15,210	0.68	D
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	9,582	0.64	C

³ Annual growth factors were the same as those used to forecast Horizon Year volumes as described in Section 4.15.7.2.1. Annual average growth rates were calculated using volume forecasts from the SANDAG Series 13 Model comparing Year 2035 to Year 2012 volumes for each roadway segment.

Table 4.15-6. Existing Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	ADT	V/C ²	LOS ^{3,4}
ID	Extent (from/to)						
21	West of Ward Rd		2C	10,000	1,510	0.15	A
Ward Rd							
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	9,972	0.66	C
Fairmount Ave							
23	San Diego Mission Rd/ Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	7,217	0.24	A
Mission Village Dr							
24	Ruffin Rd	Shawn Ave	4C	30,000	15,184	0.51	C
25	Shawn Ave	Ronda Ave	4C	30,000	12,343	0.41	B
26	Ronda Ave	Friars Rd	4M	40,000	14,241	0.36	A
Ruffin Rd							
27	Aero Dr	Mission Village Dr	4C	30,000	13,617	0.45	B
Gramercy Dr							
28	Mobley St	Ruffin Rd	4M	40,000	7,827	0.20	A
Aero Dr							
29	Sandrock Rd	Ruffin Rd	4M	40,000	19,636	0.49	B
30	Ruffin Rd	Daley Center Dr	4M	40,000	26,069	0.65	C
Camino del Rio N							
31	Qualcomm Way	Mission City Pkwy	4C	30,000	9,608	0.32	A
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	8,540	0.57	C
33	Ward Rd	Fairmount Ave	4C	30,000	12,173	0.41	B
Camino del Rio S							
34	Texas St	Mission City Pkwy	2C	10,000	11,496	1.15	F

Source: Appendix 4.15-1

Notes:

- ¹ 2C = 2-lane collector
2C w/CLTL = 2-lane collector with center left-turn lane
3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane
4C w/o CLTL = 4-lane collector without center left-turn lane
4C = 4-lane collector
4M = 4-lane major arterial
6M = 6-lane major arterial
6P = 6-lane primary arterial
7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add a capacity of 5,000 for LOS A, 7,500 for LOS B, and 10,000 for LOS C, D, and E per the Mission Valley Community Plan Update
6E = 6-lane expressway
7E = 7-lane expressway (4 lanes in one direction and 3 in opposing direction); capacity is assumed to be 117% of 6E capacity
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using City of San Diego Traffic Impact Study Manual (1998) and Mission Valley Community Plan Update Draft (2019)
- ⁴ Unacceptable ADT volumes per segment and LOS highlighted in **bold**.

4.15.3.5.3 Freeway Segment Analysis

Table 4.15-7 displays the freeway mainline LOS analysis results under Existing Conditions. The freeway segment analysis was performed using the methodology presented in Section 4.15.2. As shown on the table, all freeway segments operate at undesirable levels of service (LOS E or F) in one or both directions and during one or both peak hours under Existing Conditions except the following segments:

2. SR-163 from I-8 to Friars Road
4. SR-163 from Mesa College Drive to I-805
8. I-805 from Mesa College Drive/Kearny Villa Road to SR-163
9. I-805 from SR-163 to Balboa Avenue
14. I-8 from Morena Boulevard to Taylor Street
16. I-8 from Hotel Circle to SR-163
19. I-8 from Texas Street to I-805

Based on typical traffic conditions, the calculated freeway LOS generally corresponds to available traffic data except for select segments of SR-163, I-805, and I-8. As to these segments, appropriate adjustments to address the discrepancies have been made as part of the analysis.

Table 4.15-7. Existing Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}	
					AM	PM	AM	PM	AM	PM
State Route 163										
1	6 th Ave to I-8	NB	3M+1A	6,600	5,256	5,705	0.80	0.86	C	D
		SB	3M+2A	7,800	8,966	8,021	1.15	1.03	F(0)	F(0)
2	I-8 to Friars Rd	NB	2A	9,000	1,621	1,759	0.68	0.73	C	C
		SB	4M+2A	7,200	8,201	7,490	0.85	0.78	D	C* (F)
3	Friars Rd to Mesa College Dr ⁵	NB	5M	6,600	9,222	7,427	1.02	0.83	F(0)	D
		SB	4M	7,800	6,163	6,384	0.86	0.89	D	D* (F)
4	Mesa College Dr to I-805	NB	4M+2A	9,000	7,774	7,216	0.81	0.75	D	C
		SB	4M+1A	7,200	7,078	6,184	0.84	0.74	D	C* (F)
Interstate 805										
5	Madison Ave to I-8	NB	4M+1A	8,400	8,389	4,895	1.00	0.58	E	B
		SB	6M	10,800	4,512	9,475	0.42	0.88	B	D* (F)
6	I-8 to Murray Ridge Rd/Phyllis Pl	NB	5M	9,000	9,830	5,699	1.09	0.63	F(0)	C
		SB	4M+2A	9,600	5,145	9,204	0.54	0.96	B	E
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/ Kearny Villa Rd	NB	5M	9,000	9,821	5,673	1.09	0.63	F(0)	C
		SB	5M	9,000	4,946	8,982	0.55	1.00	B	E

Table 4.15-7. Existing Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}	
					AM	PM	AM	PM	AM	PM
8	Mesa College Dr/ Kearny Villa Rd to SR-163	NB	5M	9,000	8,191	4,826	0.91	0.54	D* (F)	B
		SB	4M	7,200	3,551	5,547	0.49	0.77	B	C* (F)
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	5,281	4,442	0.63	0.53	C* (F)	B
		SB	4M+2A	9,600	5,319	7,206	0.55	0.75	B	C * (F)
Interstate 15										
10	Adams Ave to I-8	NB	3M+2A	7,800	6,229	6,920	0.80	0.89	C	D
		SB	5M	9,000	5,030	8,403	0.56	0.93	B	E
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,143	1,771	0.48	0.74	B	C
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	3,515	4,641	0.98	1.29	E	F(1)
	Friars Rd Direct Ramp to I-15	SB	1A	1,200	622	914	0.52	0.76	B	C
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	8,022	5,889	0.96	0.70	E	C
		SB	5M+1A	10,200	6,825	9,390	0.67	0.92	C	E
13	Aero Dr to Balboa Ave/ Tierrasanta Blvd	NB	4M+1A	8,400	9,007	6,792	1.07	0.81	F(0)	D
		SB	4M+1A	8,400	6,991	8,417	0.83	1.00	D	F(0)
Interstate 8										
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	6,023	7,523	0.72	0.90	C	D
		WB	5M	9,000	7,089	6,193	0.79	0.69	C	C
15	Taylor St to Hotel Cir	EB	4M	7,200	5,901	7,890	0.82	1.10	D	F(0)
		WB	4M+1A	8,400	8,171	6,978	0.97	0.83	E	D
16	Hotel Cir to SR-163	EB	4M+2A	9,600	7,039	8,736	0.73	0.91	C	D
		WB	5M	9,000	8,173	6,719	0.91	0.75	D	C
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,017	5,669	0.42	0.79	B	C* (F)
		WB	3M+2A	7,800	8,579	7,900	1.10	1.01	F(0)	F(0)
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	5,025	9,463	0.60	1.13	B	F(0)
		WB	4M+1A	8,400	8,928	8,273	1.06	0.98	F(0)	E
19	Texas St to I-805	EB	4M	7,200	3,185	6,214	0.44	0.86	B	D* (F)
		WB	4M	7,200	6,253	4,963	0.87	0.69	D* (F)	C
20	I-805 to I-15	EB	4M+2A	9,600	6,104	10,315	0.64	1.07	C	F(0)
		WB	4M+2A	9,600	10,466	8,476	1.09	0.88	F(0)	D
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	5,965	9,335	0.62	0.97	C	E
		WB	4M+2A	9,600	7,413	5,467	0.77	0.57	C* (F)	B

Table 4.15-7. Existing Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}	
					AM	PM	AM	PM	AM	PM
22	Fairmount Ave to Waring Rd	EB	5M	9,000	6,483	10,335	0.72	1.15	C	F(0)
		WB	6M	10,800	10,029	7,923	0.93	0.73	E	C
23	Waring Rd to College Ave	EB	5M	9,000	6,392	9,979	0.71	1.11	C	F(0)
		WB	5M	9,000	9,359	7,492	1.04	0.83	F(0)	D

Source: Appendix 4.15-1

Notes:

¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane

M = mainline lane

A = auxiliary lane

² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications

³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)*

⁴ Unacceptable V/C and LOS highlighted in **bold**.

⁵ No data available from Genesee Ave to Mesa College Dr - assumed equivalent to the segment from Friars Rd to Genesee Ave

* Traffic data indicate operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

4.15.3.5.4 Freeway Ramp Metering Analysis

Table 4.15-8 displays the results of the ramp metering analysis conducted at the metered freeway on-ramps in the study area under Existing Conditions. By design, the following ramp meters are not operating during one of the two peak hours due to lower freeway mainline volumes:

- I-15 SB/I-8 Loop On-ramp from Friars Road – AM peak hour
- I-15 SB Direct On-ramp from Friars Road – AM peak hour
- I-8 EB On-ramp from southbound Fairmount Avenue – AM peak hour

As shown in Table 4.15-8, the I-8 EB On-ramp from southbound Fairmount Avenue operates with unacceptable delays during the PM peak hour. Additionally, at the two I-15 on-ramps from Friars Road, on-ramp capacity is not sufficient to accommodate the peak hour demand; thus, ramp queues spill back onto the arterial street, which was validated through field observations. Although the analysis indicates that the same spill-back occurs at the I-8 EB On-ramp, no spill back was observed onto Fairmount Avenue during field observations. This discrepancy is likely due to the application of the most restrictive meter rate of a comparatively large range from 492 to 996 vehicles per hour.

Table 4.15-8. Existing Conditions Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)
				Mixed Flow & HOV	Mixed Flow only			
I-15 NB - Friars Rd On-Ramp	AM	2	1,450	1,941	1,641	191	7.9	2,775
	PM	2	888	1,244	1,096	208	14.1	3,025

Table 4.15-8. Existing Conditions Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)
				Mixed Flow & HOV	Mixed Flow only			
I-15 SB / I-8 - Friars Rd Loop On-Ramp	AM	1	N/A	732	732	N/A	N/A	N/A
	PM	1	660	744	744	84	7.6	2,425
I-15 SB - Friars Rd Direct On-Ramp	AM	1	N/A	622	622	N/A	N/A	N/A
	PM	1	996	914	914	0	0.0	0
I-8 EB - SB Fairmount Ave	AM	1	N/A	250	250	N/A	N/A	N/A
	PM	1	492	550	550	58	7.1	1,675*

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

Notes:

- ¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed.
- ² Demand is the peak hour demand projected to use the on-ramp.
- ³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.
- ⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Undesirable delay in excess of 15 minutes is highlighted in **bold**.
- ⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.
- * Field observations indicate operations are better than calculated.

4.15.3.5.5 Freeway Off-Ramp Queuing Analysis

Table 4.15-9 displays the results of the off-ramp queuing analysis conducted at the SR-163 and I-15 off-ramps at Friars Road, and the I-8 off-ramps at Qualcomm Way/Texas Street and Fairmount Avenue. As shown on the table, all off-ramp queues can be accommodated by existing ramp storage capacity under Existing Conditions.

Table 4.15-9. Existing Conditions Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95th Percentile Queue (ft)
				Existing Conditions
1. SR-163 SB off-ramp at Friars Rd/Ulric St	AM	NBL	1,200	204
		NBT		207
		NBR		0
	PM	NBL	1,200	201
		NBT		198
		NBR		0
2. SR-163 NB off-ramp at Friars Rd	AM	NBR	900	0
		SBR	700	0
	PM	NBR	900	0
		SBR	700	0

Table 4.15-9. Existing Conditions Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95th Percentile Queue (ft)
				Existing Conditions
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	331
		SBT		333
		SBR		201
	PM	SBL	1,200	647
		SBT		648
		SBR		65
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0
		SBR	1,300	0
	PM	NBR	1,500	0
		SBR	1,300	0
29. I-8 WB off-ramp at Qualcomm Way/ Camino del Rio N	AM	WBL	3,200	0
		WBT		125
		WBR		191
	PM	WBL	3,200	0
		WBT		277
		WBR		102
30. I-8 EB off-ramp at Qualcomm Way/ Texas St	AM	EBR	900	44
	PM	EBR	900	147
35. I-8 WB off-ramp at Fairmount Ave/ Alvarado Canyon Rd/Camino del Rio N	AM	WBL	1,000	486
		WBT		464
		WBR		216
	PM	WBL	1,000	556
		WBT		336
		WBR		243
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	276
		EBR		283
	PM	EBL	4,100	714
		EBR		1,229

Source: Appendix 4.15-1.

4.15.3.5.6 Stadium Operations

The existing SDCCU Stadium hosts approximately 11 high-attendance events (over 20,000 guests) each year.⁴ For high attendance events, manual traffic control is employed at each of the Stadium entrances and exits. Transportation Network Companies (TNCs) are instructed to use a designated drop-off zone in the eastern part of the Stadium, accessed via Rancho Mission Road, whereas attendees who are driving and parking enter via Stadium Way (Street A), Mission Village Drive/Street D, and San Diego Mission Road. Before high-attendance events, advance notice is provided to the area via dynamic signage and radio announcements.

Attendee mode split and average vehicle occupancy (AVO) data was collected at the November 24, 2018 SDSU-University of Hawaii game. Of the attendees who arrived by car and parked, the observed AVO was 2.29. Of the attendees who

⁴ Stadium events based on the 2018 calendar available at <https://www.sandiego.gov/stadium>. Canceled events are not included.

arrived by TNC, the observed AVO was 2.47 (counting attendees only and not including the driver of the TNC). Based on the 2016 and 2017 SDSU Aztec football seasons, it is conservatively estimated that approximately 68% of the announced attendees for the 2018 game (28,014 based on ticket sales) were physically present (19,050 resulting attendees). Based on data collected at the Stadium driveways for the 2018 game, 65% of the attendees arrived by car and parked, and 2% of attendees arrived by TNC. The remaining 33% of attendees arrived by transit, biking, or walking.

4.15.4 Relevant Plans, Policies, and Ordinances

The following is an overview of federal, state and regional plans, policies and ordinances relevant to transportation-related issues.

Federal

Highway Capacity Manual

The analysis of intersection operations performed herein is based on procedures presented in the *2016 Highway Capacity Manual 6th Edition* (HCM 6). The 2016 HCM 6, prepared by the federal Transportation Research Board, is the result of a collaborative multiagency effort between the Transportation Research Board, Federal Highway Administration, and American Association of State Highway and Transportation Officials. The 2016 HCM contains concepts, guidelines, and computational procedures for computing the capacity and quality of service of various highway facilities, including freeways, signalized and unsignalized intersections, rural highways, and the effects of transit, pedestrian, and bicycles on the performance of these systems. The HCM 6 has limitations that prevent its application for analyzing signals with unique timing programs, such as phase numbering that does not follow the National Electrical Manufacturers Association (NEMA) convention, including providing a protected pedestrian crossing. In those cases where the HCM 6 could not evaluate intersection operations, HCM 2000 methodology was applied.

State

California Department of Transportation

Caltrans is the public agency responsible for designing, building, operating, and maintaining California's State highway system, which consists of freeways, highways, expressways, toll roads, and the area between the roadways and property lines. Caltrans is also responsible for permitting and regulating the use of State roadways. Caltrans' construction practices require temporary traffic control planning during any activities that interfere with the normal function of a roadway.

Statewide Transportation Improvement Program

The California 2007 Statewide Transportation Improvement Program, approved by the U.S. Department of Transportation in October 2006, is a multiyear, Statewide, intermodal program of transportation projects consistent with the Statewide transportation plan and planning processes, metropolitan plans, and Title 23 of the Code of Federal Regulations. The Statewide Transportation Improvement Program is prepared by Caltrans in cooperation with the Metropolitan Planning Organizations and the Regional Transportation Planning Agencies. In San Diego County, the Metropolitan Planning Organization and Regional Transportation Agency is SANDAG. The Statewide Transportation Improvement Program contains all capital and non-capital transportation projects or identified

phases of transportation projects for funding under the Federal Transit Act and Title 23 of the U.S. Code, including federally funded projects.

Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA

The technical advisory on evaluating transportation impacts in CEQA is one in a series of advisories provided by the Governor’s Office of Planning and Research (OPR) as a service to professional planners, land use officials, and CEQA practitioners. This advisory contains technical recommendations regarding the assessment of VMT-related impacts, thresholds of significance, and mitigation measures. OPR issues technical assistance on issues that broadly affect the practice of land use planning and the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). (Gov. Code, § 65040, subds. (g), (l), (m).) The purpose of the technical advisory document is to provide advice and recommendations, which agencies and other entities may use at their discretion. The document does not alter lead agency discretion in preparing environmental documents subject to CEQA and the document should not be construed as legal advice.

Senate Bill 743

Senate Bill 743 (Steinberg, 2013), which is codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA (CEQA Guidelines) regarding the analysis of transportation impacts and the metric upon which to assess those impacts. Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” (Id., subd. (b)(1); see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].)

To that end, OPR drafted revised CEQA Guidelines that identify VMT as the most appropriate metric to evaluate a project’s transportation impacts. The revised Guidelines require that all lead agencies include a VMT transportation analysis as part of their CEQA documentation by July 1, 2020; the California Natural Resources Agency adopted the revised Guidelines in December 2018.. With the Resources Agency’s adoption of the revised CEQA Guidelines, after July 1, 2020, automobile delay, as measured by “level of service” and other similar metrics, will generally no longer constitute a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)

Regional

2050 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS)

The 2050 RTP provides a framework for the expenditure of an estimated \$214 billion in local, state, and federal transportation funds expected to come to the San Diego region over the next 40 years. The 2050 RTP is the blueprint for a regional transportation system that would further enhance quality of life, promote sustainability, and offer more mobility options for people and goods. The plan outlines projects for transit, rail and bus service, express or managed lanes, highways, local streets, bicycling, and walking in order to provide an integrated, multimodal transportation system by mid-century. Pursuant to Senate Bill 375, the 2050 RTP also includes the SCS, which provides a plan for the region to reduce greenhouse gas emissions to achieve state-mandated levels. The 2050 RTP and SCS are components of *San Diego Forward: The Regional Plan*, which was adopted by the SANDAG Board of Directors on October 9, 2015. An RTP update was originally scheduled for review and approval in 2019 although that in the process of revision and a two-year delay is now anticipated.

Regional Transportation Improvement Program (RTIP)

The RTIP is a multi-billion dollar, 5-year program of major transportation projects funded by the federal and state governments, TransNet local sales taxes, and other local and private funding. The RTIP is a prioritized program designed to implement the region's overall strategy for providing mobility and improving the efficiency and safety of the transportation system, while reducing transportation-related air pollution in support of the efforts to attain federal and state air quality standards for the region. The RTIP also incrementally implements the 2050 RTP, which is the long-range transportation plan for the San Diego region; see description above. The RTIP covers multiple fiscal years and is amended frequently to reflect near term priorities and expenditures.

Congestion Management Program (CMP)

State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a CMP, which is a part of SANDAG's RTP. The purpose of the CMP is to monitor the performance of the region's transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates to the State CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region's continued compliance with the federal congestion management process. San Diego Forward: The Regional Plan, the region's long-range transportation plan and SCS, meets the requirements of 23 CFR 450.320 by incorporating the following federal congestion management process: performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-single-occupancy vehicle (SOV) analysis, land use impact analysis, the provision of congestion management tools, and integration with the RTIP process.

SANDAG Regional Bike Plan

The SANDAG Regional Bike Plan, Riding to 2050, provides a regional strategy to make riding a bike a useful form of transportation for everyday travel. The plan will help San Diego meet its goals to reduce greenhouse gas (GHG) emissions and improve mobility. Goals of the Regional Bike Plan include increasing levels of bicycling; improving bicycling safety; encouraging Complete Streets; supporting reductions in emissions; and increasing community support. In September 2013, the SANDAG Board of Directors approved funding to implement the Regional Bike Plan Early Action Program, which focuses on the region's highest-priority projects. Priority is chosen in part based on proximity to smart growth areas, taking into account that bikeways would be used more often if they connect high-density activity hubs within a short distance of each other, and on whether a project would fill key gaps in the regional bike networks.

Local

As a state agency, California State University/SDSU is not subject to local government planning and land use plans, policies, or regulations. That is, the proposed project would be subject to state and federal agency planning documents, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or the City municipal zoning code. However, for informational purposes, the proposed project has considered these planning documents and the project's location within, and relationship to, each.

Mission Valley Community Plan Update and Final EIR

The Final Draft of the Mission Valley Community Plan was released in May 2019. The Community Plan was a companion release to the Final Program Environmental Impact Report (PEIR) (May 31, 2019) (SCH No. 2017071066).

In 2015, the City of San Diego, in coordination with local community members, began updating the Mission Valley Community Plan, which serves as a blueprint for the future development of the Mission Valley community. After completing extensive research regarding existing conditions; gathering input from the Mission Valley Community Plan Update Subcommittee, community members, and stakeholders, on topics such as land use, mobility, and parks; and analyzing future conditions, the third draft of the Mission Valley Community Plan is now available. The draft will soon be considered for approval by the City Planning Commission and City Council.

The format of the Final Draft is intended to communicate the community's vision to the local community, property owners, and developers in order to encourage successful implementation. The Final Draft states a clear vision for the future of the community; provides implementing actions that the City can take to help achieve the vision; and offers design guidelines and policies to direct new development as to how to improve the quality of life for residents, employees, property owners, business owners, and visitors of Mission Valley in the future. See Section 4.10, Land Use and Planning, for more information on the Mission Valley Community Plan Update.

City of San Diego Bicycle Master Plan

The 2013 City of San Diego Bicycle Master Plan, which updates the City's 2002 plan, presents a bicycle network, projects, policies, and programs for improving bicycling through 2030 and beyond, consistent with the City's 2008 General Plan mobility, sustainability, health, economic, and social goals. The goals of the Bicycle Master Plan are to create: a city where bicycling is a viable travel choice, particularly for trips of less than five miles; a safe and comprehensive local and regional bikeway network; and environmental quality, public health, recreation and mobility benefits through increased bicycling. These goals are supported by twelve key policies to help bicycling become a more viable transportation mode for trips of less than five miles, to connect to transit, and for recreation.

The Bicycle Master Plan addresses existing bicycling conditions, the relationship of the Plan to other plans and policies, a bicycle needs analysis, bicycle facility recommendations, bicycle program recommendations, and implementation and funding issues.

City of San Diego Pedestrian Master Plan

The City of San Diego is developing a Pedestrian Master Plan to guide the planning and implementation of pedestrian improvement projects in the City. The Master Plan will help the City enhance neighborhood quality and mobility options by facilitating pedestrian improvement projects, and will identify and prioritize improvement projects based on technical analysis and community input, as well as improve the City's ability to receive grant funding for implementation of pedestrian projects.

The City currently is in Phase 4 of the planning process. During Phase 1, the City developed the Master Plan Citywide Framework Report, which provides a foundation for identifying and prioritizing projects in each community. Phases 2 and 3 inventoried seven communities in the city to understand pedestrian needs, identify problems, and create a prioritized list of pedestrian projects specific to each community. Phase 4 continues the inventory process and

focuses on seven additional communities, including the College Area. For additional information, please see www.sandiego.gov/planning/programs/transportation/mobility/pedestrian.shtml.

4.15.5 Project Travel Characteristics

4.15.5.1 Traffic Generation

In accordance with the City of San Diego and SANTEC/ITE Guidelines for Traffic Impact Studies, trip generation rates for the proposed project were obtained from the City of San Diego Trip Generation Manual (2003) (part of the Land Development Code under the Municipal Code). These rates were used to estimate the number of vehicle trips associated with the SDSU Mission Valley Campus project. The project proposes to develop approximately 86 acres of parks, recreation and open space, 4,600 residential units, 1.466 million square feet of campus office and lab space, 100,000 square feet of medical office space, 95,000 square feet of retail/restaurant space, a Stadium with a capacity of 35,000, and 400 hotel rooms. The corresponding weekday daily, AM, and PM peak hour trip rates were applied to each use under the Without Stadium Event scenario, and a total number of gross vehicle trips for each time period was estimated (see Table 4.15-10); a separate “With Stadium Event” scenario also was analyzed. However, the City and SANTEC trip rates do not account for certain factors that are applicable here.

For example, standard vehicle trip rates for market uses (e.g., commercial office buildings) were applied for the analysis. However, standard trip rates assume that nearly all uses will generally operate independently without having any formal connection to one another, which is not the case in a mixed-use development as proposed here. Specifically, the number of trips added to the study area roadways is expected to be lower than the gross number due to several factors, including: 1) the presence of significant traffic volumes already traveling on roads near the site that would patronize the planned commercial uses, 2) trip internalization within the site due to the mix of complementary land uses, 3) the propensity for people traveling to and from the site to use transit, bicycling, or walking as their primary travel mode, and 4) implementation of the TDM Program. Each of these factors affecting trip generation is described below.

As to the traffic already traveling on roads near the site that would patronize the planned commercial uses, trip reductions were applied to account for what are referred to as “pass-by” and “diverted” trips. Pass-by trips are those vehicles already passing on Mission Village Drive/Street D that would pass directly in front of the neighborhood supporting retail/restaurant uses and decide to patronize the fronting use. Diverted trips, in comparison, are those trips that are already passing by the site on adjacent Friars Road and the driver decides to turn into the project site to patronize the retail uses. In both cases, these are not new trips to the overall roadway network but are, instead, existing trips that simply visit the retail uses. The amount of pass-by/diverted trip reductions to account for this was calculated based on the City of San Diego *Trip Generation Manual*.

A second reduction to the gross trip totals was made to account for the effect of trip internalization. For developments as these that include several different types of land use within a reasonable distance of one another, visitors will often access multiple uses within one trip to a given site. This is the case with the residents and employees within the site who will both visit the retail/restaurant services on site, as well as residents who will work within the project site, etc. This trip internalization will reduce the overall number of vehicle trips to the site compared to the trips generated by each of the uses in an isolated situation. Trip internalization rates were calculated using the Fehr & Peers MainStreet web application, which uses the Mixed-Use (MXD+) Trip Generation Model. The MXD model was developed by Fehr & Peers and the Environmental Protection Agency (EPA) and is based on statistically superior data compared to the methodology used by the Institute of Transportation Engineers (ITE).

The MXD model recognizes that traffic generation by mixed-use developments and other forms of sustainable development relates closely to the density, diversity, design, destination accessibility, travel proximity, and scale of development and, as a result, the model estimates the percentage of daily and peak hour trips that remain within the project site, as well as external transit, walk, and vehicle mode splits. The resulting trip reductions calculated by the MXD model were 11%, 15%, and 13% for the daily, AM, and PM peak hours, respectively.

As to alternative means of travel, a third reduction to trips was made to account for multimodal facilities such as the on-site trolley station, and the network of bicycle and walking paths that are proposed as part of the project. For example, the *Green Line* light rail (trolley), which has a station on the site of the proposed project, provides fast and frequent service to the business centers lying between Old Town San Diego and Santee, as well as to Downtown San Diego. Due to the convenience provided by this option, it is reasonable to expect that a large number of trips to and from the site will be made via the trolley. Additionally, the new pedestrian and bicycle facilities to be provided by the proposed project will greatly enhance connectivity of the site to nearby complementary land uses. The MXD model was used to estimate the proportion of external trips that would be made by transit, walking, and biking and, based on the calculations, corresponding multimodal trip reductions of 7% (transit), 10% (walking), and 10% (biking) were applied for the daily, AM, and PM peak hours, respectively.

Finally, relative to the project's TDM Program, the 14.41% reduction in vehicle trips attributable to the project's TDM Program described in Section 4.15.1.2.1 is applied to the number of vehicle trips resulting in the final net number of trips that would be generated by the proposed project.

The gross and net vehicle trip generation estimates for the proposed project under a Without Stadium Event scenario are presented in Table 4.15-10. The table separates trips into "pass-by" trips, and "cumulative" trips, which encompasses all other trips to the project site; the City of San Diego *Trip Generation Manual* uses the term "cumulative" to refer to all new regional trips. The sum of these two general types of trips are the "driveway" trips, representing all the activity into and out of the site.

As shown in Table 4.15-10, the proposed project is expected to generate a total of 45,174 net new "cumulative" daily weekday trips, 3,716 net new "cumulative" AM peak hour trips, and 4,628 net new "cumulative" PM peak hour trips. These are new trips to the study area and, as such, the trips that will be added to the greater roadway network to calculate the proposed project's off-site impacts. In addition to the "cumulative" trips, the proposed project is expected to generate 8,104 daily pass-by trips, 393 AM peak hour pass-by trips, and 850 PM peak hour pass-by trips, which, as previously noted, are trips from traffic that already exists on Friars Road, Mission Village Drive, and San Diego Mission Road. Since this pass-by traffic is already on the greater roadway network, in assessing project impacts, the analysis considers the effect of these trips on the intersections adjacent to the site.

On weekends, the proposed uses would generate less total traffic, especially the campus office and R&D facilities, when few employees would be working. Saturday daily trip rates were estimated using the relationship between weekday and Saturday trip rates published in the *Trip Generation Manual* (10th edition, September 2017) by the ITE. After adjusting City of San Diego trip rates using the ITE data, the proposed project land uses (excluding the Stadium) would generate an estimated 33,533 daily "cumulative" trips after trip reductions are applied (see table in TIA Appendix C showing estimated Saturday trip generation). As this is nearly 26% less than the weekday trip generation, the weekday peak periods are the scenarios with the highest volumes and least available capacity and, therefore, it is the weekday peak periods that were selected as the focus of this impact analysis in order to present a conservative analysis, which, as a result, potentially overstates impacts.

Table 4.15-10. Project-Generated Weekday Trip Generation (Without Stadium Event)

Land Use	Quantity	Units	Daily Trip Rates	Break-down by Trip Type	Daily Trips	AM Peak Hour % of Daily	AM Trips			PM Peak Hour % of Daily	PM Trips		
							In	Out	Total		In	Out	Total
Supermarket	12	ksf	150		1,800	4%	50	22	72	10%	90	90	180
<i>Cumulative</i>				60%	1,080		30	13	43		54	54	108
<i>Pass-By</i>				40%	720		20	9	29		36	36	72
<i>Driveway</i>				100%	1,800		50	22	72		90	90	180
Neighborhood Retail	83	ksf	120		9,960	4%	239	160	399	11%	548	548	1,096
<i>Cumulative</i>				60%	5,976		143	96	239		329	329	658
<i>Pass-By</i>				40%	3,984		96	64	160		219	219	438
<i>Driveway</i>				100%	9,960		239	160	399		548	548	1,096
Apartments	4,300	du	6		25,800	8%	413	1,651	2,064	9%	1,625	697	2,322
<i>Cumulative/Driveway</i>				100%	25,800		413	1,651	2,064		1,625	697	2,322
Student Focused Housing	300	du	4.4		1,320	5%	59	7	66	7%	28	65	93
<i>Cumulative/Driveway</i>				100%	1,320		59	7	66		28	65	93
Commercial Office	1,165	ksf	[a]		19,981	13%	2,338	260	2,598	14%	559	2,238	2,797
<i>Cumulative/Driveway</i>				100%	19,981		2,338	260	2,598		559	2,238	2,797
Medical Office	100	ksf	50		5,000	6%	270	30	300	10%	50	450	500
<i>Cumulative</i>				32%	1,600		86	10	96		16	144	160
<i>Pass-By</i>				68%	3,400		184	20	204		34	306	340
<i>Driveway</i>				100%	5,000		270	30	300		50	450	500
Scientific Research	301	ksf	8		2,408	16%	347	39	386	14%	34	303	337
<i>Cumulative/Driveway</i>				100%	2,408		347	39	386		34	303	337
Hotel	400	room	10		4,500	6%	162	108	270	8%	216	144	360
<i>Cumulative/Driveway</i>				100%	4,500		162	108	270		216	144	360
Racquetball/Tennis/Health Club	25	ksf	40		1,000	4%	24	16	40	9%	54	36	90
<i>Cumulative/Driveway</i>				100%	1,000		24	16	40		54	36	90

Table 4.15-10. Project-Generated Weekday Trip Generation (Without Stadium Event)

Land Use	Quantity	Units	Daily Trip Rates	Break-down by Trip Type	Daily Trips	AM Peak Hour % of Daily	AM Trips			PM Peak Hour % of Daily	PM Trips		
							In	Out	Total		In	Out	Total
Community Park/ River Park	6	acre	5		30	4%	1	0	1	8%	1	1	2
Cumulative/Driveway				100%	30		1	0	1		1	1	2
Active Parks	50	acre	50		2,500	4%	60	40	100	8%	120	80	200
Cumulative/Driveway				100%	2,500		60	40	100		120	80	200
Landscaped Areas, Paseos, Trails, etc.	27.6	acre			-	-	-	-	-	-	-	-	-
Cumulative/Driveway				100%	-		-	-	-		-	-	-
Gross Subtotal			Cumulative		65,694		3,645	2,228	5,873		3,012	4,075	7,087
			Pass-By		8,104		300	93	393		289	561	850
			Driveway		73,798		3,945	2,321	6,266		3,301	4,636	7,937
Trip Reductions	Mixed-Use (Internal) Trips (11% Daily/15% AM/13% PM)				(7,226)		(547)	(334)	(881)		(392)	(530)	(921)
	Transit/Bike/Walk Trips (7% Daily/10% AM/10% PM)				(4,599)		(364)	(223)	(587)		(301)	(407)	(709)
Adjusted Gross Subtotal			Cumulative		53,869		2,734	1,671	4,405		2,319	3,138	5,457
			Pass-By		8,104		300	93	393		289	561	850
			Driveway		61,973		3,034	1,764	4,798		2,608	3,699	6,307
Existing													
Stadium					(1,089)		(62)	(2)	(64)		(17)	(33)	(50)
Cumulative/Driveway			100%		(1,089)		(62)	(2)	(64)		(17)	(33)	(50)
Net Trip Generation Subtotal													
Net Project Subtotal (Proposed - Existing)	Cumulative				52,780		2,672	1,669	4,341		2,302	3,105	5,407
	Pass-By				8,104		300	93	393		289	561	850
	Driveway				60,884		2,972	1,762	4,734		2,591	3,666	6,257

Table 4.15-10. Project-Generated Weekday Trip Generation (Without Stadium Event)

Land Use	Quantity	Units	Daily Trip Rates	Break-down by Trip Type	Daily Trips	AM Peak Hour % of Daily	AM Trips			PM Peak Hour % of Daily	PM Trips		
							<i>In</i>	<i>Out</i>	<i>Total</i>		<i>In</i>	<i>Out</i>	<i>Total</i>
TDM Program													
14.41% Reduction					(7,606)		(385)	(241)	(625)		(332)	(447)	(779)
Cumulative/Driveway				100%	(7,606)		(385)	(241)	(625)		(332)	(447)	(779)
Net Trip Generation Total													
Net Project Total (Proposed - Existing)	Cumulative				45,174		2,287	1,429	3,716		1,970	2,658	4,628
	Pass-By				8,104		300	93	393		289	561	850
	Driveway				53,278		2,587	1,522	4,109		2,259	3,219	5,478

Source: Appendix 4.15-1

Notes:

- [a] Commercial Office Formula: $\text{Ln}(T) = 0.756 \text{ Ln}(\text{ksf}) + 3.95$
 Calculated separately by building

4.15.5.1.1 Campus Effect on Trip Generation

As previously explained, standard vehicle trip rates for market uses (e.g., commercial office buildings) were used for this analysis. However, standard trip rates assume that nearly all uses will operate independently without having any formal connection to one another. However, as noted in Section 4.15.1, many of the uses on the site are expected to integrate with university uses and eventually transition to SDSU facility uses, resulting in a cohesive university campus. This would result in all the campus space being used for instructional uses, as well as all the residential buildings being occupied by students, faculty, staff, and their dependents similar to the existing SDSU College Area campus. SDSU estimates that the Mission Valley campus would ultimately serve a full-time equivalent (FTE) student population of up to 15,000 at build out.

To estimate the change in project trip generation that would take place with the conversion of the entire project site to university uses, the City of San Diego trip rate for a university of 2.5 daily trips per student (and the associated peak hour ratios) were applied to a 15,000-student campus. Based on the City's trip rate, the resulting trip generation is 41,622 net new daily trips (see TIA Appendix C), which is nearly 8% below the trips that would be generated by the market uses analyzed here. Thus, for purposes of identifying potentially long-term significant transportation impacts, the analysis presented in this section represents a conservative estimate of vehicle trip generation.

4.15.5.1.2 Stadium Event Trip Generation

The proposed Stadium is expected to be operational by 2022 and is anticipated to host a variety of events with a range of attendance levels. The highest attendance-level, regularly scheduled events are expected to be SDSU Aztec football games and possibly professional sporting games that are primarily held on Saturday afternoons or evenings or possibly on Sundays (an analysis of *weekday* events is presented in Section 4.15.6.1.1). The estimated daily vehicle trip generation for a Stadium event is presented in Table 4.15-11.

The estimate presented in the table uses an average vehicle occupancy (AVO) of 2.75 persons per vehicle⁵, and a greater focus on transit use given the proposed parking supply and anticipated emphasis on parking and TDM (see Sections 4.15.7.5 and 4.15.7.6, respectively). Using mode share estimates based on data collected (see Section 4.15.3.5.6), combined with professional engineering judgment, and without any reduction applied for Stadium attendees that would patronize the supporting retail and restaurant uses, the resulting trip generation estimate is 21,221 daily trips. Based on the traffic engineer's experience and professional judgment, it is estimated that at least 10% of the attendees at a capacity event, or 3,500 people, would patronize the supporting retail uses. Because those attendees are already included in the project's retail uses trip generation, a Stadium event would result in an estimated net vehicle trip generation of 19,099 new vehicle trips (21,221 x 90%).

Table 4.15-11. Stadium Daily Vehicle Trip Generation

Mode	Mode Share ¹	Attendees	Vehicles	Vehicle Trips
		35,000 (100% of Capacity)		
Transit	22%	7,700	0	0
TNC ² /Taxi	8%	2,800	1,018	4,073 ³
Shuttle/Private Bus	1%	350	23	93 ⁴

⁵ AVO is expected to be higher than existing (2.29 per **Section 4.15.3.5.6**) due to a decrease in parking availability and increased friction at event departure. TNC AVO is conservatively estimated to be equal to that of private autos.

Table 4.15-11. Stadium Daily Vehicle Trip Generation

Mode	Mode Share ¹	Attendees	Vehicles	Vehicle Trips
		35,000 (100% of Capacity)		
Walk/Bike	2%	700	0	0
Private Auto	67%	23,450	8,527	17,055 ⁵
Total	100%	35,000	9,568	21,221
Mixed-Use Reduction (10%)				(2,122)
Total Net New Stadium Vehicle Trips				19,099

Source: Appendix 4.15-1.

Notes:

- ¹ Percent of attendees driving and using TNC/Taxi for general major events is estimated to be higher than observed for an SDSU Aztec football game given fewer students traveling by trolley to the Stadium. Other mode share is based on engineering judgement.
- ² TNC = Transportation Network Company (e.g., Uber, Lyft)
- ³ Estimated to be 4 trips per vehicle and 2.75 persons per vehicle
- ⁴ Estimated to be 4 trips per vehicle and 15 persons per vehicle
- ⁵ Estimated to be 2 trips per vehicle and 2.75 persons per vehicle

4.15.5.1.3 Stadium Event Peak Hour Trip Generation

The majority of high attendance Stadium events with more than 20,000 spectators are anticipated to take place on Saturday and Sunday days and evenings. A total of 38 Stadium events per year are planned that could exceed 20,000 attendees each, with 27 events to be held on weekend days and 11 on a weekday evening. The most frequent events to be held on weekdays (Monday through Friday) with the highest attendance levels would be a professional or international soccer match, or a concert; only one SDSU Aztec football game per season is expected to take place on a weekday and that usually occurs on a Friday night. All of these weekday events are expected to have a start time of 7:00 pm or later and, therefore, some attendees would be expected to arrive during the typical PM commute period between 4:00 pm to 6:00 pm and some attendees arriving after the peak period, between 6:00 pm and 7:00 pm.

To estimate the number of Stadium event trips that would be generated during the PM peak hour, traffic count data for the Sacramento Republic US League (USL) soccer team was used and supplemented with data from the Golden 1 Center in Sacramento, as well as from Levi's Stadium in Santa Clara. Based on this data, the distribution of attendee arrival time is estimated to be as follows:

- 5pm to 6pm: 22.8%
- 6pm to 6:30pm: 38.0%
- 6:30pm to 7pm: 32.0%
- After 7pm: 7.2%

Based on this information, 22.8% or 4,355 attendees would be expected to arrive during the last hour (5:00-6:00 pm) of the peak period. Using the daily trip generation rates from Table 4.15-11, a total of 1,964 PM peak hour vehicle trips from a full capacity Stadium event are projected to be generated as shown in Table 4.15-12. Only a negligible number of Stadium trips would be generated during the AM peak hour. These morning trips are expected to include maintenance and security personnel and are estimated to be less than 50 total.

Table 4.15-12. Stadium Peak hour Vehicle Trip Generation

Mode	Daily Vehicle Trips After Mixed-Use Reduction	Vehicle Trips Occurring Before Event (50% of Daily)	Percent Traveling During Weekday PM Peak Hour	Stadium Event PM Peak Hour Vehicle Trips: Total (In / Out)
TNC ¹ /Taxi	3,666 ²	1,833	22.8%	418 (209 / 209)
Shuttle/Private Bus	84 ³	42	22.8%	10 (5 / 5)
Private Auto	15,349 ⁴	7,675	22.8%	1,750 (1,750 / 0)
Total				2,178 (1,964 / 214)

Source: Appendix 4.15-1.

Notes:

¹ TNC = Transportation Network Company (e.g., Uber, Lyft,

² Estimated to be 4 trips per vehicle and 2.75 persons per vehicle with a 10% reduction for mixed-use

³ Estimated to be 4 trips per vehicle and 15 persons per vehicle with a 10% reduction for mixed-use

⁴ Estimated to be 2 trips per vehicle and 2.75 persons per vehicle with a 10% reduction for mixed-use

4.15.5.2 Trip Distribution/Assignment

This section describes how the project-generated vehicle trips were distributed to the roadway network and the specific assignment of those trips to the study area intersections, roadway segments, freeway segments and ramps. The distribution for both non-Stadium and Stadium trips is described in this section.

4.15.5.2.1 Project Trip Distribution

For a project of this scope, the most appropriate planning tool to forecast trip distribution is the regional travel demand model maintained by SANDAG. A trip distribution estimate was prepared based on a “select zone” analysis of the SANDAG Series 13 Year 2035 travel demand model, where the proposed non-Stadium land uses were coded into the model, and the model roadway network was modified to exclude the potential Fenton Parkway bridge.⁶ The select zone process identifies the number of trips on each roadway segment that would be generated by the single traffic analysis zone (TAZ) representing the project site. Figure 4.15-6, Trip Distribution, illustrates the vehicle trip distribution pattern for the non-Stadium project uses.

Project trips for *Stadium* events will have a distinct traffic distribution pattern from the typical residential and office/retail land uses within the project site. Stadium trip distribution was estimated using the zip codes of existing SDSU football season ticket holders and the most likely paths of travel to and from the Stadium site. The resulting distribution pattern was applied to both weekday and weekend Stadium events. Figure 4.15-7, Event Trip Distribution, illustrates the vehicle trip distribution pattern for Stadium events.

4.15.5.2.2 Project Trip Assignment

Once the project trip generation is calculated and the general roadway distribution of those trips is determined, project trips were assigned to the study area intersections based on the characteristics of the streets within the study area, anticipated congestion, and directness of route. Figure 4.15-8, Project Trip Assignment, shows the assignment of the vehicle trips that would be generated on a typical weekday by the proposed project non-Stadium

⁶ While the Fenton Parkway bridge is planned as part of the future network in Mission Valley and would improve area connectivity, the timing of its implementation is not defined due to required environmental studies and funding sources that have not been identified. Accordingly, the Fenton Parkway bridge was excluded from the model for purposes of distributing project traffic.

uses at each intersection. Figure 4.15-9, Event Trip Assignment, shows the assignment of PM peak hour trips that would be generated by a Stadium event at each intersection.

4.15.5.3 Campus Effect on Trip Distribution

Because students have different trip-making patterns from the typical population, the trip distribution for university uses was examined. A trip distribution estimate was prepared based on a “select zone” analysis of the SANDAG Series 13 Year 2035 travel demand model similar to the process for the market project, with the proposed project land uses serving a 15,000-student university campus. The trip distribution was generally found to be the same as for the market project. Minor differences were noted along I-8 to the west of the study area and along Aero Drive to the west of Ruffin Road, both of which had a trip assignment approximately 0.5% less than that of the market project. Similarly, the trip assignment along I-8 to the east of the study area and along Montezuma Road were both approximately 0.5% greater than for the market project. As previously explained in Section 4.15.5.1.1, under a university project scenario, the total trip generation would be 21% less than the market project scenario analyzed here. Therefore, while the trip distribution generally would be similar under a campus scenario, impacts under the university campus scenario generally would be less than the market project due to the lower trip generation.

4.15.5.4 Site Access, Internal Vehicle Circulation, and Project Roadway Improvements

The proposed project will take vehicle access from existing connections on Mission Village Drive/Street D immediately south of the Friars Road eastbound ramps, Stadium Way (Street A), San Diego Mission Road, and Rancho Mission Road. In addition, a new street will be constructed to connect to Fenton Parkway at the trolley rail crossing to the southwest portion of the site.

At Friars Road & Stadium Way (Street A), the intersection will be re-constructed to appropriately size the roadway for the proposed project and to enhance safety for bicyclists and pedestrians. A new full-time traffic signal will be installed to control traffic on all approaches with regular cycle lengths and protected turning movements. This signal will replace the existing part-time signal that is used for Stadium events only. The Friars Road approaches will be modified to include one (1) separate eastbound right-turn lane and two (2) separate westbound left-turn lanes. Due to the proximity of this intersection to the fire station, the median break and “KEEP CLEAR” striping in front of the fire station access should be maintained. The northbound (i.e., Stadium Way (Street A)) approach will include two (2) left-turn lanes and two (2) right-turn lanes. Stadium Way (Street A) will be constructed and striped with two northbound lanes and two southbound lanes, plus a 24-foot wide striped median to allow contraflow operation so as to manage peak inbound and outbound traffic flows on game days when manual traffic control will be employed.

To improve safety and operations, the proposed project includes the realignment of San Diego Mission Road east of Mission Village Drive to connect within the project site, and to convert the Mission Village Drive & Friars Road Eastbound Ramps intersection to a standard four-legged configuration. The new San Diego Mission Road alignment will intersect with a new internal site road (Street F) that would be located east of and parallel to Mission Village Road at a new two-lane roundabout (Intersection #16). This new road will in turn connect with another internal site road (Street 4) that is aligned south of and parallel to Friars Road and provides a connection to Mission Village Drive/Street D at a new intersection south of the Friars Road Eastbound Ramps (Intersection #14).

Additionally, the segment of Rancho Mission Road that is aligned east-west and extends west of Ward Road will be extended as Street I, which will be aligned parallel to and west of I-15 before curving to align east-west as Street 6

and intersecting with San Diego Mission Road and Street F at the new two-lane roundabout at Intersection #16. This intersection will have a build-out configuration of a two-lane roundabout to accommodate proposed project traffic plus existing volumes that currently use San Diego Mission Road to travel between Mission Village Drive and Rancho Mission Road (east of I-15).

Finally, as part of the proposed project, the intersections of Mission Village Drive at both of the Friars Road ramps will be improved to accommodate project traffic by widening the Mission Village Drive bridge over Friars Road to accommodate another lane in each direction, plus maintaining bike lanes and sidewalks in each direction between the two ramp intersections. These improvements ultimately will provide two through lanes and two left-turn lanes on Mission Village Drive at each Friars Road ramp. The provision of dual left turn lanes will provide additional storage to accommodate vehicle queues and will increase overall capacity at these locations. At the westbound on-ramp, it is recommended that the two lanes merge prior to the merge onto Friars Road, while at the eastbound on-ramp, it is recommended that the second on-ramp lane become a new auxiliary lane on Friars Road to the I-15 SB on-ramp. This will require widening the Friars Road bridge over the utility terminal driveway. Also, the westbound ramp from Friars Road to Mission Village Drive will be widened to accommodate a second westbound left-turn lane, and a second eastbound right-turn lane will be added to the Friars Road Eastbound ramp. All adjacent road improvements to be constructed as part of the proposed project are shown on Figures 4.15-10A and 4.15-10B, Project Road Improvements.

As shown on Figure 4.15-11, Internal Network, vehicular circulation within the project site will be provided by a grid system of 11 streets. Residential uses will be located on the east side of the site and will be accessed primarily by Mission Village Drive, San Diego Mission Road, and Rancho Mission Road. The campus uses will be located on the west side of the site south of the Stadium site and will be accessed primarily by Mission Village Drive, Stadium Way (Street A), and Fenton Parkway. Retail uses including the grocery store are planned to front Street D. Overall, the site will be completely interconnected to optimize traffic distribution on typical days. The Street D and Stadium Way (Street A) internal roads will be designed as major arterials.

Other internal roads generally will be collectors, except for the segment of Street 4 connecting San Diego Mission Road/Street F to Mission Village Drive/Street D, which is also expected to be designed as a major arterial with a raised median.

Internal intersections will be controlled by traffic signals, stop signs, or roundabouts depending on the street classification and anticipated turning movement volumes. Curb extensions, limited driveway cuts, and off-street shared use paths will enhance pedestrian connectivity across the site. Figure 4.15-11 illustrates the internal circulation network.

For all Stadium events, a transportation and parking management plan (TPMP) will be implemented as described in Section 4.15.1.4.

4.15.6 Significance Criteria

The following significance criteria were used to evaluate the proposed project's potential impacts on transportation facilities.

4.15.6.1 CEQA Appendix G

The significance criteria used to evaluate the project's transportation-related impacts are based on Appendix G of the CEQA Guidelines. Based on Appendix G, a significant impact related to transportation would occur if the project would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). (Section 15064.3, subdivision (b), addresses the analysis of project impacts relative to vehicle miles traveled, or VMT. Portions of Section 15064.3 relevant to the analysis presented in this section are set forth below in Section 4.15.7.9 along with the corresponding VMT analysis.)
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.

4.15.6.2 California State University (CSU), City of San Diego, and Caltrans Criteria

The analysis presented in this section addresses both direct and cumulative impacts. Direct impacts are those resulting from the project alone, relative to the baseline condition; the baseline condition may be existing conditions or a future condition, dependent upon the analysis scenario. Cumulative impacts are those that result from the project in combination with other past, present and reasonably foreseeable development projects. Cumulative impacts result if the project's effect is "cumulatively considerable," that is, the incremental effects of the project are considerable when viewed in connection with the effects of the other past, present, and reasonably foreseeable projects.

The following are the significance criteria applied in assessing the project's impacts relative to each component of the transportation system:

Intersections

Signalized Intersections

Based on the CSU TISM, the minimum acceptable operating standards for all roadways and intersections is LOS D. Specific to signalized intersections, the proposed project would result in a significant impact if any of the following scenarios occurs:

5. An intersection operating at LOS D or better under existing or future conditions without the project worsens to LOS E or F with the proposed project, or
6. At an intersection operating at LOS E or F without the proposed project, the project adds at least 10 peak hour trips and causes the delay to increase by more than five seconds, or
7. At an intersection operating at very poor LOS F (delay of 120 seconds or more) without the proposed project, the project causes an increase in V/C ratio of 0.02 or more.

The City of San Diego's CEQA Significance Determination Thresholds were also reviewed for local context and are referred to later in this analysis. The City's guidelines differ from the CSU TISM such that criteria 2 and 3 above would instead be consolidated to read as follows: At an intersection operating at LOS E or F without the proposed project, the project causes the delay to increase by more than two (2.0) and one (1.0) seconds for those operating levels,

respectively. The analyses of impacts based on the City's significance thresholds are presented for information purposes only; significance determinations and recommended mitigation are based on the CSU TISM thresholds.

Unsignalized Intersections

Based on the CSU TISM, the proposed project would result in a significant impact at an unsignalized intersection if any of the following scenarios occurs:

1. An intersection operating at LOS D or better under existing or future conditions without the project worsens to LOS E or F with the proposed project, or
2. At an intersection operating at LOS E or F without the proposed project, the project adds at least 10 peak hour trips and causes the delay to increase by more than five seconds, or
3. At an intersection operating at very poor LOS F (delay of 120 seconds or more) without the proposed project, the project causes an increase in V/C ratio of 0.02 or more.

Based on these criteria, the project is determined to have a significant project-specific impact if the addition of project traffic causes an unsignalized intersection to degrade from LOS D or better to LOS E or F and if the location satisfies the peak hour signal warrant described in the California Manual on Uniform Traffic Control Devices (MUTCD). The peak hour warrant is one of several key indications as to whether a traffic signal may be needed at a given location. An impact is considered a cumulative impact when it adds traffic to a study area location that includes a controlled approach that operates at an unacceptable level (i.e., LOS E or F) and if the peak hour signal warrant is satisfied.

As to the City of San Diego's Significance Thresholds, the City guidelines differ from the CSU TISM such that criteria 2 and 3 above would instead be consolidated to read as follows: At an intersection operating at LOS E or F without the proposed project, the project causes the delay to increase by more than two (2.0) and one (1.0) seconds for those operating levels, respectively. As previously noted, the analyses of impacts based on the City's significance thresholds are presented for information purposes only; significance determinations and recommended mitigation are based on the CSU TISM thresholds.

Roadway Segments

As previously explained, the analysis of roadway segments is included in this study for information purposes only to provide segment capacity evaluation consistent with City of San Diego impact guidelines. To that end, the following two-part analysis is performed to determine whether the proposed project meets City of San Diego criteria for traffic conditions on roadway segments:

Roadway Segment Analysis: Part 1

First, the vehicle/capacity (V/C) analysis is performed to determine whether the proposed project will result in either of the following:

- Traffic conditions on any roadway segment worsen from LOS D or better without the proposed project to LOS E or LOS F with the proposed project.
- The proposed project traffic results in a V/C ratio increase of more than 0.02 for LOS E roadway segments or 0.01 for LOS F roadway segments.

If a proposed project does not result in one of the above scenarios, then traffic conditions on that roadway meet the City of San Diego standards, and no further analysis is required. If, however, a proposed project results in one of the scenarios described in Part 1, then the following secondary analysis is performed:

Roadway Segment Analysis: Part 2

The analysis considers the following three additional factors to determine if the roadway segment will meet the City of San Diego standards; if the project fails to meet one of the three criteria, then traffic conditions along the roadway segment do not meet the City of San Diego standards:

- if the intersections at either end of the segment will operate acceptably with the project (using the intersection criteria described above);
- if an arterial analysis of the segment shows that it will operate at LOS D or better based on travel speed during both peak hours OR speeds decrease by less than 1 mph on roadway segments that operate at LOS E or less than 0.5 mph on roadway segments which operate at LOS F without the proposed project; and
- if the proposed street classification is consistent with the adopted Community Plan for the area.

Although the roadway segment analysis is presented for information purposes only, a discussion of improvements that would be needed to avoid exceedance of the threshold also is included.

Freeway Segments

Based on the CSU TISM, the local Caltrans district's preferred method should be used for the analysis of freeway facilities. In this case, the local Caltrans district's preferred method is the *SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region*. According to those guidelines, LOS D or better is used as the threshold for acceptable freeway operations. A significant impact to freeway mainline lanes is identified when the project causes:

1. a segment operating at LOS D or better (under baseline conditions without the proposed project) to degrade to LOS E or F, or
2. an increase in per lane V/C ratio greater than 0.01 (1%) for segments already operating at LOS E or F

The City of San Diego's CEQA Significance Determination Thresholds differ from the SANTEC guidelines such that for segments already operating at LOS F, the threshold is more restrictive at an increase in per lane V/C ratio greater than 0.005 (0.5%). The analysis of impacts based on the City's significance thresholds is presented for information purposes only.

Metered Ramps

Based on the CSU TISM, the local Caltrans district's preferred method should be used for freeway facility analysis, including metered ramps. In the San Diego region, the preferred method is the *SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region*, in which ramp meter delays greater than 15 minutes are considered undesirable when the ramp is accessing a freeway segment operating at LOS E or F. If a ramp meter is operating unacceptably (i.e. delay is 15 minutes or greater) and the project adds traffic to the on-ramp, causing the delay to increase by more than two (2) minutes, then this is characterized as a significant impact.

The City of San Diego's CEQA Significance Determination Thresholds are further restrictive in the case of LOS F conditions; analysis based on the City's significance thresholds is presented for information purposes only. Table

4.15-13 summarizes the impact thresholds as identified by the SANTEC, CSU TISM, and City of San Diego guidelines relative to freeways, segments, intersections, and ramp meters.

Table 4.15-13. Measure of Significant Traffic Impacts

Level of Service (LOS) with the Project ¹	Allowable Change Due to Project Impact ²					
	Freeways		Roadway Segments		Intersections	Ramp Meters
	V/C	Speed (mph)	V/C	Speed ³ (mph)	Delay (sec)	Delay (min)
LOS D, E, or F (or ramp meter delays above 15 min)	0.01	1.0	0.02	1.0	2.0	2.0
LOS F (per City of San Diego)	0.005	0.5	0.01	0.5	1.0	1.0

Source: SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, 2002; CEQA Significance Determination Thresholds, City of San Diego 2016

Notes:

- ¹ All level of service (LOS) measurements are based upon HCM procedures for peak-hour conditions. However, vehicle to capacity (V/C) ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis. The acceptable LOS for freeways, roadways, and intersections is generally “D” (“C” for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.
- ² If the project’s traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project developer shall then identify feasible mitigation (within the Traffic Impact Study report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the project becomes LOS E or F (see above * note), or if the project adds a significant number of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project developer shall be responsible for significantly reducing significant impact changes.
- ³ Speed-based LOS is only analyzed if an arterial analysis is required (Part 2 of the Roadway Segment Analysis).

Freeway Off-Ramps

The analysis of freeway off-ramps is not required by the CSU TISM, SANTEC, or City of San Diego impact guidelines. However, Caltrans typically requires that potential safety impacts on their system be identified as part of transportation impact analyses for land development projects, especially those that are projected to add a substantial amount of traffic to roadways under their jurisdiction. Accordingly, the analysis presented in this section includes a queuing evaluation at freeway off-ramps to determine if projected vehicle queues will extend back onto the freeway mainline so as to result in potential safety impacts. If the queue is projected to exceed the available ramp storage (i.e., the distance to the upstream mainline gore point) with the project in place, it will be considered a significant impact.

Bicycle Facilities

Based on the CSU TISM, the proposed project would result in a significant impact to bicycle facilities if the project would significantly disrupt existing or planned bicycle facilities or significantly conflicts with applicable non-automotive transportation plans, guidelines, policies, or standards.

The assessment of planned facilities outlined in planning documents, such as the *San Diego Regional Bicycle Plan*, is used to evaluate future conditions for bicycle facilities. If the project would conflict with existing or planned improvements to bicycle facilities, then the project would have a significant impact.

Pedestrian Facilities

Similarly, under the CSU TISM, the proposed project would result in a significant impact to pedestrian facilities if the project would fail to provide safe pedestrian connections between campus buildings and adjacent streets and transit facilities, or if a project significantly disrupts existing or planned pedestrian facilities or significantly conflicts with applicable non-automotive transportation plans, guidelines, policies, or standards.

Transit

Under the CSU TISM, the proposed project would result in a significant impact to transit facilities if the project would significantly disrupt existing or planned transit facilities and services or significantly conflict with applicable transit plans, guidelines, policies, or standards.

Vehicle Miles of Travel (VMT)

Based on the CSU TISM (revised March 2019), analysis of the proposed project's transportation impacts relative to VMT is to include an evaluation of potential project-level impacts, as well as cumulative-level impacts based on the effects of the project on regional VMT.

Under the TISM, and consistent with CEQA Guidelines, the proposed project potentially could be screened out from the requirement to complete a project-level VMT evaluation because the proposed project would be built within a transit priority area (TPA). However, a project-level assessment was completed utilizing the CSU TISM and OPR recommended threshold of 15% below the existing regional average for San Diego County; that is, project impacts would be significant if the project VMT were greater than 15% below existing VMT.

For the cumulative analysis, the regional VMT with the project in place under horizon year conditions must be less than the regional VMT without the project to avoid a significant impact. The VMT analysis is presented for informational purposes only, and is not used for the purpose of identifying significant VMT impacts; lead agencies are not required to include VMT analyses as part of their CEQA documentation until July 1, 2020.

4.15.7 Impacts Analysis

4.15.7.1 Existing Plus Project Conditions

As previously stated, the Existing plus Project traffic scenario provides forecasts of traffic volumes and an assessment of operating conditions under existing baseline conditions with the addition of project-generated traffic, as though the proposed project were immediately built out. This hypothetical scenario isolates the potential impacts of the proposed project and the analysis eliminates the impacts of both ambient growth and other proposed projects, thereby potentially understating impacts. Additionally, the analysis does not account for future roadway improvements that would provide additional capacity and, in this regard, the analysis potentially overstates impacts. As such, the results of the analysis can be misleading, especially in the case of a project like this with a long-term build out. For these reasons, the Existing Plus Project Conditions analysis presented here is for information purposes only; project impacts are assessed, and corresponding mitigation measures identified, against the Horizon Year (2037) Plus Project Conditions, which considers the effects of future traffic growth, planned infrastructure improvements, and changing land uses.

This section presents the results of the operations analysis under the hypothetical Existing Plus Project scenarios, both without and with a Stadium Event, which is modeled as a sold-out event.

4.15.7.1.1 Existing Plus Project – Without Stadium Event Conditions

Under Existing Plus Project Conditions, project-generated traffic volumes that assume immediate buildout of the entire site are added to existing study area intersection and roadway segment traffic volumes and the resulting impacts assessed. Therefore, and as previously stated, in the case of projects like this with a long-term 10-20 year buildout scenario, such analysis is hypothetical because the proposed project will not be immediately built out. As a result, the Existing Plus Project scenario tends to *understate* impacts in that it does not consider expected future traffic growth from other, or cumulative, projects and, therefore, the analysis overstates capacity available to the project. Relatedly, the Existing Plus Project scenario can *overstate* impacts in that it does not account for planned future road improvements that would provide additional capacity. Because the Existing Plus Project scenario is hypothetical in nature and potentially both understates and overstates significant impacts, the results of the Existing Plus Project analysis can be misleading to both the decision-maker and the public. For this reason, the Existing Plus Project analysis presented here in Section 4.15.7.1.1 and the accompanying Section 4.15.7.1.2 is provided for information purposes only; the proposed project's significant impact determinations and recommended mitigation measures will be identified based on the Horizon Year (2037) Plus Project analysis presented in Section 4.15.7.3.1 and the accompanying Section 4.15.7.3.2, which accurately reflect future cumulative traffic conditions, as well as future road improvements, forecast to be in place at the time the proposed project reaches full buildout.

To be distinguished from the full Project buildout scenario, because the Stadium component of the proposed project will, unlike the remainder of the proposed project, be built in the near-term, approximately year 2022, the analysis of potential impacts associated with the Stadium are accurately assessed under an Existing Plus Stadium Event scenario. Therefore, significant impacts and mitigation are identified under this scenario, which is presented in Section 4.15.7.1.3.

Intersections

Turning movement traffic volumes and intersection lane configurations for the Existing Plus Project Conditions are shown on TIA Figure 14. This information was used to calculate operations under this scenario.

Table 4.15-14 presents a summary of the intersection operating conditions and traffic changes under the Existing Plus Project conditions, comparing the projected levels of service at each study area intersection under the proposed project with Existing Conditions. The corresponding LOS calculation sheets are included in TIA Appendix B.

As indicated in Table 4.15-14, after applying the applicable CSU TISM significant impact criteria for intersections, the proposed project is projected to exceed the thresholds at 11 locations:

1. SR-163 SB Ramps/Ulric St & Friars Road (PM peak hour) – Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 6.1 seconds.
2. SR-163 NB Ramps & Friars Road (PM peak hour) – Project traffic would degrade LOS E operations to LOS F in the PM peak hour and increase delay by 42.8 seconds.
3. Frazee Road & Friars Road (PM peak hour) – Project traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 27.0 seconds.

9. Fenton Parkway & Friars Road (PM peak hour) – Project traffic would degrade LOS C operations to LOS E in the PM peak hour and increase delay by 33.7 seconds.
17. I-15 SB Ramps & Friars Road (AM and PM peak hours) – Project traffic would degrade LOS D operations to LOS F in the AM peak hour, would degrade LOS E operations to LOS F in the PM peak hour, and would increase delay by 46.2 and over 34.5 seconds, respectively.
18. I-15 NB Ramps & Friars Road (AM and PM peak hours) – Project traffic would degrade LOS E operations to LOS F in the AM and PM peak hours and would increase delay by 43.8 and 146.0 seconds, respectively.
19. Rancho Mission Road & Friars Road – Existing conditions are estimated to be LOS D based on engineering judgment and field observations, and to be conservative it is assumed that project traffic would degrade operations to LOS E.
31. Texas St & Camino del Rio S (PM peak hour) – Project traffic would exacerbate LOS E operations in the PM peak hour and would increase delay by 7.7 seconds.
32. Ward Road & Rancho Mission Road (AM and PM peak hours) – Project traffic would degrade LOS C to LOS F operations in the AM and PM peak hours and would increase delay by 39.4 seconds and 67.2 seconds, respectively. The addition of project traffic would satisfy the peak hour signal warrant per the California MUTCD.
35. Fairmount Avenue & Camino del Rio North (AM and PM peak hours) – Project traffic would degrade LOS D operations to LOS E in the AM peak hour, would degrade LOS E operations to LOS F in the PM peak hour, and would increase delay by 21.1 and 55.6 seconds, respectively.

For stop-sign controlled Intersection #32 (Ward Road & Rancho Mission Road), the peak hour signal warrant is satisfied. Warrant calculations are included in TIA Appendix B. That finding, coupled with the LOS F operations results in threshold exceedance at this location.

Under the City thresholds, the same intersections would exceed the applicable thresholds; that is, no additional deficiencies would be identified based on application of the City's criteria.

It should be noted that while the analysis presented in this section is for information purposes only, all of the locations identified under this scenario are also identified as significant impacts, with mitigation recommended, under the Horizon Year scenario with the exception of Intersections #2 and #3 where planned future improvements will substantially improve conditions thereby resulting in the elimination of these impacts under the Horizon Year scenario (see Section 4.15.7.2.1).

Roadway Segments

Project traffic traversing the study area roadway segments was added to existing peak hour roadway volumes. Table 4.15-15 displays the LOS analysis for the study area roadway segments under Existing Plus Project Conditions and compares the projected levels of service on each segment under the proposed project with the Existing Conditions LOS. The referenced exceedance triggers the second part of the roadway analysis, which evaluates intersection LOS on either side of the segment, the arterial speed-based LOS on the segment, and the existing Community Plan street classification.

As shown in the table, all study area roadway segments are projected to operate acceptably at LOS D or better except for the following segments:

9. Friars Road from the I-15 Ramps to Rancho Mission Road (LOS E) - Project traffic would degrade LOS D operations to LOS E and would result in a V/C increase that exceeds the maximum threshold. Note that the travel time increase along this segment is no more than 32 seconds in each direction and peak hour.
17. San Diego Mission Road from Mission Village Drive to Rancho Mission Road (LOS F) - Project traffic would degrade LOS C operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.
18. San Diego Mission Road from Rancho Mission Road to Fairmount Avenue (LOS E) - Project traffic would degrade LOS C operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.
19. Rancho Mission Road from Friars Road to San Diego Mission Road (LOS E) - Project traffic would degrade LOS D operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.
22. Ward Road from Rancho Mission Road to Camino del Rio North (LOS F) - Project traffic would degrade LOS C operations to LOS F and would result in a V/C increase that exceeds the maximum threshold.
34. Camino del Rio South from Texas Street to Mission City Parkway (LOS F) - Project traffic would degrade operations to LOS F and would result in a V/C increase that exceeds the maximum threshold.

All of the locations identified under this scenario as operating below acceptable levels of service also are identified under the Horizon Year scenario as operating similarly.

Freeway Segments

Table 4.15-16 illustrates freeway operation under Existing Plus Project Conditions. As shown on the table, the addition of project trips at all locations would exacerbate operations. Based on Caltrans' applicable significant impact criteria, the proposed project would exceed the thresholds on the following freeway segments:

10. I-15 from Adams Avenue to I-8 (NB, PM peak hour; SB, PM peak hour).
11. I-15 from I-8 to Friars Road (NB auxiliary lanes, PM peak hour; SB auxiliary lanes to I-8, AM and PM peak hours; SB auxiliary lane to I-15 SB, PM peak hour).
- 12-13. I-15 from Friars Rd to Balboa Avenue/Tierrasanta Boulevard (NB, AM peak hour; SB, PM peak hour).
- 15-16. I-8 from Taylor Street to SR-163 (EB, PM peak hour).
- 17-18. I-8 from SR-163 to Texas Street (WB, PM peak hour).
20. I-8 from I-805 to I-15 (EB, PM peak hour; WB, AM peak hour).
- 22-23. I-8 from Fairmount Avenue to College Avenue (EB, PM peak hour; WB, AM peak hour).

Under the City of San Diego criteria, in addition to the segments noted above, the following freeway segments would exceed the City's thresholds:

1. SR-163 from 6th Avenue to I-8 (SB, PM peak hour)
17. I-8 from SR-163 to Mission Center Road (WB, AM peak hour)
18. I-8 from Mission Center Road to Texas Street (EB, PM peak hour; WB, AM peak hour)

All of the locations identified as operating at less than acceptable levels of service under this scenario also are identified under the Horizon Year scenario as operating at similar conditions.

Ramp Metering

Table 4.15-17 illustrates the results of the ramp metering analysis conducted at the metered freeway on-ramps in the study area under Existing Plus Project Conditions. As shown in Table 17, based on Caltrans criteria, all ramps are expected to operate with unacceptable delays during one or both peak hours. Additionally, on-ramp capacity is not sufficient to accommodate the peak hour demand during metered peak periods at all ramps; thus, ramp queues are expected to spill back onto the arterial street.

Specific to the proposed project, the project would increase delay by more than two minutes at four on-ramps operating with delays above 15 minutes without the project and, therefore, would exceed the Caltrans threshold at the following four locations:

- I-15 NB On-ramp from Friars Road – operates at 14.1 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 30.1 minutes to a total delay of 44.2 minutes, resulting in an exceedance of the threshold. Therefore, project traffic would exacerbate undesirable operations and result in a delay increase that exceeds the threshold for an on-ramp operating with delays greater than 15 minutes.
- I-15 SB/I-8 Loop On-ramp from Friars Road – operates at 7.6 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 17.2 minutes to a total delay of 24.8 minutes, resulting in an exceedance of the threshold. Therefore, project traffic would exacerbate undesirable operations and result in a delay increase that exceeds the threshold for an on-ramp operating with delays greater than 15 minutes.
- I-15 SB Direct On-ramp from Friars Road – operates at 0 minutes of delay in the PM peak hour without the project. The addition of project traffic would exacerbate operations and increase delay by 18.5 minutes to a total delay of 18.5 minutes, resulting in an exceedance of the threshold. Therefore, project traffic would degrade operations to undesirable levels and result in a delay greater than 15 minutes.
- I-8 EB On-ramp from southbound Fairmount Avenue – operates at 7.1 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 28.7 minutes to a total delay of 35.8 minutes, resulting in an exceedance of the threshold. Therefore, project traffic would degrade operations to undesirable levels and result in a delay greater than 15 minutes.

Note that the same ramps would exceed the thresholds of the City of San Diego impact criteria. Additionally, all of the locations identified under this scenario as operating at unacceptable levels of service are also identified under the Horizon Year scenario as operating similarly.

Off-Ramp Queuing

Table 4.15-18 illustrates the results of the off-ramp queuing analysis conducted at the SR-163 and I-15 off-ramps at Friars Road, and the I-8 off-ramps at Qualcomm Way/Texas Street and Fairmount Avenue. As shown, all off-ramp queues can be accommodated by existing storage capacity under Existing Plus Project Conditions and, therefore, all would operate at acceptable levels of service.

Table 4.15-14. Existing Plus Project Conditions Without Event Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
1. SR-163 SB Ramps/Ulric St & Friars Rd	Signalized	AM	22.5	C	23.1	C	0.6	NO
		PM	57.9	E	64.0	E	6.1	YES
2. SR-163 NB Ramps & Friars Rd	Signalized	AM	11.2	B	11.7	B	0.5	NO
		PM	60.9	E	103.7	F	42.8	YES
3. Frazee Rd & Friars Rd	Signalized	AM	26.9	C	27.9	C	1.0	NO
		PM	51.0	D	78.0	E	27.0	YES
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	10.5	B	11.5	B	1.0	NO
		PM	11.1	B	12.5	B	1.4	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	15.9	B	15.8	B	-0.1	NO
		PM	25.1	C	25.6	C	0.5	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	17.4	B	19.2	B	1.8	NO
		PM	22.1	C	22.4	C	0.3	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.9	A	7.0	A	1.1	NO
		PM	9.6	A	11.1	B	1.5	NO
8. River Run Dr & Friars Rd	Signalized	AM	17.7	B	18.2	B	0.5	NO
		PM	37.1	D	53.3	D	16.2	NO
9. Fenton Pkwy & Friars Rd	Signalized	AM	25.3	C	25.2	C	-0.1	NO
		PM	30.2	C	63.9	E	33.7	YES
10. Northside Dr & Friars Rd	Signalized	AM	28.0	C	22.4	C	-5.6	NO
		PM	39.9	D	39.4	D	-0.5	NO
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A	11.2	B	N/A	NO
		PM	-	N/A	35.4	D	N/A	NO
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	18.5	B	28.6	C	10.1	NO
		PM	32.6	C	30.1	C	-2.5	NO
13. Mission Village Dr & Friars Rd EB Ramps/San Diego Mission Rd*	Signalized	AM	59.9	E	14.7	B	-45.2	NO
		PM	54.2	D	26.1	C	-28.1	NO
14. Mission Village Dr/Aztec Way & Street 2	Signalized	AM	DNE	N/A	21.6	C	N/A	NO
		PM		N/A	35.7	D	N/A	NO

Table 4.15-14. Existing Plus Project Conditions Without Event Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
15. Street B & Street 2	Signalized	AM	DNE	N/A	26.0	C	N/A	NO
		PM		N/A	34.3	C	N/A	NO
16. Murphy Creek Rd & Street B/ San Diego Mission Rd	Roundabout	AM	DNE	N/A	7.0	A	N/A	NO
		PM		N/A	7.8	A	N/A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	38.0	D	84.2	F	46.2	YES
		PM	49.3	D** (E)	83.8	F (F)	34.5	YES
18. I-15 NB Ramps & Friars Rd	Signalized	AM	34.2	C** (E)	78.0	F (F)	43.8	YES
		PM	47.8	D** (E)	193.8***	F (F)	146.0	YES
19. Rancho Mission Rd & Friars Rd	Signalized	AM	23.1	C** (D)	27.7	C (E)	4.6	YES****
		PM	17.7	B** (D)	33.6	D (E)	15.9	YES****
20. Santo Rd & Friars Rd	Signalized	AM	25.4	C	28.0	C	2.6	NO
		PM	13.3	B	14.8	B	1.5	NO
21. Riverdale St & Friars Rd	Signalized	AM	21.1	C	21.9	C	0.8	NO
		PM	20.7	C	20.9	C	0.2	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	33.4	C	33.5	C	0.1	NO
		PM	32.2	C	33.1	C	0.9	NO
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	14.6	B	15.6	B	1.0	NO
		PM	23.0	C	24.8	C	1.8	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	9.5	A	9.8	A	0.3	NO
		PM	12.1	B	13.1	B	1.0	NO
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	15.2	B	15.3	B	0.1	NO
		PM	21.7	C	22.4	C	0.7	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	21.5	C	27.6	C	6.1	NO
		PM	22.1	C	32.0	C	9.9	NO
27. Fairmount Ave & San Diego Mission Rd/ Twain Ave	Signalized	AM	13.7	B	18.4	B	4.7	NO
		PM	13.0	B	16.9	B	3.9	NO
28. Qualcomm Way & Camino del Rio N/ Camino de la Reina	Signalized	AM	18.2	B	18.7	B	0.5	NO
		PM	61.2	E	60.7	E	-0.5	NO

Table 4.15-14. Existing Plus Project Conditions Without Event Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
29. Qualcomm Way & I-8 WB Off-Ramp/ Camino del Rio N	Signalized	AM	10.7	B	11.5	B	0.8	NO
		PM	42.8	D	43.4	D	0.6	NO
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.1	A	1.0	A	-0.1	NO
		PM	4.0	A	4.1	A	0.1	NO
31. Texas St & Camino del Rio S	Signalized	AM	39.0	D	41.9	D	2.9	NO
		PM	55.6	E	63.3	E	7.7	YES
32. Ward Rd & Rancho Mission Rd	SSSC	AM	20.0	C	59.4	F	39.4	YES
		PM	18.7	C	85.9	F	67.2	YES
33. Camino del Rio N & Ward Ave	Signalized	AM	11.9	B	17.8	B	5.9	NO
		PM	13.8	B	21.5	C	7.7	NO
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	20.7	C	24.8	C	4.1	NO
		PM	25.3	C	45.7	D	20.4	NO
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	53.8	D	74.9	E	21.1	YES
		PM	61.0	E	116.6	F	55.6	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	12.7	B	14.0	B	1.3	NO
		PM	21.3	C	24.8	C	3.5	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	39.4	D	37.6	D	-1.8	NO
		PM	25.1	C	26.7	C	1.6	NO
38. Mission Village Dr & Shawn Ave	Signalized	AM	5.1	A	5.2	A	0.1	NO
		PM	6.6	A	7.7	A	1.1	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	11.1	B	11.5	B	0.4	NO
		PM	7.5	A	8.5	A	1.0	NO
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	14.2	B	19.5	B	5.3	NO
		PM	16.0	B	20.0	B	4.0	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	30.8	C	32.9	C	2.1	NO
		PM	31.3	C	38.1	D	6.8	NO

Table 4.15-14. Existing Plus Project Conditions Without Event Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
42. Gramercy Dr & Mobley St	Signalized	AM	6.3	A	6.4	A	0.1	NO
		PM	5.3	A	5.4	A	0.1	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	8.9	A	9.1	A	0.2	NO
		PM	10.4	B	10.4	B	0.0	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the Highway Capacity Manual (HCM) method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way & Friars Road intersection is only used during Stadium events.
- * Existing or proposed signal phasing prevents the use of HCM 6 at this intersection. The HCM 2000 method was applied instead.
- ** Ramp metering during the peak hours results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation. This additional delay is estimated to result in operations as shown in parentheses.
- *** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- **** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would exceed the TISM threshold.

Table 4.15-15. Existing Plus Project Conditions Without Event Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Existing Without the Project Conditions			Existing Plus Project Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
Friars Rd												
1	Frazee Rd	Mission Center Rd	7E	93,330	43,540	0.47	B	47,779	0.51	B	0.04	NO
2	Mission Center Rd	Qualcomm Way	6E	80,000	40,223	0.50	B	45,710	0.57	C	0.07	NO
3	Qualcomm Way	River Run Dr	6E	80,000	35,187	0.44	B	42,521	0.53	C	0.09	NO
4	River Run Dr	Fenton Pkwy	6P	60,000	35,757	0.60	C	43,379	0.72	C	0.12	NO
5	Fenton Pkwy	Northside Dr	6P	60,000	35,037	0.58	C	42,641	0.71	C	0.13	NO

Table 4.15-15. Existing Plus Project Conditions Without Event Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Existing Without the Project Conditions			Existing Plus Project Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
6	Northside Dr	Stadium Way (Street A)	6E – 6P with project	80,000 – 60,000	45,076	0.56	C	53,139	0.89	D	0.33	NO
7	Stadium Way (Street A)	Mission Village Dr	6E	80,000	45,076	0.56	C	57,022	0.71	C	0.15	NO
8	Mission Village Dr	I-15 Ramps	6E	80,000	43,746	0.55	C	63,021	0.79	D	0.24	NO
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	60,400	0.86	D	65,837	0.94	E	0.08	YES
10	Rancho Mission Rd	Santo Rd	7P	70,000	50,773	0.73	C	53,133	0.76	C	0.03	NO
11	Santo Rd	Riverdale St	6P	60,000	49,805	0.83	C	51,508	0.86	D	0.03	NO
12	Riverdale St	Mission Gorge Rd	6P	60,000	45,257	0.75	C	46,834	0.78	C	0.03	NO
Qualcomm Way												
13	Friars Rd	Rio San Diego Dr	6M	50,000	14,616	0.29	A	15,850	0.32	A	0.03	NO
Rio San Diego Dr												
14	Qualcomm Way	River Run Dr	4M	40,000	11,301	0.28	A	12,098	0.30	A	0.02	NO
15	River Run Dr	Fenton Pkwy	4C/M	30,000	9,264	0.31	A	10,138	0.34	B	0.03	NO
Fenton Pkwy												
16	Rio San Diego Dr/ Fenton Marketplace Dwy	Northside Dr	4M	40,000	5,165	0.13	A	6,359	0.16	A	0.03	NO
San Diego Mission Rd												
17	Mission Village Dr	Rancho Mission Rd	4C w/o CLTL	15,000	7,660	0.51	C	14,331	0.96	E	0.45	YES
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	8,819	0.59	C	13,873	0.92	E	0.33	YES

Table 4.15-15. Existing Plus Project Conditions Without Event Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Existing Without the Project Conditions			Existing Plus Project Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
Rancho Mission Rd												
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	15,210	0.68	D	19,512	0.87	E	0.19	YES
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	9,582	0.64	C	11,307	0.75	D	0.11	NO
21	West of Ward Rd		2C	10,000	1,510	0.15	A	5,961	0.60	C	0.45	NO
Ward Rd												
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	9,972	0.66	C	14,666	0.98	E	0.32	YES
Fairmount Ave												
23	San Diego Mission Rd/ Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	7,217	0.24	A	10,672	0.36	B	0.12	NO
Mission Village Dr												
24	Ruffin Rd	Shawn Ave	4C	30,000	15,184	0.51	C	19,463	0.65	C	0.14	NO
25	Shawn Ave	Ronda Ave	4C	30,000	12,343	0.41	B	16,830	0.56	C	0.15	NO
26	Ronda Ave	Friars Rd	4M	40,000	14,241	0.36	A	18,746	0.47	B	0.11	NO
Ruffin Rd												
27	Aero Dr	Mission Village Dr	4C	30,000	13,617	0.45	B	16,252	0.54	C	0.09	NO
Gramercy Dr												
28	Mobley St	Ruffin Rd	4M	40,000	7,827	0.20	A	9,183	0.23	A	0.03	NO
Aero Dr												
29	Sandrock Rd	Ruffin Rd	4M	40,000	19,636	0.49	B	20,974	0.52	B	0.03	NO
30	Ruffin Rd	Daley Center Dr	4M	40,000	26,069	0.65	C	27,200	0.68	C	0.03	NO
Camino del Rio N												
31	Qualcomm Way	Mission City Pkwy	4C	30,000	9,608	0.32	A	10,063	0.34	B	0.02	NO

Table 4.15-15. Existing Plus Project Conditions Without Event Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Existing Without the Project Conditions			Existing Plus Project Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	8,540	0.57	C	9,459	0.63	C	0.06	NO
33	Ward Rd	Fairmount Ave	4C	30,000	12,173	0.41	B	16,407	0.55	C	0.14	NO
Camino del Rio S												
34	Texas St	Mission City Pkwy	2C	10,000	11,496	1.15	F	11,717	1.17	F	0.02	YES

Source: Appendix 4.15-1

Notes:

- ¹ 2C w/CLTL = 2-lane collector with center left-turn lane
 3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane;
 4C w/o CLTL = 4-lane collector without center left-turn lane
 4C = 4-lane collector
 4M = 4-lane major arterial
 6M = 6-lane major arterial
 6P = 6-lane primary arterial
 7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add 5,000 ADT for LOS A, 7,500 ADT for LOS B, and 10,000 ADT for LOS C, D, and E per the Mission Valley Community Plan Update
 6E = 6-lane expressway
 7E = 7-lane expressway (4 lanes in one direction and 3 in opposing direction); capacity is assumed to be 117% of 6E capacity
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)* and the *Mission Valley Community Plan Update (2019)*
- ⁴ Unacceptable ADT volumes per segment and LOS highlighted in **bold**.

Table 4.15-16. Existing Plus Project Without Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Existing Without the Project Conditions						Existing Plus Project Conditions						V/C Delta		Exceeds TISM Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
State Route 163																				
1	6th Ave to I-8	NB	3M+1A	6,600	5,256	5,705	0.80	0.86	C	D	5,323	5,763	0.81	0.87	D	D	0.01	0.01	NO	NO
		SB	3M+2A	7,800	8,966	8,021	1.15	1.03	F(0)	F(0)	9,008	8,099	1.15	1.04	F(0)	F(0)	0.01	0.01	NO	NO**
2	I-8 to Friars Rd	NB	2A	2,400	1,621	1,759	0.68	0.73	C	C	1,767	1,853	0.74	0.77	C	C	0.06	0.04	NO	NO
		SB	4M+2A	9,600	8,201	7,490	0.85	0.78	D	C* (F)	8,243	7,576	0.86	0.79	D	C (F)	0.00	0.01	NO	NO
3	Friars Rd to Mesa College Dr5	NB	5M	9,000	9,222	7,427	1.02	0.83	F(0)	D	9,237	7,465	1.03	0.83	F(0)	D	0.00	0.00	NO	NO
		SB	4M	7,200	6,163	6,384	0.86	0.89	D	D* (F)	6,184	6,406	0.86	0.89	D	D (F)	0.00	0.00	NO	NO
4	Mesa College Dr to I-805	NB	4M+2A	9,600	7,774	7,216	0.81	0.75	D	C	7,788	7,250	0.81	0.76	D	C	0.00	0.00	NO	NO
		SB	4M+1A	8,400	7,078	6,184	0.84	0.74	D	C* (F)	7,097	6,204	0.84	0.74	D	C (F)	0.00	0.00	NO	NO
Interstate 805																				
5	Madison Ave to I-8	NB	4M+1A	8,400	8,389	4,895	1.00	0.58	E	B	8,429	4,930	1.00	0.59	F(0)	B	0.00	0.00	NO	NO
		SB	6M	10,800	4,512	9,475	0.42	0.88	B	D* (F)	4,537	9,522	0.42	0.88	B	D (F)	0.00	0.00	NO	NO
6	I-8 to Murray Ridge Rd/ Phyllis Pl	NB	5M	9,000	9,830	5,699	1.09	0.63	F(0)	C	9,842	5,725	1.09	0.64	F(0)	C	0.00	0.00	NO	NO
		SB	4M+2A	9,600	5,145	9,204	0.54	0.96	B	E	5,164	9,217	0.54	0.96	B	E	0.00	0.00	NO	NO
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/ Kearny Villa Rd	NB	5M	9,000	9,821	5,673	1.09	0.63	F(0)	C	9,833	5,699	1.09	0.63	F(0)	C	0.00	0.00	NO	NO
		SB	5M	9,000	4,946	8,982	0.55	1.00	B	E	4,965	8,995	0.55	1.00	B	E	0.00	0.00	NO	NO
8	Mesa College Dr/Kearny Villa Rd to SR-163	NB	5M	9,000	8,191	4,826	0.91	0.54	D* (F)	B	8,202	4,850	0.91	0.54	D (F)	B	0.00	0.00	NO	NO
		SB	4M	7,200	3,551	5,547	0.49	0.77	B	C* (F)	3,569	5,559	0.50	0.77	B	C (F)	0.00	0.00	NO	NO
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	5,281	4,442	0.63	0.53	C* (F)	B	5,306	4,500	0.63	0.54	C (F)	B	0.00	0.01		NO
		SB	4M+2A	9,600	5,319	7,206	0.55	0.75	B	C* (F)	5,356	7,238	0.56	0.75	B	C (F)	0.00	0.00	NO	
Interstate 15																				
10	Adams Ave to I-8	NB	3M+2A	7,800	6,229	6,920	0.80	0.89	C	D	6,643	7,277	0.85	0.93	D	E	0.05	0.05	NO	YES
		SB	5M	9,000	5,030	8,403	0.56	0.93	B	E	5,289	8,884	0.59	0.99	B	E	0.03	0.05	NO	YES
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,143	1,771	0.48	0.74	B	C	1,726	2,297	0.72	0.96	C	E	0.24	0.22	NO	YES
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	3,515	4,641	0.98	1.29	E	F(1)	3,648	4,862	1.01	1.35	F(0)	F(2)	0.04	0.06	YES	YES
	Friars Rd Direct Ramp to I-15 SB	SB	1A	1,200	622	914	0.52	0.76	B	C	859	1,369	0.72	1.14	C	F(0)	0.20	0.38	NO	YES
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	8,022	5,889	0.96	0.70	E	C	8,340	6,479	0.99	0.77	E	C	0.04	0.07	YES	NO
		SB	5M+1A	10,200	6,825	9,390	0.67	0.92	C	E	7,333	9,827	0.72	0.96	C	E	0.05	0.04	NO	YES
13	Aero Dr to Balboa Ave/ Tierrasanta Blvd	NB	4M+1A	8,400	9,007	6,792	1.07	0.81	F(0)	D	9,292	7,320	1.11	0.87	F(0)	D	0.03	0.06	YES	NO
		SB	4M+1A	8,400	6,991	8,417	0.83	1.00	D	F(0)	7,446	8,808	0.89	1.05	D	F(0)	0.05	0.05	NO	YES
Interstate 8																				
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	6,023	7,523	0.72	0.90	C	D	6,146	7,629	0.73	0.91	C	D	0.01	0.01	NO	NO
		WB	5M	9,000	7,089	6,193	0.79	0.69	C	C	7,165	6,336	0.80	0.70	C	C	0.01	0.02	NO	NO
15	Taylor St to Hotel Cir	EB	4M	7,200	5,901	7,890	0.82	1.10	D	F(0)	6,034	8,004	0.84	1.11	D	F(0)	0.02	0.02	NO	YES
		WB	4M+1A	8,400	8,171	6,978	0.97	0.83	E	D	8,253	7,131	0.98	0.85	E	D	0.01	0.02	NO	NO

Table 4.15-16. Existing Plus Project Without Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Existing Without the Project Conditions						Existing Plus Project Conditions						V/C Delta		Exceeds TISM Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 8																				
16	Hotel Cir to SR-163	EB	4M+2A	9,600	7,039	8,736	0.73	0.91	C	D	7,173	8,851	0.75	0.92	C	E	0.01	0.01	NO	YES
		WB	5M	9,000	8,173	6,719	0.91	0.75	D	C	8,256	6,874	0.92	0.76	D	C	0.01	0.02	NO	NO
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,017	5,669	0.42	0.79	B	C* (F)	3,092	5,752	0.43	0.80	B	C (F)	0.01	0.01	NO	NO
		WB	3M+2A	7,800	8,579	7,900	1.10	1.01	F(0)	F(0)	8,662	8,046	1.11	1.03	F(0)	F(0)	0.01	0.02	NO**	YES
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	5,025	9,463	0.60	1.13	B	F(0)	5,100	9,546	0.61	1.14	B	F(0)	0.01	0.01	NO	NO**
		WB	4M+1A	8,400	8,928	8,273	1.06	0.98	F(0)	E	9,011	8,420	1.07	1.00	F(0)	F(0)	0.01	0.02	NO**	YES
19	Texas St to I-805	EB	4M	7,200	3,185	6,214	0.44	0.86	B	D* (F)	3,260	6,297	0.45	0.87	B	D (F)	0.01	0.01	NO	NO
		WB	4M	7,200	6,253	4,963	0.87	0.69	D* (F)	C	6,336	5,110	0.88	0.71	D (F)	C	0.01	0.02	NO	NO
20	I-805 to I-15	EB	4M+2A	9,600	6,104	10,315	0.64	1.07	C	F(0)	6,238	10,446	0.65	1.09	C	F(0)	0.01	0.01	NO	YES
		WB	4M+2A	9,600	10,466	8,476	1.09	0.88	F(0)	D	10,581	8,674	1.10	0.90	F(0)	D	0.01	0.02	YES	NO
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	5,965	9,335	0.62	0.97	C	E	5,998	9,393	0.62	0.98	C	E	0.00	0.01	NO	NO
		WB	4M+2A	9,600	7,413	5,467	0.77	0.57	C* (F)	B	7,485	5,574	0.78	0.58	C (F)	B	0.01	0.01	NO	NO
22	Fairmount Ave to Waring Rd	EB	5M	9,000	6,483	10,335	0.72	1.15	C	F(0)	6,650	10,645	0.74	1.18	C	F(0)	0.02	0.03	NO	YES
		WB	6M	10,800	10,029	7,923	0.93	0.73	E	C	10,296	8,153	0.95	0.75	E	C	0.02	0.02	YES	NO
23	Waring Rd to College Ave	EB	5M	9,000	6,392	9,979	0.71	1.11	C	F(0)	6,557	10,286	0.73	1.14	C	F(0)	0.02	0.03	NO	YES
		WB	5M	9,000	9,359	7,492	1.04	0.83	F(0)	D	9,623	7,720	1.07	0.86	F(0)	D	0.03	0.03	YES	NO

Source: Appendix 4.15-1

Notes:

- ¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane
M = mainline lane
A = auxiliary lane
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)*
- ⁴ Unacceptable V/C and LOS highlighted in **bold**.
- ⁵ No data available from Genesee Ave to Mesa College Dr - assumed equivalent to the segment from Friars Rd to Genesee Ave
- * Traffic data indicate operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.
- ** Freeway segment would exceed the City of San Diego impact threshold.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

Table 4.15-17. Existing Plus Project Without Event Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Existing Without the Project Conditions					Existing Plus Project Conditions					Delay Delta	Exceeds TISM Threshold?
				Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)		
				Mixed Flow & HOV	Mixed Flow only				Mixed Flow & HOV	Mixed Flow only					
I-15 NB - Friars Rd On-Ramp	AM	2	1,450	1,941	1,641	191	7.9	2,775	2,213	1,871	421	17.4	6,100	9.5	NO*
	PM	2	888	1,244	1,096	208	14.1	3,025	1,751	1,542	654	44.2	9,500	30.1	YES
I-15 SB / I-8 - Friars Rd Loop On-Ramp	AM	1	N/A	732	732	N/A	N/A	N/A	846	846	N/A	N/A	N/A	N/A	NO
	PM	1	660	744	744	84	7.6	2,425	933	933	273	24.8	7,925	17.2	YES
I-15 SB - Friars Rd Direct On-Ramp	AM	1	N/A	622	622	N/A	N/A	N/A	825	825	N/A	N/A	N/A	N/A	NO
	PM	1	996	914	914	0	0.0	0	1,303	1,303	307	18.5	8,925	18.5	YES
I-8 EB - SB Fairmount Ave	AM	1	N/A	250	250	N/A	N/A	N/A	380	380	N/A	N/A	N/A	N/A	NO
	PM	1	492	550	550	58	7.1	1,675**	785	785	293	35.8	8,500	28.7	YES

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

Notes:

¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed

² Demand is the peak hour demand projected to use the on-ramp.

³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Delays in excess of the desirable 15 minutes are highlighted in **bold**.

⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.

* Upstream freeway is operating at LOS D. Per the City of San Diego’s significance criteria, ramp meter thresholds do not apply as the meter rate will be higher than the most restrictive rate.

** Field observations indicate operations are better than calculated.

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Table 4.15-18. Existing Plus Project Without Event Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95th Percentile Queue (ft)	
				Existing Without the Project Conditions	Existing Plus Project Conditions
1. SR-163 SB off-ramp at Friars Rd/ Ulric St	AM	NBL	1,200	204	204
		NBT		207	207
		NBR		0	0
	PM	NBL	1,200	201	201
		NBT		198	198
		NBR		0	0
2. SR-163 NB off-ramp at Friars Rd	AM	NBR	900	0	0
		SBR	700	0	0
	PM	NBR	900	0	0
		SBR	700	0	0
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	331	346
		SBT		333	347
		SBR		201	405
	PM	SBL	1,200	647	716
		SBT		648	717
		SBR		65	150
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0	0
		SBR	1,300	0	0
	PM	NBR	1,500	0	0
		SBR	1,300	0	0
29. I-8 WB off-ramp at Qualcomm Way/ Camino del Rio N	AM	WBL	3,200	0	0
		WBT		125	135
		WBR		191	230
	PM	WBL	3,200	0	0
		WBT		277	290
		WBR		102	109
30 I-8 EB off-ramp at Qualcomm Way/ Texas St	AM	EBR	900	44	56
	PM	EBR	900	147	149
35. I-8 WB off-ramp at Fairmount Ave/Alvarado Canyon Rd/ Camino del Rio N	AM	WBL	1,000	486	561
		WBT		464	544
		WBR		216	359
	PM	WBL	1,000	556	556
		WBT		336	475
		WBR		243	329
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	276	313
		EBR		283	314
	PM	EBL	4,100	714	754
		EBR		1,229	1,269

Source: Appendix 4.15-1.

4.15.7.1.2 Existing Plus Project – Plus Stadium Event Conditions

This section presents the results of the operations analysis under the hypothetical Existing Plus Project Plus Stadium Event scenario. Under this scenario, Stadium event trips were added to the Existing Plus Project Conditions to analyze operations under the scenario in which a sold-out event occurs on a typical weekday. As with the Existing Plus Project scenario, this scenario tends to understate impacts in that it does not consider expected future traffic growth from other, or cumulative, projects and, therefore, overstates capacity available to the project. Relatedly, the scenario can overstate impacts in that it does not account for future road improvements planned to be built. The Existing Plus Project Plus Stadium Event Scenario is also likely to overstate impacts in that it does not account for changes in travel patterns by local residents and employees due to the advance notice of a large-scale event occurring at the Stadium. For example, office employees may be more likely to leave work early on a weekday when a large event is occurring, or local residents may choose to adjust their typical commute such that they would not return home until after the event has started in order to avoid peak traffic. Because the Existing Plus Project plus Stadium Event scenario potentially both understates and overstates significant impacts, the results of the analysis can be misleading to both the decision-maker and the public. For this reason, the Existing Plus Project Plus Stadium Event analysis presented here is provided for information purposes only; the proposed project's significant impact determinations and corresponding mitigation measures will be identified based on the Horizon Year (2037) Plus Project Plus Event analysis, which accurately reflects future cumulative traffic conditions, as well as future road improvements, forecast to be in place at the time the proposed project reaches full buildout. Additionally, as previously explained, significant impacts and corresponding mitigation also will be assessed under an Existing plus Stadium Event (only) scenario in light of the near-term buildout of the Stadium component, which is to be distinguished from the long-term buildout of the remainder of the project.

Intersections

Turning movement traffic volumes and intersection lane configurations for the Existing Plus Project Plus Stadium Event Conditions are shown on TIA Figure 15. This information was used to calculate operations under this scenario.

Table 4.15-19 presents a summary of the intersection operating conditions and traffic changes under the Existing Plus Project Plus Stadium Event Conditions, comparing the projected levels of service at each study area intersection under the proposed project with Existing Conditions. The corresponding LOS calculation sheets are included in TIA Appendix B.

As shown in Table 4.15-19, in addition to the locations that exceed the significance threshold identified under the Existing Plus Project Without Stadium Event Conditions, the addition of Stadium traffic would result in operations that exceed the threshold at the following additional four (4) locations:

8. Fenton Parkway & Friars Road – Event traffic would degrade LOS D operations to LOS F in the PM peak hour and increase delay by 62.6 seconds.
10. Northside Drive & Friars Road – Event traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 30.5 seconds.
11. Stadium Way (Street A) & Friars Road – Event traffic would degrade free-flow operations to LOS F in the PM peak hour.
14. Mission Village Drive/Street D & Street 4 – Event traffic would result in LOS F operations in PM peak hour.

The same intersections would also exceed the City of San Diego significance thresholds.

Roadway Segments

Under this scenario, project traffic traversing the study area roadway segments was added to existing peak hour roadway volumes. Table 4.15-20 illustrates the results of the LOS analysis for the study area roadway segments under Existing Plus Project Plus Stadium Event Conditions and compares the projected levels of service on each segment under the proposed project with the Existing Conditions LOS. As shown in the table, in addition to those segments that operate unacceptably (LOS E or F) under Existing Plus Project Without Stadium Event Conditions, the following segments will operate unacceptably due to the addition of event traffic:

6. Friars Road from Northside Drive to Stadium Way (Street A) (LOS E) – Event traffic would degrade LOS C operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.
8. Friars Road from Mission Village Drive to the I-15 Ramps (LOS E) – Event traffic would degrade LOS C operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.

All of the locations identified under this scenario as operating below acceptable levels of service also are identified under the Horizon Year scenario as operating similarly.

Freeway Segments

Table 4.15-21 illustrates the results of the freeway operations analysis under Existing Plus Project Plus Stadium Event Conditions. In addition to those impacts identified under Existing Plus Project Without Stadium Event Conditions, the Stadium event trips will further exacerbate operations and result in operations that exceed Caltrans' significance threshold on the following three freeway segments:

1. SR-163 from 6th Avenue to I-8 (SB, PM peak hour).
14. I-8 from Morena Boulevard to Taylor Street (EB, PM peak hour).
18. I-8 from Mission Center Road to Texas Street (WB, PM peak hour and EB, PM peak hour).

Ramp Metering

Table 4.15-22 illustrates the results of the ramp metering analysis conducted at the metered freeway on-ramps in the study area under Existing Plus Project Plus Stadium Event Conditions. As shown in Table 4.15-22, all ramps are expected to operate with unacceptable delays during one or both peak hours as was the case under Existing Plus Project Without Stadium Event Conditions. Additionally, on-ramp capacity is not sufficient to accommodate the peak hour demand during metered peak periods at all ramps; thus, ramp queues are expected to spill back onto the arterial street. The proposed project would increase delay by more than two minutes compared to Existing Conditions for all on-ramps operating with delays above 15 minutes and, therefore, would result in an exceedance of the Caltrans threshold at the same locations identified under Existing Plus Project Without Stadium Event Conditions.

Off-Ramp Queuing

Table 4.15-23 illustrates the results of the off-ramp queuing analysis conducted at the SR-163 and I-15 off-ramps at Friars Road and the I-8 off-ramps at Qualcomm Way/Texas Street and Fairmount Avenue. As shown, all off-ramp queues can be accommodated by the existing storage capacity under Existing Year Plus Project Plus Stadium Event Conditions and, therefore, operations would not exceed the Caltrans significance threshold.

Table 4.15-19. Existing Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Plus Event Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
1. SR-163 SB Ramps/Ulric St & Friars Rd	Signalized	AM	22.5	C	23.1	C	0.6	NO
		PM	57.9	E	64.2	E	6.3	YES
2. SR-163 NB Ramps & Friars Rd	Signalized	AM	11.2	B	11.7	B	0.5	NO
		PM	60.9	E	108.5	F	47.6	YES
3. Frazee Rd & Friars Rd	Signalized	AM	26.9	C	27.9	C	1.0	NO
		PM	51.0	D	126.2	F	75.2	YES
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	10.5	B	11.5	B	1.0	NO
		PM	11.1	B	12.6	B	1.5	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	15.9	B	15.8	B	-0.1	NO
		PM	25.1	C	25.7	C	0.6	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	17.4	B	19.2	B	1.8	NO
		PM	22.1	C	22.4	C	0.3	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.9	A	7.0	A	1.1	NO
		PM	9.6	A	11.1	B	1.5	NO
8. River Run Dr & Friars Rd	Signalized	AM	17.7	B	18.2	B	0.5	NO
		PM	37.1	D	99.7	F	62.6	YES
9. Fenton Pkwy & Friars Rd	Signalized	AM	25.3	C	25.2	C	-0.1	NO
		PM	30.2	C	107.5	F	77.3	YES
10. Northside Dr & Friars Rd	Signalized	AM	28.0	C	22.4	C	-5.6	NO
		PM	39.9	D	70.4	E	30.5	YES
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A	11.2	B	N/A	NO
		PM	-	N/A	144.7	F	N/A	YES
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	18.5	B	28.6	C	10.1	NO
		PM	32.6	C	32.1	C	-0.5	NO
13. Mission Village Dr & Friars Rd EB Ramps/ San Diego Mission Rd*	Signalized	AM	59.9	E	14.7	B	-45.2	NO
		PM	54.2	D	27.1	C	-27.1	NO

Table 4.15-19. Existing Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Plus Event Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
14. Mission Village Dr/Aztec Way & Street 2	Signalized	AM	DNE	N/A	21.6	C	N/A	NO
		PM		N/A	371.5	F	N/A	YES
15. Street B & Street 2	Signalized	AM	DNE	N/A	26.0	C	N/A	NO
		PM		N/A	31.0	C	N/A	NO
16. Murphy Creek Rd & Street B/San Diego Mission Rd	Roundabout	AM	DNE	N/A	7.0	A	N/A	NO
		PM		N/A	10.6	B	N/A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	38.0	D	84.2	F	46.2	YES
		PM	49.3	D** (E)	126.1	F (F)	76.8	YES
18. I-15 NB Ramps & Friars Rd	Signalized	AM	34.2	C** (E)	78.0	E (F)	43.8	YES
		PM	47.8	D** (E)	203.3	F (F)	155.5	YES
19. Rancho Mission Rd & Friars Rd	Signalized	AM	23.1	C** (D)	27.7	C (E)	4.6	YES****
		PM	17.7	B** (D)	41.6	D (E)	23.9	YES****
20. Santo Rd & Friars Rd	Signalized	AM	25.4	C	28.0	C	2.6	NO
		PM	13.3	B	15.2	B	1.9	NO
21. Riverdale St & Friars Rd	Signalized	AM	21.1	C	21.9	C	0.8	NO
		PM	20.7	C	21.0	C	0.3	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	33.4	C	33.5	C	0.1	NO
		PM	32.2	C	33.3	C	1.1	NO
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	14.6	B	15.6	B	1.0	NO
		PM	23.0	C	25.0	C	2.0	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	9.5	A	9.8	A	0.3	NO
		PM	12.1	B	13.4	B	1.3	NO
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	15.2	B	15.3	B	0.1	NO
		PM	21.7	C	22.5	C	0.8	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	21.5	C	27.6	C	6.1	NO
		PM	22.1	C	33.5	C	11.4	NO

Table 4.15-19. Existing Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Plus Event Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
27. Fairmount Ave & San Diego Mission Rd/ Twain Ave	Signalized	AM	13.7	B	18.4	B	4.7	NO
		PM	13.0	B	26.3	C	13.3	NO
28. Qualcomm Way & Camino del Rio N/ Camino de la Reina	Signalized	AM	18.2	B	18.7	B	0.5	NO
		PM	61.2	E	60.9	E	-0.3	NO
29. Qualcomm Way & I-8 WB Off-Ramp/ Camino del Rio N	Signalized	AM	10.7	B	11.5	B	0.8	NO
		PM	42.8	D	43.0	D	0.2	NO
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.1	A	1.0	A	-0.1	NO
		PM	4.0	A	4.1	A	0.1	NO
31. Texas St & Camino del Rio S	Signalized	AM	39.0	D	41.9	D	2.9	NO
		PM	55.6	E	63.4	E	7.8	YES
32. Ward Rd & Rancho Mission Rd	SSSC	AM	20.0	C	59.4	F	39.4	YES
		PM	18.7	C	471.8	F	453.1	YES
33. Camino del Rio N & Ward Ave	Signalized	AM	11.9	B	17.8	B	5.9	NO
		PM	13.8	B	23.1	C	9.3	NO
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	20.7	C	24.8	C	4.1	NO
		PM	25.3	C	48.0	D	22.7	NO
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	53.8	D	74.9	E	21.1	YES
		PM	61.0	E	141.7	F	80.7	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	12.7	B	14.0	B	1.3	NO
		PM	21.3	C	25.2	C	3.9	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	39.4	D	37.6	D	-1.8	NO
		PM	25.1	C	28.0	C	2.9	NO
38. Mission Village Dr & Shawn Ave	Signalized	AM	5.1	A	5.2	A	0.1	NO
		PM	6.6	A	8.2	A	1.6	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	11.1	B	11.5	B	0.4	NO
		PM	7.5	A	8.9	A	1.4	NO

Table 4.15-19. Existing Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Existing Without the Project Conditions		Existing Plus Project Plus Event Conditions		Delay Delta	Exceeds TISM Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	14.2	B	19.3	B	5.1	NO
		PM	16.0	B	21.3	C	5.3	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	30.8	C	32.9	C	2.1	NO
		PM	31.3	C	40.2	D	8.9	NO
42. Gramercy Dr & Mobley St	Signalized	AM	6.3	A	6.4	A	0.1	NO
		PM	5.3	A	5.4	A	0.1	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	8.9	A	9.1	A	0.2	NO
		PM	10.4	B	10.5	B	0.1	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the Highway Capacity Manual (HCM) method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way & Friars Road intersection is only used during Stadium events.
- * Existing or proposed signal phasing prevents the use of HCM 6 at this intersection. The HCM 2000 method was applied instead.
- ** Ramp metering during the peak hours results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation. This additional delay is estimated to result in operations as shown in parentheses.
- *** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- **** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would exceed the TISM threshold.

Table 4.15-20. Existing Plus Project Plus Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Existing Without the Project Conditions			Existing Plus Project Plus Event Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3, 4}	ADT	V/C ²	LOS ^{3, 4}		
Friars Rd												
1	Frazee Rd	Mission Center Rd	7E	93,330	43,540	0.47	B	51,682	0.55	C	0.08	NO
2	Mission Center Rd	Qualcomm Way	6E	80,000	40,223	0.50	B	49,692	0.62	C	0.12	NO
3	Qualcomm Way	River Run Dr	6E	80,000	35,187	0.44	B	46,643	0.58	C	0.14	NO
4	River Run Dr	Fenton Pkwy	6P	60,000	35,757	0.60	C	47,501	0.79	C	0.19	NO
5	Fenton Pkwy	Northside Dr	6P	60,000	35,037	0.58	C	46,667	0.78	C	0.20	NO
6	Northside Dr	Stadium Way (Street A)	6E – 6P with project	80,000 – 60,000	45,076	0.56	C	57,183	0.95	E	0.39	YES
7	Stadium Way (Street A)	Mission Village Dr	6E	80,000	45,076	0.56	C	65,829	0.82	D	0.26	NO
8	Mission Village Dr	I-15 Ramps	6E	80,000	43,746	0.55	C	72,609	0.91	E	0.36	YES
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	60,400	0.86	D	68,363	0.98	E	0.12	YES
10	Rancho Mission Rd	Santo Rd	7P	70,000	50,773	0.73	C	54,537	0.78	C	0.05	NO
11	Santo Rd	Riverdale St	6P	60,000	49,805	0.83	C	52,894	0.88	D	0.05	NO
12	Riverdale St	Mission Gorge Rd	6P	60,000	45,257	0.75	C	48,220	0.80	C	0.05	NO
Qualcomm Way												
13	Friars Rd	Rio San Diego Dr	6M	50,000	14,616	0.29	A	15,990	0.32	A	0.03	NO
Rio San Diego Dr												
14	Qualcomm Way	River Run Dr	4M	40,000	11,301	0.28	A	12,300	0.31	A	0.03	NO
15	River Run Dr	Fenton Pkwy	4C/M	30,000	9,264	0.31	A	10,340	0.34	B	0.03	NO
Fenton Pkwy												
16	Rio San Diego Dr/ Fenton Marketplace Dwy	Northside Dr	4M	40,000	5,165	0.13	A	6,666	0.17	A	0.04	NO
San Diego Mission Rd												
17	Mission Village Dr	Rancho Mission Rd	4C w/o CLTL	15,000	7,660	0.51	C	17,348	1.16	F	0.65	YES

Table 4.15-20. Existing Plus Project Plus Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Existing Without the Project Conditions			Existing Plus Project Plus Event Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3, 4}	ADT	V/C ²	LOS ^{3, 4}		
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	8,819	0.59	C	15,522	1.03	F	0.44	YES
Rancho Mission Rd												
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	15,210	0.68	D	21,372	0.95	E	0.27	YES
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	9,582	0.64	C	11,728	0.78	D	0.14	NO
21	West of Ward Rd		2C	10,000	1,510	0.15	A	7,189	0.72	C	0.57	NO
Ward Rd												
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	9,972	0.66	C	16,254	1.08	F	0.42	YES
Fairmount Ave												
23	San Diego Mission Rd/ Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	7,217	0.24	A	12,058	0.40	B	0.16	NO
Mission Village Dr												
24	Ruffin Rd	Shawn Ave	4C	30,000	15,184	0.51	C	20,147	0.67	D	0.16	NO
25	Shawn Ave	Ronda Ave	4C	30,000	12,343	0.41	B	17,532	0.58	C	0.17	NO
26	Ronda Ave	Friars Rd	4M	40,000	14,241	0.36	A	19,474	0.49	B	0.13	NO
Ruffin Rd												
27	Aero Dr	Mission Village Dr	4C	30,000	13,617	0.45	B	16,682	0.56	C	0.11	NO
Gramercy Dr												
28	Mobley St	Ruffin Rd	4M	40,000	7,827	0.20	A	9,394	0.23	A	0.03	NO
Aero Dr												
29	Sandrock Rd	Ruffin Rd	4M	40,000	19,636	0.49	B	21,229	0.53	C	0.04	NO
30	Ruffin Rd	Daley Center Dr	4M	40,000	26,069	0.65	C	27,358	0.68	C	0.03	NO
Camino del Rio N												
31	Qualcomm Way	Mission City Pkwy	4C	30,000	9,608	0.32	A	10,125	0.34	B	0.02	NO

Table 4.15-20. Existing Plus Project Plus Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Existing Without the Project Conditions			Existing Plus Project Plus Event Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3, 4}	ADT	V/C ²	LOS ^{3, 4}		
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	8,540	0.57	C	9,512	0.63	C	0.06	NO
33	Ward Rd	Fairmount Ave	4C	30,000	12,173	0.41	B	17,995	0.60	C	0.19	NO
Camino del Rio S												
34	Texas St	Mission City Pkwy	2C	10,000	11,496	1.15	F	11,725	1.17	F	0.02	YES

Source: Appendix 4.15-1

Notes:

¹ 2C w/CLTL = 2-lane collector with center left-turn lane

3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane;

4C w/o CLTL = 4-lane collector without center left-turn lane

4C = 4-lane collector

4M = 4-lane major arterial

6M = 6-lane major arterial

6P = 6-lane primary arterial

7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add 5,000 ADT for LOS A, 7,500 ADT for LOS B, and 10,000 ADT for LOS C, D, and E per the Mission Valley Community Plan Update

6E = 6-lane expressway

7E = 7-lane expressway (4 lanes in one direction and 3 in opposing direction); capacity is assumed to be 117% of 6E capacity

² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications³ LOS calculations performed using City of San Diego Traffic Impact Study Manual (1998) and the Mission Valley Community Plan Update (2019)⁴ Unacceptable ADT volumes per segment and LOS highlighted in **bold**.

Table 4.15-21. Existing Plus Project Plus Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Existing Without the Project Conditions						Existing Plus Project Plus Event Conditions						V/C Delta		Exceeds TISM Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
State Route 163																				
1	6 th Ave to I-8	NB	3M+1A	6,600	5,256	5,705	0.80	0.86	C	D	5,313	5,913	0.81	0.90	D	D	0.01	0.03	NO	NO
		SB	3M+2A	7,800	8,966	8,021	1.15	1.03	F(0)	F(0)	9,002	8,104	1.15	1.04	F(0)	F(0)	0.00	0.01	NO*	YES
2	I-8 to Friars Rd	NB	2A	2,400	1,621	1,759	0.68	0.73	C	C	1,746	2,108	0.73	0.88	C	D	0.05	0.15	NO	NO
		SB	4M+2A	9,600	8,201	7,490	0.85	0.78	D	C** (F)	8,237	7,580	0.86	0.79	D	C (F)	0.00	0.01	NO	YES***
3	Friars Rd to Mesa College Dr ⁵	NB	5M	9,000	9,222	7,427	1.02	0.83	F(0)	D	9,235	7,474	1.03	0.83	F(0)	D	0.00	0.01	NO	NO
		SB	4M	7,200	6,163	6,384	0.86	0.89	D	D** (F)	6,181	6,530	0.86	0.91	D	D (F)	0.00	0.02	NO	YES***
4	Mesa College Dr to I-805	NB	4M+2A	9,600	7,774	7,216	0.81	0.75	D	C	7,786	7,258	0.81	0.76	D	C	0.00	0.00	NO	NO
		SB	4M+1A	8,400	7,078	6,184	0.84	0.74	D	C** (F)	7,094	6,315	0.84	0.75	D	C (F)	0.00	0.02	NO	YES***
Interstate 805																				
5	Madison Ave to I-8	NB	4M+1A	8,400	8,389	4,895	1.00	0.58	E	B	8,423	4,945	1.00	0.59	F(0)	B	0.00	0.01	NO	NO
		SB	6M	10,800	4,512	9,475	0.42	0.88	B	D** (F)	4,533	9,517	0.42	0.88	B	D (F)	0.00	0.00	NO	YES***
6	I-8 to Murray Ridge Rd/Phyllis Pl	NB	5M	9,000	9,830	5,699	1.09	0.63	F(0)	C	9,840	5,722	1.09	0.64	F(0)	C	0.00	0.00	NO	NO
		SB	4M+2A	9,600	5,145	9,204	0.54	0.96	B	E	5,161	9,226	0.54	0.96	B	E	0.00	0.00	NO	NO
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/Kearny Villa Rd	NB	5M	9,000	9,821	5,673	1.09	0.63	F(0)	C	9,831	5,696	1.09	0.63	F(0)	C	0.00	0.00	NO	NO
		SB	5M	9,000	4,946	8,982	0.55	1.00	B	E	4,962	9,004	0.55	1.00	B	F(0)	0.00	0.00	NO	NO
8	Mesa College Dr/Kearny Villa Rd to SR-163	NB	5M	9,000	8,191	4,826	0.91	0.54	D** (F)	B	8,201	4,848	0.91	0.54	D (F)	B	0.00	0.00	YES***	NO
		SB	4M	7,200	3,551	5,547	0.49	0.77	B	C** (F)	3,566	5,568	0.50	0.77	B	C (F)	0.00	0.00	NO	YES***
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	5,281	4,442	0.63	0.53	C** (F)	B	5,302	4,505	0.63	0.54	C (F)	B	0.00	0.01	YES***	NO
		SB	4M+2A	9,600	5,319	7,206	0.55	0.75	B	C** (F)	5,350	7,358	0.56	0.77	B	C (F)	0.00	0.02	NO	YES***
Interstate 15																				
10	Adams Ave to I-8	NB	3M+2A	7,800	6,229	6,920	0.80	0.89	C	D	6,583	7,363	0.84	0.94	D	E	0.05	0.06	NO	YES
		SB	5M	9,000	5,030	8,403	0.56	0.93	B	E	5,252	8,831	0.58	0.98	B	E	0.02	0.05	NO	YES
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,143	1,771	0.48	0.74	B	C	1,642	2,237	0.68	0.93	C	E	0.21	0.19	NO	YES
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	3,515	4,641	0.98	1.29	E	F(1)	3,629	4,846	1.01	1.35	F(0)	F(1)	0.03	0.06	YES	YES
	Friars Rd Direct Ramp to I-15 SB	SB	1A	1,200	622	914	0.52	0.76	B	C	825	1,319	0.69	1.10	C	F(0)	0.17	0.34	NO	YES
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	8,022	5,889	0.96	0.70	E	C	8,294	6,449	0.99	0.77	E	C	0.03	0.07	YES	NO
		SB	5M+1A	10,200	6,825	9,390	0.67	0.92	C	E	7,260	10,277	0.71	1.01	C	F(0)	0.04	0.09	NO	YES
13	Aero Dr to Balboa Ave/ Tierrasanta Blvd	NB	4M+1A	8,400	9,007	6,792	1.07	0.81	F(0)	D	9,251	7,293	1.10	0.87	F(0)	D	0.03	0.06	YES	NO
		SB	4M+1A	8,400	6,991	8,417	0.83	1.00	D	F(0)	7,380	9,211	0.88	1.10	D	F(0)	0.05	0.09	NO	YES

Table 4.15-21. Existing Plus Project Plus Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Existing Without the Project Conditions						Existing Plus Project Plus Event Conditions						V/C Delta		Exceeds TISM Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 8																				
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	6,023	7,523	0.72	0.90	C	D	6,129	7,745	0.73	0.92	C	E	0.01	0.03	NO	YES
		WB	5M	9,000	7,089	6,193	0.79	0.69	C	C	7,154	6,328	0.79	0.70	C	C	0.01	0.02	NO	NO
15	Taylor St to Hotel Cir	EB	4M	7,200	5,901	7,890	0.82	1.10	D	F(0)	6,015	8,129	0.84	1.13	D	F(0)	0.02	0.03	NO	YES
		WB	4M+1A	8,400	8,171	6,978	0.97	0.83	E	D	8,241	7,123	0.98	0.85	E	D	0.01	0.02	NO	NO
Interstate 8																				
16	Hotel Cir to SR-163	EB	4M+2A	9,600	7,039	8,736	0.73	0.91	C	D	7,154	8,977	0.75	0.94	C	E	0.01	0.03	NO	YES
		WB	5M	9,000	8,173	6,719	0.91	0.75	D	C	8,244	6,866	0.92	0.76	D	C	0.01	0.02	NO	NO
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,017	5,669	0.42	0.79	B	C** (F)	3,081	5,772	0.43	0.80	B	D (F)	0.01	0.01	NO	YES***
		WB	3M+2A	7,800	8,579	7,900	1.10	1.01	F(0)	F(0)	8,650	8,039	1.11	1.03	F(0)	F(0)	0.01	0.02	YES	YES
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	5,025	9,463	0.60	1.13	B	F(0)	5,089	9,566	0.61	1.14	B	F(0)	0.01	0.01	NO	YES
		WB	4M+1A	8,400	8,928	8,273	1.06	0.98	F(0)	E	8,999	8,413	1.07	1.00	F(0)	F(0)	0.01	0.02	NO*	YES
19	Texas St to I-805	EB	4M	7,200	3,185	6,214	0.44	0.86	B	D** (F)	3,249	6,317	0.45	0.88	B	D (F)	0.01	0.01	NO	YES***
		WB	4M	7,200	6,253	4,963	0.87	0.69	D** (F)	C	6,324	5,103	0.88	0.71	D (F)	C	0.01	0.02	YES***	NO
20	I-805 to I-15	EB	4M+2A	9,600	6,104	10,315	0.64	1.07	C	F(0)	6,219	10,477	0.65	1.09	C	F(0)	0.01	0.02	NO	YES
		WB	4M+2A	9,600	10,466	8,476	1.09	0.88	F(0)	D	10,564	8,656	1.10	0.90	F(0)	D	0.01	0.02	YES	NO
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	5,965	9,335	0.62	0.97	C	E	5,993	9,419	0.62	0.98	C	E	0.00	0.01	NO	NO
		WB	4M+2A	9,600	7,413	5,467	0.77	0.57	C** (F)	B	7,475	5,828	0.78	0.61	C (F)	B	0.01	0.04	YES***	NO
22	Fairmount Ave to Waring Rd	EB	5M	9,000	6,483	10,335	0.72	1.15	C	F(0)	6,626	10,650	0.74	1.18	C	F(0)	0.02	0.04	NO	YES
		WB	6M	10,800	10,029	7,923	0.93	0.73	E	C	10,258	8,568	0.95	0.79	E	C	0.02	0.06	YES	NO
23	Waring Rd to College Ave	EB	5M	9,000	6,392	9,979	0.71	1.11	C	F(0)	6,534	10,291	0.73	1.14	C	F(0)	0.02	0.03	NO	YES
		WB	5M	9,000	9,359	7,492	1.04	0.83	F(0)	D	9,585	8,130	1.07	0.90	F(0)	D	0.03	0.07	YES	NO

Source: Appendix 4.15-1

Notes:

- ¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane
M = mainline lane
A = auxiliary lane
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)*
- ⁴ Unacceptable V/C and LOS highlighted in **bold**.
- ⁵ No data available from Genesee Ave to Mesa College Dr - assumed equivalent to the segment from Friars Rd to Genesee Ave
- * Freeway segment would exceed the City of San Diego impact threshold.
- ** Traffic data indicate operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.
- *** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would exceed the TISM threshold.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

Table 4.15-22. Existing Plus Project Plus Event Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Existing Without the Project Conditions					Existing Plus Project Plus Event Conditions					Delay Delta	Exceeds TISM Threshold?
				Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)		
				Mixed Flow & HOV	Mixed Flow only				Mixed Flow & HOV	Mixed Flow only					
I-15 NB - Friars Rd On-Ramp	AM	2	1,450	1,941	1,641	191	7.9	2,775	2,213	1,871	421	17.4	6,100	9.5	NO*
	PM	2	888	1,244	1,096	208	14.1	3,025	1,806	1,591	703	47.5	10,200	33.4	YES
I-15 SB / I-8 - Friars Rd Loop On-Ramp	AM	1	N/A	732	732	N/A	N/A	N/A	846	846	N/A	N/A	N/A	N/A	NO
	PM	1	660	744	744	84	7.6	2,425	964	964	304	27.7	8,825	20.0	YES
I-15 SB - Friars Rd Direct On-Ramp	AM	1	N/A	622	622	N/A	N/A	N/A	825	825	N/A	N/A	N/A	N/A	NO
	PM	1	996	914	914	0	0.0	0	1,320	1,320	324	19.5	9,400	19.5	YES
I-8 EB - SB Fairmount Ave	AM	1	N/A	250	250	N/A	N/A	N/A	380	380	N/A	N/A	N/A	N/A	NO
	PM	1	492	550	550	58	7.1	1,675**	820	820	328	40.0	9,525	33.0	YES

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

Notes:

¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed.

² Demand is the peak hour demand projected to use the on-ramp.

³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Delays in excess of the desirable 15 minutes are highlighted in **bold**.

⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.

* Upstream freeway is operating at LOS D. Per the City of San Diego’s significance criteria, ramp meter thresholds do not apply as the meter rate will be higher than the most restrictive rate.

** Field observations indicate operations are better than calculated.

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Table 4.15-23. Existing Plus Project Plus Event Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95th Percentile Queue (ft)	
				Existing Without the Project Conditions	Existing Plus Project Plus Event Conditions
1. SR-163 SB off-ramp at Friars Rd/ Ulric St	AM	NBL	1,200	204	204
		NBT		207	207
		NBR		0	0
	PM	NBL	1,200	201	201
		NBT		198	198
		NBR		0	0
2. SR-163 NB off-ramp at Friars Rd	AM	NBR	900	0	0
		SBR	700	0	0
	PM	NBR	900	0	0
		SBR	700	0	0
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	331	346
		SBT		333	347
		SBR		201	405
	PM	SBL	1,200	647	716
		SBT		648	717
		SBR		65	362
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0	0
		SBR	1,300	0	0
	PM	NBR	1,500	0	0
		SBR	1,300	0	0
29. I-8 WB off-ramp at Qualcomm Way/ Camino del Rio N	AM	WBL	3,200	0	0
		WBT		125	135
		WBR		191	230
	PM	WBL	3,200	0	0
		WBT		277	290
		WBR		102	109
30. I-8 EB off-ramp at Qualcomm Way/ Texas St	AM	EBR	900	44	56
	PM	EBR	900	147	149
35. I-8 WB off-ramp at Fairmount Ave/ Alvarado Canyon Rd/Camino del Rio N	AM	WBL	1,000	486	561
		WBT		464	544
		WBR		216	359
	PM	WBL	1,000	556	656
		WBT		336	625
		WBR		243	478
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	276	313
		EBR		283	314
	PM	EBL	4,100	714	773
		EBR		1,229	1,275

Source: Appendix 4.15-1.

4.15.7.1.3 Existing Plus Stadium Event Only Conditions

The proposed new Stadium will replace the existing SDCCU Stadium and is planned to be operational in the near-term, by year 2022; therefore, because the Stadium would be built and operational in the near-term, an Existing Plus Stadium Event Only analysis provides a reasonable assessment of the potential traffic-related impacts associated with the Stadium.

With the replacement Stadium and no additional development on the site, traffic conditions with the new 35,000 capacity Stadium will be similar to or better than those conditions presently existing with operation of the much greater capacity 70,561-seat Stadium. The proposed project would not change the type of events presently being held at the site and, accordingly, no substantive operational change is expected in parking, manual traffic control, or circulation. Moreover, in light of the reduced capacity of the proposed Stadium relative to the existing facility, it is reasonable to conclude that traffic generation generally would be less than existing traffic and, as a result, potential traffic-related impacts on any given day would be less than under existing Stadium event conditions. Traffic operations of the new Stadium generally would be equivalent to the existing Stadium under circumstances in which 35,561 seats in the existing SDCCU Stadium were removed such that only 35,000 seats remained. Existing Stadium operations are discussed in more detail in Section 4.15.3.5.6.

Notwithstanding, while a single event at the new Stadium would result in traffic operations that are the same as or better than existing conditions, the new Stadium may hold more total events in a given year with attendance levels of 20,000 patrons or more. Under Existing Conditions, five high-attendance events (i.e., events with over 20,000 attendees) were held on a weekday during 2018. One of those events (the Beyonce and Jay-Z concert) had 40,885 attendees (which would have been limited to a capacity of 35,000 persons with the new facility). Under the proposed project, the Stadium is expected to hold 11 weekday high-attendance events annually, of which approximately four (4) potentially would be professional sporting (e.g., soccer) games, assuming a professional team is based in San Diego.

Thus, two to six additional Stadium events with 20,000 or more attendees potentially would take place with the new Stadium. While no significance threshold is available for events as these, which are held on a limited number of days throughout the year, the potential *increase* in the number of Stadium events would result in a potentially significant impact. Although implementation of the proposed Stadium TDM and TPMP Programs would help to minimize congestion associated with these additional events, even with these programs in place the impact would remain **potentially significant (TR-1)**.

4.15.7.2 Horizon year (2037) No Project Conditions

This section presents the results of the operations analysis under the Horizon Year (2037) scenario conditions without project-generated traffic. This scenario assumes that SDCCU Stadium would remain in operation with only a negligible level of traffic generated by the site on a typical weekday. This scenario also includes certain planned roadway improvements, as well as new and/or redeveloped land uses in the study area and the greater region that will affect traffic patterns and traffic volumes over the next 15-20 years, as the proposed project builds out. This scenario establishes the baseline against which project impacts will be assessed.

4.15.7.2.1 Horizon Year Street System Improvements

The SANDAG Regional Transportation Plan (RTP) and the 1985 Mission Valley Community Plan identify proposed future roadway improvements that are expected to be built by 2037. The following improvements are included in both plans and are part of the 2037 baseline:

- **SR-163/Friars Road Interchange** – The proposed project will widen Friars Road from Avenida Del Rio west of SR-163 to the Friars Road Eastbound Ramp to Mission Center Road. Intersection improvements also will add lanes on Ulric Street, the SR-163 Southbound and Northbound Ramps, and Frazee Road. New sidewalks and bike lanes also will be provided along Friars Road. Phase I is fully funded, construction presently is underway, and the improvements are expected to be open to traffic in 2019.
- **Qualcomm Way & Friars Road** – As part of the Quarry Falls Specific Plan (i.e., the Civita development), the Civita developer will construct improvements at the Qualcomm Way & Friar’s Road interchange to add additional lanes to all approaches. These improvements are funded by the Civita developer and are a condition of approval of Phase II of the Quarry Falls Specific Plan.

No other changes to the configuration of the study area intersections, roadway segments, freeway segments, or ramps were assumed for this scenario.

4.15.7.2.2 Horizon Year Traffic Forecasts

Baseline traffic forecasts for 2037 were developed using projections from the SANDAG Series 13 Year 2035 travel demand model, which is the best available long-range planning tool for traffic volume forecasting in the San Diego region. The SANDAG model reflects the forecasted population and employment from land uses based on the adopted General Plans of all 18 cities within the county, and the County of San Diego for the unincorporated areas.

Daily traffic volumes generated from the model for Year 2035 were compared to the volumes from the model for Year 2012 to determine an average annual growth rate along each roadway and freeway segment. Calculated growth rates ranged from -0.3% to 2.4%. The existing volumes on all facilities were increased to Year 2037 conditions using either the calculated growth rate or 1.0%, whichever was greater, to provide a conservative analysis of traffic operations. Growth rates on each segment are provided in TIA Appendix D. The resulting turning movement traffic volumes and intersection lane configurations for Horizon Year Without Project Conditions are shown on Figure 4.15-12, Horizon Year Without Project Conditions.

Intersections

The Horizon Year peak hour turning movement volumes and lane configurations from Figure 4.15-12 were input into the Synchro modeling software, and intersection LOS operations were calculated. Table 4.15-24 presents the anticipated intersection operations under Horizon Year Conditions without the project. The corresponding LOS calculation sheets are included in TIA Appendix E. As shown on the table, 28 of the study area intersections are forecasted to operate at LOS D or better under Horizon Year Conditions without the project. The remaining 12 study area intersections, listed below, are expected to operate at LOS E or F during at least one peak hour:

1. SR-163 Southbound Ramps/Ulric Street & Friars Road – LOS E (PM peak hour)
8. River Run Drive & Friars Road – LOS E (PM peak hour)
9. Fenton Parkway & Friars Road – LOS F (PM peak hour)

10. Northside Drive & Friars Road – LOS F (PM peak hour)
13. Mission Village Drive & Friars Road Eastbound Ramps/San Diego Mission Road – LOS F (AM and PM peak hours)
17. I-15 Southbound Ramps & Friars Road – LOS F (AM and PM peak hours)
18. I-15 Northbound Ramps & Friars Road – LOS F (AM and PM peak hours)
19. Rancho Mission Road & Friars Road –LOS E (AM and PM peak hours)
28. Qualcomm Way & Camino del Rio N/Camino de la Reina – LOS E (PM peak hour)
29. Qualcomm Way & I-8 WB Off-Ramp/Camion del Rio N – LOS E (PM peak hour)
31. Texas St & Camino del Rio S – LOS F (AM and PM peak hours)
35. Fairmount Avenue & Camino del Rio North – LOS F (AM and PM peak hours).

Roadway Segments

As previously explained, the LOS analysis of roadway segments is presented for information purposes only and is based on the City of San Diego impact thresholds. Table 4.15-25 illustrates the results of the LOS analysis for the project study area roadway segments under Horizon Year No Project Conditions. As shown in the table, all roadway segments are projected to operate acceptably at LOS D or better in 2037 except for:

9. Friars Road from the I-15 Ramps to Rancho Mission Road (LOS F)
11. Friars Road from Santo Road to Riverdale Street (LOS F)
18. San Diego Mission Road from Rancho Mission Road to Fairmount Avenue (LOS E)
34. Camino del Rio South from Texas Street to Mission City Parkway (LOS F)

Freeway Segments

Table 4.15-26 illustrates the results of the freeway LOS analysis under Horizon Year No Project Conditions. As shown, under this scenario all freeway segments would operate at undesirable levels (LOS E or F) in one or both directions during one or both peak hours.

Ramp Metering

Table 4.15-27 illustrates the results of the analysis conducted for the metered freeway on-ramps in the study area under Horizon Year Without Project Conditions. As shown in Table 4.15-27, under this scenario the following ramps are expected to operate with unacceptable delays during one or both peak hours:

- I-15 NB On-ramp from Friars Road – AM and PM peak hours
- I-15 SB/I-8 Loop On-ramp from Friars Road – PM peak hour
- I-8 EB On-ramp from southbound Fairmount Avenue – PM peak hour

Additionally, at all ramps, on-ramp capacity is not sufficient to accommodate the peak hour demand during metered periods; thus, under this scenario ramp queues would spill back onto the adjacent arterial street(s).

Off-Ramp Queuing

Table 4.15-28 illustrates the results of the off-ramp queuing analysis conducted at the SR-163 and I-15 off-ramps at Friars Road, and the I-8 off-ramps at Qualcomm Way/Texas Street and Fairmount Avenue. As shown, all off-ramp queues can be accommodated by existing storage capacity under Horizon Year without Project Conditions.

Table 4.15-24. Horizon Year (2037) No Project Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Delay	LOS ^{2,3}
			(sec/veh) ¹	
1. SR-163 SB Ramps/Ulric St & Friars Rd*	Signalized	AM	43.9	D
		PM	56.9	E
2. SR-163 NB Ramps & Friars Rd*	Signalized	AM	26.2	C
		PM	33.5	C
3. Frazee Rd & Friars Rd*	Signalized	AM	49.0	D
		PM	43.0	D
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	12.8	B
		PM	14.1	B
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	16.8	B
		PM	36.2	D
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	15.9	B
		PM	24.5	C
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.6	A
		PM	12.8	B
8. River Run Dr & Friars Rd	Signalized	AM	23.0	C
		PM	59.6	E
9. Fenton Pkwy & Friars Rd	Signalized	AM	27.9	C
		PM	92.8	F
10. Northside Dr & Friars Rd*	Signalized	AM	34.9	C
		PM	122.1	F
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A
		PM	-	N/A
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	30.1	C
		PM	52.0	D
13. Mission Village Dr & Friars Rd EB Ramps/San Diego Mission Rd*	Signalized	AM	173.4**	F
		PM	94.0	F
14. Mission Village Dr/Aztec Way & Street 2	Signalized	AM	DNE	N/A
		PM		N/A
15. Street B & Street 2	Signalized	AM	DNE	N/A
		PM		N/A
16. Murphy Creek Rd & Street B/San Diego Mission Rd	Roundabout	AM	DNE	N/A
		PM		N/A
17. I-15 SB Ramps & Friars Rd	Signalized	AM	46.3	D
		PM	67.3	E*** (F)
18. I-15 NB Ramps & Friars Rd	Signalized	AM	83.5	F*** (F)
		PM	67.3	E*** (F)
19. Rancho Mission Rd & Friars Rd	Signalized	AM	30.3	C*** (E)
		PM	72.4	E*** (E)

Table 4.15-24. Horizon Year (2037) No Project Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Delay	LOS ^{2,3}
			(sec/veh) ¹	
20. Santo Rd & Friars Rd	Signalized	AM	38.1	D
		PM	16.8	B
21. Riverdale St & Friars Rd	Signalized	AM	37.4	D
		PM	37.4	D
22. Mission Gorge Rd & Friars Rd	Signalized	AM	44.1	D
		PM	44.5	D
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	19.3	B
		PM	44.4	D
24. Rio San Diego Dr & River Run Dr	AWSC	AM	12.9	B
		PM	25.1	D
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	16.7	B
		PM	27.7	C
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	31.0	C
		PM	30.0	C
27. Fairmount Ave & San Diego Mission Rd/Twain Ave	Signalized	AM	23.5	C
		PM	26.7	C
28. Qualcomm Way & Camino del Rio N/ Camino de la Reina	Signalized	AM	21.3	C
		PM	71.0	E
29. Qualcomm Way & I-8 WB Off-Ramp/ Camino del Rio N	Signalized	AM	20.5	C
		PM	73.6	E
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.2	A
		PM	4.9	A
31. Texas St & Camino del Rio S	Signalized	AM	104.1	F
		PM	85.0	F
32. Ward Rd & Rancho Mission Rd	SSSC	AM	26.9	D
		PM	29.9	D
33. Camino del Rio N & Ward Ave	Signalized	AM	15.4	B
		PM	15.9	B
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	22.0	C
		PM	28.1	C
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	94.7	F
		PM	104.7	F
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	17.7	B
		PM	44.3	D
37. Montezuma Rd & Collwood Blvd	Signalized	AM	46.9	D
		PM	50.0	D
38. Mission Village Dr & Shawn Ave	Signalized	AM	6.2	A
		PM	10.8	B
39. Mission Village Dr & Fermi Ave	Signalized	AM	14.5	B
		PM	11.3	B
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	20.5	C
		PM	24.5	C

Table 4.15-24. Horizon Year (2037) No Project Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Delay	LOS ^{2,3}
			(sec/veh) ¹	
41. Ruffin Rd & Aero Dr	Signalized	AM	35.7	D
		PM	52.6	D
42. Gramercy Dr & Mobley St	Signalized	AM	7.1	A
		PM	6.0	A
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	9.1	A
		PM	11.7	B

Source: Appendix 4.15-1.

Notes:

- ¹ Whole intersection weighted average stopped delay reported for the signalized and all-way stop control (AWSC) intersections. Worst movement delay reported for the side-street stop-control (SSSC) intersection.
- ² LOS calculations performed using the Highway Capacity Manual 6th Edition (HCM 6) method.
- ³ LOS E or F operations highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way & Friars Road intersection is only used during Stadium events.
- * Due to limitations of the HCM 6 method, LOS calculations performed using the HCM 2000 method.
- ** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- *** Ramp metering during the peak hours under existing conditions results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation. This additional delay is estimated to result in operations as shown in parentheses.

Table 4.15-25. Horizon Year (2037) No Project Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	ADT	V/C ²	LOS ^{3,4}
ID	Extent (from/to)						
Friars Rd							
1	Frazee Rd	Mission Center Rd	8P	52,603	52,600	0.66	C
2	Mission Center Rd	Qualcomm Way	6E	106,667	48,594	0.61	C
3	Qualcomm Way	River Run Dr	6E	80,000	42,681	0.53	C
4	River Run Dr	Fenton Pkwy	6P	60,000	43,198	0.72	C
5	Fenton Pkwy	Northside Dr	6P	60,000	45,271	0.75	C
6	Northside Dr	Stadium Way	6E	80,000	54,457	0.68	C
7	Stadium Way	Mission Village Dr	6E	80,000	54,457	0.68	C
8	Mission Village Dr	I-15 Ramps	6E	80,000	52,850	0.66	C
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	72,970	1.04	F
10	Rancho Mission Rd	Santo Rd	7P	70,000	61,340	0.88	D
11	Santo Rd	Riverdale St	6P	60,000	60,170	1.00	F
12	Riverdale St	Mission Gorge Rd	6P	60,000	54,675	0.91	D
Qualcomm Way							
13	Friars Rd	Rio San Diego Dr	6M	50,000	22,813	0.46	B
Rio San Diego Dr							
14	Qualcomm Way	River Run Dr	4M	40,000	15,876	0.40	B
15	River Run Dr	Fenton Pkwy	4C/M	30,000	13,246	0.44	B
Fenton Pkwy							
16	Rio San Diego Dr/Fenton Marketplace Dwy	Northside Dr	4M	40,000	6,240	0.16	A

Table 4.15-25. Horizon Year (2037) No Project Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	ADT	V/C ²	LOS ^{3,4}
ID	Extent (from/to)						
San Diego Mission Rd							
17	Mission Village Dr	Rancho Mission Rd	4C w/o CLTL	15,000	9,254	0.62	C
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	13,240	0.88	E
Rancho Mission Rd							
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	18,681	0.83	D
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	11,576	0.77	D
21	West of Ward Rd		2C	10,000	1,824	0.18	A
Ward Rd							
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	12,047	0.80	D
Fairmount Ave							
23	San Diego Mission Rd/ Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	8,719	0.29	A
Mission Village Dr							
24	Ruffin Rd	Shawn Ave	4C	30,000	18,344	0.61	C
25	Shawn Ave	Ronda Ave	4C	30,000	14,912	0.50	C
26	Ronda Ave	Friars Rd	4M	40,000	17,204	0.43	B
Ruffin Rd							
27	Aero Dr	Mission Village Dr	4C	30,000	16,451	0.55	C
Gramercy Dr							
28	Mobley St	Ruffin Rd	4M	40,000	9,456	0.24	A
Aero Dr							
29	Sandrock Rd	Ruffin Rd	4M	40,000	24,167	0.60	C
30	Ruffin Rd	Daley Center Dr	4M	40,000	31,494	0.79	D
Camino del Rio N							
31	Qualcomm Way	Mission City Pkwy	4C	30,000	11,608	0.39	B
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	10,318	0.69	D
33	Ward Rd	Fairmount Ave	4C	30,000	14,706	0.49	C
Camino del Rio S							
34	Texas St	Mission City Pkwy	2C	10,000	13,888	1.39	F

Source: Appendix 4.15-1

Notes:

¹ 2C = 2-lane collector

2C w/CLTL = 2-lane collector with center left-turn lane

3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane

4C w/o CLTL = 4-lane collector without center left-turn lane

4C = 4-lane collector

4M = 4-lane major arterial

6M = 6-lane major arterial

6P = 6-lane primary arterial

7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add capacity of 5,000 for LOS A, 7,500 for LOS B, and 10,000 for LOS C, D, and E per the Mission Valley Community Plan Update

8P = 8-lane prime arterial

6E = 6-lane expressway

- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using City of San Diego Traffic Impact Study Manual (1998)
- ⁴ Unacceptable ADT volumes per segment and LOS highlighted in **bold**.

Table 4.15-26. Horizon Year (2037) No Project Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}	
					AM	PM	AM	PM	AM	PM
State Route 163										
1	6 th Ave to I-8	NB	3M+1A	6,600	6,350	6,892	0.96	1.04	E	F(0)
		SB	3M+2A	7,800	10,832	9,690	1.39	1.24	F(2)	F(0)
2	I-8 to Friars Rd	NB	2A	2,400	1,958	2,125	0.82	0.89	D	D
		SB	4M+2A	9,600	9,908	9,049	1.03	0.94	F(0)	E* (F)
3	Friars Rd to Mesa College Dr ⁵	NB	5M	9,000	11,141	8,973	1.24	1.00	F(0)	E
		SB	4M	7,200	7,446	7,713	1.03	1.07	F(0)	F(0)* (F)
4	Mesa College Dr to I-805	NB	4M+2A	9,600	9,392	8,718	0.98	0.91	E	D
		SB	4M+1A	8,400	8,551	7,471	1.02	0.89	F(0)	D*
Interstate 805										
5	Madison Ave to I-8	NB	4M+1A	8,400	10,241	5,976	1.22	0.71	F(0)	C
		SB	6M	10,800	5,454	11,453	0.50	1.06	B	F(0)* (F)
6	I-8 to Murray Ridge Rd/Phyllis Pl	NB	5M	9,000	11,876	6,885	1.32	0.77	F(1)	C
		SB	4M+2A	9,600	6,216	11,119	0.65	1.16	C	F(0)
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/Kearny Villa Rd	NB	5M	9,000	11,865	6,854	1.32	0.76	F(1)	C
		SB	5M	9,000	5,975	10,851	0.66	1.21	C	F(0)
8	Mesa College Dr/Kearny Villa Rd to SR-163	NB	5M	9,000	9,896	5,830	1.10	0.65	F(0)* (F)	C
		SB	4M	7,200	4,290	6,701	0.60	0.93	B	E* (F)
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	7,077	5,952	0.84	0.71	D* (F)	C
		SB	4M+2A	9,600	6,693	9,068	0.70	0.94	C	E* (F)
Interstate 15										
10	Adams Ave to I-8	NB	3M+2A	7,800	7,624	8,470	0.98	1.09	E	F(0)
		SB	5M	9,000	6,077	10,152	0.68	1.13	C	F(0)
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,381	2,140	0.58	0.89	B	D
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	4,390	5,796	1.22	1.61	F(0)	F(3)
	Friars Rd Direct Ramp to I-15 SB	SB	1A	1,200	751	1,104	0.63	0.92	C	E
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	9,691	7,115	1.15	0.85	F(0)	D
		SB	5M+1A	10,200	8,245	11,344	0.81	1.11	D	F(0)

Table 4.15-26. Horizon Year (2037) No Project Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}	
					AM	PM	AM	PM	AM	PM
13	Aero Dr to Balboa Ave/Tierrasanta Blvd	NB	4M+1A	8,400	10,881	8,205	1.30	0.98	F(1)	E
		SB	4M+1A	8,400	8,446	10,169	1.01	1.21	F(0)	F(0)
Interstate 8										
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	7,276	9,089	0.87	1.08	D	F(0)
		WB	5M	9,000	8,564	7,482	0.95	0.83	E	D
15	Taylor St to Hotel Cir	EB	4M	7,200	7,129	9,532	0.99	1.32	E	F(1)
		WB	4M+1A	8,400	9,871	8,430	1.18	1.00	F(0)	F(0)
16	Hotel Cir to SR-163	EB	4M+2A	9,600	8,841	10,972	0.92	1.14	E	F(0)
		WB	5M	9,000	10,030	8,245	1.11	0.92	F(0)	D
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,770	7,084	0.52	0.98	B	E* (F)
		WB	3M+2A	7,800	10,364	9,544	1.33	1.22	F(1)	F(0)
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	6,280	11,826	0.75	1.41	C	F(2)
		WB	4M+1A	8,400	10,786	9,995	1.28	1.19	F(1)	F(0)
19	Texas St to I-805	EB	4M	7,200	3,980	7,765	0.55	1.08	B	F(0)
		WB	4M	7,200	7,554	5,996	1.05	0.83	F(0)	D
20	I-805 to I-15	EB	4M+2A	9,600	7,374	12,462	0.77	1.30	C	F(1)
		WB	4M+2A	9,600	12,644	10,240	1.32	1.07	F(1)	F(0)
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	7,378	11,546	0.77	1.20	C	F(0)
		WB	4M+2A	9,600	8,956	6,605	0.93	0.69	E* (F)	C
22	Fairmount Ave to Waring Rd	EB	5M	9,000	8,018	12,782	0.89	1.42	D	F(2)
		WB	6M	10,800	12,116	9,572	1.12	0.89	F(0)	D
23	Waring Rd to College Ave	EB	5M	9,000	7,722	12,056	0.86	1.34	D	F(1)
		WB	5M	9,000	11,307	9,051	1.26	1.01	F(1)	F(0)

Source: Appendix 4.15-1

Notes:

- ¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane
M = mainline lane
A = auxiliary lane
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using City of San Diego Traffic Impact Study Manual (1998)
- ⁴ Unacceptable V/C and LOS highlighted in **bold**.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

- ⁵ No data available from Genesee Ave to Mesa College Dr – assumed equivalent to the segment from Friars Rd to Genesee Ave
- * Traffic data indicate operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.

Table 4.15-27. Horizon Year (2037) No Project Conditions Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)
				Mixed Flow & HOV	Mixed Flow only			
I-15 NB – Friars Rd On-Ramp	AM	2	1,450	2,345	1,983	533	22.0	7,725
	PM	2	888	1,503	1,369	481	32.5	6,975
I-15 SB / I-8 – Friars Rd Loop On-Ramp	AM	1	N/A	914	914	N/A	N/A	N/A
	PM	1	660	929	929	269	24.5	7,800
I-15 SB – Friars Rd Direct On-Ramp	AM	1	N/A	751	751	N/A	N/A	N/A
	PM	1	996	1,104	1,104	108	6.5	3,150
I-8 EB – SB Fairmount Ave	AM	1	N/A	302	302	N/A	N/A	N/A
	PM	1	492	664	664	172	21.0	5,000*

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

Notes:

- ¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed.
- ² Demand is the peak hour demand projected to use the on-ramp.
- ³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.
- ⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Undesirable delay in excess of 15 minutes is highlighted in **bold**.
- ⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.
- * Field observations of existing conditions indicate operations may be better than calculated.

Table 4.15-28. Horizon Year Conditions Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95th Percentile Queue (ft)
				Horizon Year Conditions
1. SR-163 SB off-ramp at Friars Rd/Ulric St	AM	NBL	1,200	211
		NBT		104
		NBR		487
	PM	NBL	1,200	263
		NBT		62
		NBR		485
2. SR-163 NB off-ramp at Friars Rd	AM	SBL	700	444
		SBT		0
		SBR		305
	PM	SBL	700	418
		SBT		0
		SBR		447
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	460
		SBT		449
		SBR		257
	PM	SBL	1,200	842
		SBT		845
		SBR		80
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0
		SBR	1,300	0
	PM	NBR	1,500	0
		SBR	1,300	0
29. I-8 WB off-ramp at Qualcomm Way/ Camino del Rio N	AM	WBL	3,200	0
		WBT		221
		WBR		740
	PM	WBL	3,200	0
		WBT		394
		WBR		545
30. I-8 EB off-ramp at Qualcomm Way/ Texas St	AM	EBR	900	169
	PM	EBR	900	274
35. I-8 WB off-ramp at Fairmount Ave/ Alvarado Canyon Rd/Camino del Rio N	AM	WBL	1,000	627
		WBT		607
		WBR		269
	PM	WBL	1,000	714
		WBT		464
		WBR		308
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	484
		EBR		493
	PM	EBL	4,100	1,099
		EBR		1,659

Source: Appendix 4.15-1.

4.15.7.3 Horizon year (2037) Plus Project Conditions

This section presents the results of the operations analysis under the Horizon Year (2037) scenario with buildout of the proposed project, both under conditions without and with a Stadium Event, which is modeled as (i.e., assumed to be) a sold-out event.

4.15.7.3.1 Horizon Year (2037) Plus Project – Without Stadium Event Conditions

Under the Horizon Year Plus Project Without Stadium Event scenario, project traffic assigned to the study area intersections and roadway segments was added to Horizon Year (2037) No Project traffic volumes. The Horizon Year Plus Project Conditions roadway network is the same network assumed under the Horizon Year with Project scenario, except for the addition of the site access points and immediately adjacent project features that are discussed in Section 4.15.6.4. Separate analyses of intersections, roadway segments, freeway segments, ramp metering, and ramp queuing, are presented below.

Intersections

Turning movement traffic volumes and intersection lane configurations for the Horizon Year (2037) Plus Project Conditions are shown on Figure 4.15-13. This data was used to calculate operations under this scenario. Table 4.15-29 presents the analysis results, with intersection operating conditions and resulting significant traffic impacts shown under the Horizon Year Plus Project Conditions; a comparison of the projected levels of service at each study area intersection under this scenario to the Horizon Year Without Stadium Event Conditions also is provided. The corresponding LOS calculation sheets are included in TIA Appendix E.

As shown in Table 4.15-29, after applying the applicable significance impact criteria, the proposed project would result in a significant cumulative impact at the following 13 locations:

1. **SR-163 Southbound Ramps/Ulric Street & Friars Road** – Project traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 5.2 seconds. Therefore, impacts would be **potentially significant (TR-2)**.
8. **River Run Drive & Friars Road** – Project traffic would degrade LOS E operations to LOS F in the PM peak hour and would increase delay by 35.3 seconds. Therefore, impacts would be **potentially significant (TR-3)**.
9. **Fenton Pkwy & Friars Road**– Project traffic would exacerbate LOS F operations in the PM peak hour and would increase delay by 33.8 seconds. Therefore, impacts would be **potentially significant (TR-4)**.
10. **Northside Drive & Friars Road** – Project traffic would exacerbate LOS F operations in the PM peak hour and would increase delay by 6.5 seconds. Therefore, impacts would be **potentially significant (TR-5)**.
17. **I-15 SB Ramps & Friars Road** – Project traffic would degrade LOS D operations to LOS F operations in the AM peak hour, would degrade LOS E operations to LOS F in the PM peak hour, and would increase delay by 78.3 and 33.3 seconds, respectively. Therefore, impacts would be **potentially significant (TR-6)**.
18. **I-15 NB Ramps & Friars Road** – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 54.1 and 141.1 seconds, respectively. Therefore, impacts would be **potentially significant (TR-7)**.
19. **Rancho Mission Road & Friars Road**– Project traffic would degrade LOS E operations to LOS F in the AM and PM peak hours and would increase delay by 3.5 and 10.8 seconds, respectively. Therefore, impacts would be **potentially significant (TR-8)**.

27. **Fairmount Avenue & San Diego Mission Road/Twain Avenue** – Project traffic would degrade LOS C operations to LOS F in the AM, would degrade LOS C operations to LOS E in the PM peak hour, and would increase delay by 77.6 and 46.5 seconds, respectively. Therefore, impacts would be **potentially significant (TR-9)**.
31. **Texas Street & Camino del Rio N** – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 7.6 and 18.3 seconds, respectively. Therefore, impacts would be **potentially significant (TR-10)**.
32. **Ward Road & Rancho Mission Road** – Project traffic would degrade LOS D to LOS F operations in the AM and PM peak hours and would increase delay by 104.2 and 295.3 seconds, respectively. The addition of project traffic also would satisfy the peak hour signal warrant per the California MUTCD. Therefore, impacts would be **potentially significant (TR-11)**.
34. **Fairmount Avenue & Mission Gorge Road** – Project traffic would degrade LOS C to LOS E operations in the PM peak hour and increase delay by 34.0 seconds. Therefore, impacts would be **potentially significant (TR-12)**.
35. **Fairmount Avenue & Camino del Rio North** – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and increase delay by 27.8 and over 71.8 seconds, respectively. Therefore, impacts would be **potentially significant (TR-13)**.
41. **Ruffin Road & Aero Drive** – Project traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 10.6 seconds. Therefore, impacts would be **potentially significant (TR-14)**.

For information purposes, applying the City of San Diego impact criteria, the same 13 intersections would be significantly impacted, as would intersection #29, Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio North.

Roadway Segments

The roadway segment LOS analysis was conducted using the City of San Diego impact thresholds and is presented for information purposes only. Project traffic traversing the study area roadway segments was added to Horizon Year 2037 Without Project Conditions peak hour volumes. Table 4.15-30 illustrates the LOS analysis for the study area roadway segments under Horizon Year Plus Project Conditions and compares the projected levels of service at each segment in 2037 to conditions without the project. Based on the analysis, the following segments would exceed the first step of the City thresholds and be subject to the further analysis before identifying as significantly impacted:

6. **Friars Road from Northside Drive to Stadium Way (Street A)** – Project traffic would degrade LOS C operations to LOS F and would result in a V/C increase that exceeds the maximum threshold.
8. **Friars Road from Mission Village Drive to the I-15 Ramps** – Project traffic would degrade LOS C operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.
9. **Friars Road from the I-15 Ramp to Rancho Mission Road** – Project traffic would exacerbate LOS F operations and would result in a V/C increase that exceeds the maximum threshold.
11. **Friars Road from Santo Road to Riverdale Street** – Project traffic would exacerbate LOS F operations and would result in a V/C increase that exceeds the maximum threshold.
12. **Friars Road from Riverdale Street to Mission Gorge Road** – Project traffic would degrade LOS D operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.
17. **San Diego Mission Road from Mission Village Drive/Street F to Rancho Mission Road** – Project traffic would degrade LOS C operations to LOS F and would result in a V/C increase that exceeds the maximum threshold.
18. **San Diego Mission Road from Rancho Mission Road to Fairmount Avenue** – Project traffic would degrade LOS E operations to LOS F and would result in a V/C increase that exceeds the maximum threshold.

19. Rancho Mission Road from Friars Road to San Diego Mission Road – Project traffic would degrade LOS D operations to LOS F and would result in a V/C increase that exceeds the maximum threshold.
20. Rancho Mission Road from San Diego Mission Road to Ward Road – Project traffic would degrade LOS D operations to LOS E and would result in a V/C increase that exceeds the maximum threshold.
22. Ward Road from Rancho Mission Road to Camino del Rio North – Project traffic would degrade LOS D operations to LOS F and would result in a V/C increase that exceeds the maximum threshold.
34. Camino del Rio South from Texas Street to Mission City Parkway (LOS F)

This exceedance triggers the second part of the roadway analysis, which evaluates intersection LOS on either side of the segment, the arterial speed-based LOS on the segment, and the existing Community Plan street classification. Appendix 4.15-1, Table 43 summarizes the results of the second part of the roadway analysis assuming, hypothetically, implementation of the intersection improvements described above.

Freeway Segments

Table 4.15-31 illustrates the results of the freeway operations analysis under Horizon Year (2037) Plus Project conditions. As shown on the table, all freeways segments are expected to operate at undesirable levels (LOS E or F) under without and with project conditions. The addition of project trips will further exacerbate operations at these locations. Based on the applicable impact criteria, the proposed project would result in significant cumulative impacts on the following freeway segments:

10. **I-15 from Adams Avenue to I-8 (NB, AM and PM peak hours; SB, PM peak hour). Potentially significant (TR-15).**
11. **I-15 from I-8 to Friars Road (NB auxiliary lanes, PM peak hour; SB auxiliary lanes to I-8, AM and PM peak hours; SB auxiliary lane to I-15 SB, PM peak hour). Potentially significant (TR-16).**
12. **I-15 from Friars Road to Aero Drive (NB, AM peak hour; SB, PM peak hour). Potentially significant (TR-17).**
13. **I-15 from Aero Drive to Balboa Avenue/Tierrasanta Boulevard (both directions, AM and PM peak hours). Potentially significant (TR-18).**
14. **I-8 from Morena Boulevard to Taylor Street (EB, PM peak hour). Potentially significant (TR-19).**
- 15-16. **I-8 from Taylor Street to SR-163 (EB, AM and PM peak hours; WB, PM peak hour). XXX. Therefore, impacts would be potentially significant (TR-20).**
18. **I-8 from SR-163 to Texas Street (WB, PM peak hour). Potentially significant (TR-21).**
20. **I-8 from I-805 to I-15 (EB, PM peak hour; WB, AM and PM peak hours). Potentially significant (TR-22).**
- 22-23. **I-8 from Fairmount Avenue to College Avenue (EB, PM peak hour; WB, AM peak hour). Potentially significant (TR-23).**

For information purposes, it is noted that the locations that would exceed the City of San Diego significance criteria include those noted above, as well as the following four additional locations:

1. SR-163 from Washington Street to I-8 (NB, PM peak hour; SB, PM peak hour)
- 15-17. I-8 from Taylor Street to Mission Center Road (WB, AM peak hour)
- 18-19. I-8 from Mission Center Road to Texas Street (EB, PM peak hour; WB, AM peak hour)
21. I-8 from I-15 to Waring Road (EB, PM peak hour)

Ramp Metering

Table 4.15-32 illustrates the results of the ramp metering analysis conducted at the metered freeway on-ramps in the study area under Horizon Year Plus Project Conditions. As shown in Table 32, under this scenario, all ramps are expected to operate with unacceptable delays during one or both peak hours. Additionally, at all ramps, on-ramp capacity is not sufficient to accommodate the peak hour demand during metered peak periods; thus, ramp queues are expected to spill back onto the arterial streets.

Based on the applicable significance criteria, the proposed project would increase the delay by more than two (2) minutes, when compared to Horizon Year conditions without the project, at the following on-ramps operating with delays above 15 minutes and, therefore, the proposed project would result in a significant cumulative impact at the following four ramp locations:

- **I-15 NB On-ramp from Friars Road** – operates at 22.0 minutes of delay in the AM peak hour and 32.5 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 9.6 minutes to a total delay of 31.2 minutes in the AM peak hour and 31.6 minutes to a total of 63.7 minutes in the PM peak hour. Impacts would be **potentially significant (TR-24)**.
- **I-15 SB/I-8 Loop On-ramp from Friars Road** – operates at 24.5 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 17.2 minutes to a total delay of 41.7 minutes. Impacts would be **potentially significant (TR-25)**.
- **I-15 SB Direct On-ramp from Friars Road** – operates at 6.5 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 23.5 minutes to a total delay of 30.0 minutes. Impacts would be **potentially significant (TR-26)**.
- **I-8 EB On-ramp from SB Fairmount Avenue** – operates at 21.0 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 28.7 minutes to a total delay of 49.7 minutes. Impacts would be **potentially significant (TR-27)**.

For informational purposes, it is noted that the locations that would exceed the City of San Diego significance criteria are the same as those noted above.

Off-Ramp Queuing

The off-ramp queuing analysis was conducted using the Caltrans impact thresholds. Table 4.15-33 illustrates the results of the off-ramp queuing analysis conducted at the SR-163 and I-15 off-ramps at Friars Road, and the I-8 off-ramps at Qualcomm Way/Texas Street and Fairmount Avenue. As shown on the table, all off-ramp queues can be accommodated by the existing storage capacity under Horizon Year Plus Project Conditions and, therefore, impacts would be **less than significant**.

Table 4.15-29. Horizon Year (2037) Plus Project Without Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
1. SR-163 SB Ramps/Ulric St & Friars Rd*	Signalized	AM	45.2	D	45.3	D	1.4	NO
		PM	54.5	D	62.1	E	5.2	YES
2. SR-163 NB Ramps & Friars Rd*	Signalized	AM	19.8	B	29.5	C	3.3	NO
		PM	32.4	C	36.2	D	2.7	NO
3. Frazee Rd & Friars Rd*	Signalized	AM	45.2	D	50.6	D	1.6	NO
		PM	44.8	D	46.9	D	3.9	NO
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	12.8	B	13.3	B	0.5	NO
		PM	14.1	B	15.0	B	0.9	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	16.8	B	16.7	B	-0.1	NO
		PM	36.2	D	38.1	D	1.9	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	15.9	B	17.0	B	1.1	NO
		PM	24.5	C	24.9	C	0.4	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.6	A	6.2	A	0.6	NO
		PM	12.8	B	13.3	B	0.5	NO
8. River Run Dr & Friars Rd	Signalized	AM	23.0	C	25.0	C	2.0	NO
		PM	59.6	E	94.9	F	35.3	YES
9. Fenton Pkwy & Friars Rd	Signalized	AM	27.9	C	22.1	C	-5.8	NO
		PM	92.8	F	126.6	F	33.8	YES
10. Northside Dr & Friars Rd*	Signalized	AM	34.9	C	34.8	C	-0.1	NO
		PM	122.1	F	128.6	F	6.5	YES
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A	10.4	B	N/A	NO
		PM	-	N/A	22.9	C	N/A	NO
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	30.1	C	28.8	C	-1.3	NO
		PM	52.0	D	33.6	C	-18.4	NO
13. Mission Village Dr /Street D & Friars Rd EB Ramps*	Signalized	AM	173.4**	F	17.0	B	-156.4	NO
		PM	94.0	F	30.0	C	-64.0	NO

Table 4.15-29. Horizon Year (2037) Plus Project Without Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
14. Street D & Street 4	Signalized	AM	DNE	N/A	23.7	C	N/A	NO
		PM		N/A	40.9	D	N/A	NO
15. Street F & Street 4	Signalized	AM	DNE	N/A	27.0	C	N/A	NO
		PM		N/A	35.1	D	N/A	NO
16. Street F & Street 6/San Diego Mission Rd	Roundabout	AM	DNE	N/A	8.1	A	N/A	NO
		PM		N/A	9.3	A	N/A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	46.3	D	124.6	F	78.3	YES
		PM	67.3	E*** (F)	100.6	F (F)	33.3	YES
18. I-15 NB Ramps & Friars Rd	Signalized	AM	83.5	F*** (F)	137.6	F (F)	54.1	YES
		PM	67.3	E*** (F)	208.4**	F (F)	141.1	YES
19. Rancho Mission Rd & Friars Rd	Signalized	AM	30.3	C*** (E)	33.8	C (F)	3.5	YES*****
		PM	72.4	E*** (E)	83.2	F (F)	10.8	YES
20. Santo Rd & Friars Rd	Signalized	AM	38.1	D	47.1	D	9.0	NO
		PM	16.8	B	19.0	B	2.2	NO
21. Riverdale St & Friars Rd	Signalized	AM	37.4	D	43.8	D	6.4	NO
		PM	37.4	D	43.8	D	6.4	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	44.1	D	46.5	D	2.4	NO
		PM	44.5	D	54.2	D	9.7	NO
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	19.3	B	22.1	C	2.8	NO
		PM	44.4	D	49.6	D	5.2	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	12.9	B	13.6	B	0.7	NO
		PM	25.1	D	30.8	D	5.7	NO

Table 4.15-29. Horizon Year (2037) Plus Project Without Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	16.7	B	17.0	B	0.3	NO
		PM	27.7	C	28.7	C	1.0	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	31.0	C	46.0	D	15.0	NO
		PM	30.0	C	48.4	D	18.4	NO
27. Fairmount Ave & San Diego Mission Rd/ Twain Ave	Signalized	AM	23.5	C	101.1	F	77.6	YES
		PM	26.7	C	73.2	E	46.5	YES
28. Qualcomm Way & Camino del Rio N/ Camino de la Reina	Signalized	AM	21.3	C	21.8	C	0.5	NO
		PM	71.0	E	71.0	E	0.0	NO
29. Qualcomm Way & I-8 WB Off-Ramp/ Camino del Rio N	Signalized	AM	20.5	C	21.8	C	1.3	NO
		PM	73.6	E	77.2	E	3.6	NO****
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.2	A	1.2	A	0.0	NO
		PM	4.9	A	4.9	A	0.0	NO
31. Texas St & Camino del Rio S	Signalized	AM	104.1	F	111.7	F	7.6	YES
		PM	85.0	F	103.3	F	18.3	YES
32. Ward Rd & Rancho Mission Rd	SSSC	AM	26.9	D	131.2	F	104.3	YES
		PM	29.9	D	321.1**	F	291.2	YES
33. Camino del Rio N & Ward Ave	Signalized	AM	15.4	B	25.3	C	9.9	NO
		PM	15.9	B	29.6	C	13.7	NO
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	22.0	C	27.6	C	5.6	NO
		PM	28.1	C	62.1	E	34.0	YES
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	94.7	F	122.5	F	27.8	YES
		PM	104.7	F	176.5**	F	71.8	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	17.7	B	20.5	C	2.8	NO
		PM	44.3	D	52.7	D	8.4	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	46.9	D	49.2	D	2.3	NO
		PM	50.0	D	53.5	D	3.5	NO

Table 4.15-29. Horizon Year (2037) Plus Project Without Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
38. Mission Village Dr & Shawn Ave	Signalized	AM	6.2	A	6.4	A	0.2	NO
		PM	10.8	B	13.6	B	2.8	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	14.5	B	15.5	B	1.0	NO
		PM	11.3	B	13.9	B	2.6	NO
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	20.5	C	32.6	C	12.1	NO
		PM	24.5	C	36.4	D	11.9	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	35.7	D	36.8	D	1.1	NO
		PM	52.6	D	63.2	E	10.6	YES
42. Gramercy Dr & Mobley St	Signalized	AM	7.1	A	7.2	A	0.1	NO
		PM	6.0	A	6.1	A	0.1	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	9.1	A	9.3	A	0.2	NO
		PM	11.7	B	11.9	B	0.2	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the *Highway Capacity Manual (HCM)* method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way & Friars Road intersection is only used during Stadium events.
- * Existing or proposed signal phasing prevents the use of *HCM 6* at this intersection. The *HCM 2000* method was applied instead.
- ** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- *** Ramp metering during the peak hours under existing conditions results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation. This additional delay is estimated to result in operations as shown in parentheses.
- **** Intersection would exceed the City of San Diego impact threshold.
- **** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would cause a significant impact.

Table 4.15-30. Horizon Year Plus Project Without Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year Without the Project Conditions			Horizon Year Plus Project Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
Friars Rd												
1	Frazee Rd	Mission Center Rd	8P	80,000	52,600	0.66	C	56,839	0.71	C	0.05	NO
2	Mission Center Rd	Qualcomm Way	6E	80,000	48,594	0.61	B	54,081	0.68	C	0.07	NO
3	Qualcomm Way	River Run Dr	6E	80,000	42,681	0.53	C	50,015	0.63	C	0.10	NO
4	River Run Dr	Fenton Pkwy	6P	60,000	43,198	0.72	C	50,820	0.85	D	0.13	NO
5	Fenton Pkwy	Northside Dr	6P	60,000	45,271	0.75	C	52,875	0.88	D	0.13	NO
6	Northside Dr	Stadium Way (Street A)	6E – 6P with project	80,000 – 60,000	54,457	0.68	C	62,520	1.04	F	0.36	YES
7	Stadium Way (Street A)	Mission Village Dr	6E	80,000	54,457	0.68	C	66,403	0.83	D	0.15	NO
8	Mission Village Dr	I-15 Ramps	6E	80,000	52,850	0.66	C	72,125	0.90	E	0.24	YES
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	72,970	1.04	F	78,407	1.12	F	0.08	YES
10	Rancho Mission Rd	Santo Rd	7P	70,000	61,340	0.88	D	63,700	0.91	D	0.03	NO
11	Santo Rd	Riverdale St	6P	60,000	60,170	1.00	F	61,873	1.03	F	0.03	YES
12	Riverdale St	Mission Gorge Rd	6P	60,000	54,675	0.91	D	56,252	0.94	E	0.03	YES
Qualcomm Way												
13	Friars Rd	Rio San Diego Dr	6M	50,000	22,813	0.46	B	24,047	0.48	B	0.02	NO
Rio San Diego Dr												
14	Qualcomm Way	River Run Dr	4M	40,000	15,876	0.40	B	16,673	0.42	B	0.02	NO
15	River Run Dr	Fenton Pkwy	4C/M	30,000	13,246	0.44	B	14,120	0.47	C	0.03	NO
Fenton Pkwy												
16	Rio San Diego Dr/ Fenton Marketplace Dwy	Northside Dr	4M	40,000	6,240	0.16	A	7,434	0.19	A	0.03	NO

Table 4.15-30. Horizon Year Plus Project Without Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year Without the Project Conditions			Horizon Year Plus Project Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
San Diego Mission Rd												
17	Mission Village Dr/Street F	Rancho Mission Rd	4C w/o CLTL	15,000	9,254	0.62	C	15,925	1.06	F	0.44	YES
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	13,240	0.88	E	18,294	1.22	F	0.34	YES
Rancho Mission Rd												
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	18,681	0.83	D	22,983	1.02	F	0.19	YES
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	11,576	0.77	D	13,301	0.89	E	0.12	YES
21	West of Ward Rd		2C	10,000	1,824	0.18	A	6,275	0.63	C	0.45	NO
Ward Rd												
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	12,047	0.80	D	16,741	1.12	F	0.32	YES
Fairmount Ave												
23	San Diego Mission Rd/ Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	8,719	0.29	A	12,174	0.41	B	0.12	NO
Mission Village Dr												
24	Ruffin Rd	Shawn Ave	4C	30,000	18,344	0.61	C	22,623	0.75	D	0.14	NO
25	Shawn Ave	Ronda Ave	4C	30,000	14,912	0.50	C	19,399	0.65	C	0.15	NO
26	Ronda Ave	Friars Rd	4M	40,000	17,204	0.43	B	21,709	0.54	C	0.11	NO
Ruffin Rd												
27	Aero Dr	Mission Village Dr	4C	30,000	16,451	0.55	C	19,086	0.64	C	0.09	NO
Gramercy Dr												
28	Mobley St	Ruffin Rd	4M	40,000	9,456	0.24	A	10,812	0.27	A	0.03	NO

Table 4.15-30. Horizon Year Plus Project Without Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year Without the Project Conditions			Horizon Year Plus Project Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
Aero Dr												
29	Sandrock Rd	Ruffin Rd	4M	40,000	24,167	0.60	C	25,505	0.64	C	0.04	NO
30	Ruffin Rd	Daley Center Dr	4M	40,000	31,494	0.79	D	32,625	0.82	D	0.03	NO
Camino del Rio N												
31	Qualcomm Way	Mission City Pkwy	4C	30,000	11,608	0.39	B	12,063	0.40	B	0.01	NO
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	10,318	0.69	D	11,237	0.75	D	0.06	NO
33	Ward Rd	Fairmount Ave	4C	30,000	14,706	0.49	C	18,940	0.63	C	0.14	NO
Camino del Rio S												
34	Texas St	Mission City Pkwy	2C	10,000	13,888	1.39	F	14,109	1.41	F	0.02	YES

Source: Appendix 4.15-1

Notes:

- ¹ 2C w/CLTL = 2-lane collector with center left-turn lane
 3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane;
 4C w/o CLTL = 4-lane collector without center left-turn lane
 4C = 4-lane collector
 4M = 4-lane major arterial
 6M = 6-lane major arterial
 6P = 6-lane primary arterial
 7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add 5,000 ADT for LOS A, 7,500 ADT for LOS B, and 10,000 ADT for LOS C, D, and E per the Mission Valley Community Plan Update
 8P = 8-lane primary arterial
 6E = 6-lane expressway
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)* and the *Mission Valley Community Plan Update (2019)*
- ⁴ Unacceptable ADT volumes per segment and LOS highlighted in **bold**.

Table 4.15-31. Horizon Year Plus Project Without Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year Without the Project Conditions						Horizon Year Plus Project Conditions						V/C Delta		Significant Impact?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
State Route 163																				
1	6 th Ave to I-8	NB	3M+1A	6,600	6,350	6,892	0.96	1.04	E	F(0)	6,407	6,942	0.97	1.05	E	F(0)	0.01	0.01	NO	NO*
		SB	3M+2A	7,800	10,832	9,690	1.39	1.24	F(2)	F(0)	10,868	9,757	1.39	1.25	F(2)	F(1)	0.00	0.01	NO	NO*
2	I-8 to Friars Rd	NB	2A	2,400	1,958	2,125	0.82	0.89	D	D	2,083	2,206	0.87	0.92	D	D	0.05	0.03	NO	NO
		SB	4M+2A	9,600	9,908	9,049	1.03	0.94	F(0)	E** (F)	9,944	9,122	1.04	0.95	F(0)	E (F)	0.00	0.01	NO	NO
3	Friars Rd to Mesa College Dr ⁵	NB	5M	9,000	11,141	8,973	1.24	1.00	F(0)	E	11,154	9,005	1.24	1.00	F(0)	F(0)	0.00	0.00	NO	NO
		SB	4M	7,200	7,446	7,713	1.03	1.07	F(0)	F(0)**(F)	7,464	7,731	1.04	1.07	F(0)	F(0) (F)	0.00	0.00	NO	NO
4	Mesa College Dr to I-805	NB	4M+2A	9,600	9,392	8,718	0.98	0.91	E	D	9,403	8,747	0.98	0.91	E	D	0.00	0.00	NO	NO
		SB	4M+1A	8,400	8,551	7,471	1.02	0.89	F(0)	D* (F)	8,567	7,488	1.02	0.89	F(0)	D (F)	0.00	0.00	NO	NO
Interstate 805																				
5	Madison Ave to I-8	NB	4M+1A	8,400	10,241	5,976	1.22	0.71	F(0)	C	10,275	6,006	1.22	0.71	F(0)	C	0.00	0.00	NO	NO
		SB	6M	10,800	5,454	11,453	0.50	1.06	B	F(0)**(F)	5,475	11,493	0.51	1.06	B	F(0) (F)	0.00	0.00	NO	NO
6	I-8 to Murray Ridge Rd/ Phyllis Pl	NB	5M	9,000	11,876	6,885	1.32	0.77	F(1)	C	11,886	6,907	1.32	0.77	F(1)	C	0.00	0.00	NO	NO
		SB	4M+2A	9,600	6,216	11,119	0.65	1.16	C	F(0)	6,232	11,131	0.65	1.16	C	F(0)	0.00	0.00	NO	NO
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/Kearny Villa Rd	NB	5M	9,000	11,865	6,854	1.32	0.76	F(1)	C	11,875	6,876	1.32	0.76	F(1)	C	0.00	0.00	NO	NO
		SB	5M	9,000	5,975	10,851	0.66	1.21	C	F(0)	5,992	10,862	0.67	1.21	C	F(0)	0.00	0.00	NO	NO
8	Mesa College Dr/Kearny Villa Rd to SR-163	NB	5M	9,000	9,896	5,830	1.10	0.65	F(0)**(F)	C	9,905	5,851	1.10	0.65	F(0) (F)	C	0.00	0.00	NO	NO
		SB	4M	7,200	4,290	6,701	0.60	0.93	B	E** (F)	4,305	6,712	0.60	0.93	B	E (F)	0.00	0.00	NO	NO
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	7,077	5,952	0.84	0.71	D** (F)	C	7,098	6,002	0.84	0.71	D (F)	C	0.00	0.01	NO	NO
		SB	4M+2A	9,600	6,693	9,068	0.70	0.94	C	E** (F)	6,724	9,095	0.70	0.95	C	E (F)	0.00	0.00	NO	YNO
Interstate 15																				
10	Adams Ave to I-8	NB	3M+2A	7,800	7,624	8,470	0.98	1.09	E	F(0)	7,978	8,775	1.02	1.13	F(0)	F(0)	0.05	0.04	YES	YES
		SB	5M	9,000	6,077	10,152	0.68	1.13	C	F(0)	6,298	10,563	0.70	1.17	C	F(0)	0.02	0.05	NO	YES
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,381	2,140	0.58	0.89	B	D	1,880	2,590	0.78	1.08	C	F(0)	0.21	0.19	NO	YES
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	4,390	5,796	1.22	1.61	F(0)	F(3)	4,504	5,985	1.25	1.66	F(1)	F(3)	0.03	0.05	YES	YES
	Friars Rd Direct Ramp to I-15 SB	SB	1A	1,200	751	1,104	0.63	0.92	C	E	954	1,494	0.80	1.24	C	F(0)	0.17	0.32	NO	YES
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	9,691	7,115	1.15	0.85	F(0)	D	9,964	7,620	1.19	0.91	F(0)	D	0.03	0.06	YES	NO
		SB	5M+1A	10,200	8,245	11,344	0.81	1.11	D	F(0)	8,680	11,718	0.85	1.15	D	F(0)	0.04	0.04	NO	YES
13	Aero Dr to Balboa Ave/ Tierrasanta Blvd	NB	4M+1A	8,400	10,881	8,205	1.30	0.98	F(1)	E	11,125	8,657	1.32	1.03	F(1)	F(0)	0.03	0.05	YES	YES
		SB	4M+1A	8,400	8,446	10,169	1.01	1.21	F(0)	F(0)	8,835	10,503	1.05	1.25	F(0)	F(1)	0.05	0.04	YES	YES
Interstate 8																				
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	7,276	9,089	0.87	1.08	D	F(0)	7,382	9,179	0.88	1.09	D	F(0)	0.01	0.01	NO	YES
		WB	5M	9,000	8,564	7,482	0.95	0.83	E	D	8,630	7,604	0.96	0.84	E	D	0.01	0.01	NO	NO
15	Taylor St to Hotel Cir	EB	4M	7,200	7,129	9,532	0.99	1.32	E	F(1)	7,243	9,629	1.01	1.34	F(0)	F(1)	0.02	0.01	YES	YES
		WB	4M+1A	8,400	9,871	8,430	1.18	1.00	F(0)	F(0)	9,942	8,562	1.18	1.02	F(0)	F(0)	0.01	0.02	NO*	YES

Table 4.15-31. Horizon Year Plus Project Without Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year Without the Project Conditions						Horizon Year Plus Project Conditions						V/C Delta		Significant Impact?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 8																				
16	Hotel Cir to SR-163	EB	4M+2A	9,600	8,841	10,972	0.92	1.14	E	F(0)	8,956	11,071	0.93	1.15	E	F(0)	0.01	0.01	YES	YES
		WB	5M	9,000	10,030	8,245	1.11	0.92	F(0)	D	10,101	8,378	1.12	0.93	F(0)	E	0.01	0.01	NO*	YES
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,770	7,084	0.52	0.98	B	E** (F)	3,834	7,155	0.53	0.99	B	E (F)	0.01	0.01	NO	NO
		WB	3M+2A	7,800	10,364	9,544	1.33	1.22	F(1)	F(0)	10,435	9,669	1.34	1.24	F(1)	F(0)	0.01	0.02	NO*	YES
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	6,280	11,826	0.75	1.41	C	F(2)	6,344	11,897	0.76	1.42	C	F(2)	0.01	0.01	NO	NO*
		WB	4M+1A	8,400	10,786	9,995	1.28	1.19	F(1)	F(0)	10,857	10,121	1.29	1.20	F(1)	F(0)	0.01	0.01	NO*	YES
19	Texas St to I-805	EB	4M	7,200	3,980	7,765	0.55	1.08	B	F(0)**(F)	4,044	7,836	0.56	1.09	B	F(0) (F)	0.01	0.01	NO	NO
		WB	4M	7,200	7,554	5,996	1.05	0.83	F(0)**(F)	D	7,625	6,122	1.06	0.85	F(0) (F)	D	0.01	0.02		NO
20	I-805 to I-15	EB	4M+2A	9,600	7,374	12,462	0.77	1.30	C	F(1)	7,489	12,574	0.78	1.31	C	F(1)	0.01	0.01	NO	YES
		WB	4M+2A	9,600	12,644	10,240	1.32	1.07	F(1)	F(0)	12,742	10,409	1.33	1.08	F(3)	F(3)	0.01	0.02	YES	YES
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	7,378	11,546	0.77	1.20	C	F(0)	7,406	11,595	0.77	1.21	C	F(0)	0.00	0.01	NO	NO*
		WB	4M+2A	9,600	8,956	6,605	0.93	0.69	E** (F)	C	9,017	6,696	0.94	0.70	E	C	0.01	0.01		NO
22	Fairmount Ave to Waring Rd	EB	5M	9,000	8,018	12,782	0.89	1.42	D	F(2)	8,161	13,048	0.91	1.45	D	F(2)	0.02	0.03	NO	YES
		WB	6M	10,800	12,116	9,572	1.12	0.89	F(0)	D	12,345	9,769	1.14	0.90	F(0)	D	0.02	0.02	YES	NO
23	Waring Rd to College Ave	EB	5M	9,000	7,722	12,056	0.86	1.34	D	F(1)	7,864	12,318	0.87	1.37	D	F(2)	0.02	0.03	NO	YES
		WB	5M	9,000	11,307	9,051	1.26	1.01	F(1)	F(0)	11,533	9,246	1.28	1.03	F(1)	F(0)	0.03	0.02	YES	YES

Source: Appendix 4.15-1

Notes:

- ¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane
M = mainline lane
A = auxiliary lane

² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications

³ LOS calculations performed using City of San Diego Traffic Impact Study Manual (1998)

⁴ Unacceptable V/C and LOS highlighted in **bold**.

⁵ No data available from Genesee Ave to Mesa College Dr - assumed equivalent to the segment from Friars Rd to Genesee Ave

* Freeway segment would exceed the City of San Diego impact threshold.

** Traffic data indicate existing operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

Table 4.15-32. Horizon Year (2037) Plus Project Without Event Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Horizon Year Without the Project Conditions					Horizon Year Plus Project Conditions					Delay Delta	Significant Impact?
				Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)		
				Mixed Flow & HOV	Mixed Flow only				Mixed Flow & HOV	Mixed Flow only					
I-15 NB - Friars Rd On-Ramp	AM	2	1,450	2,345	1,983	533	22.0	7,725	2,617	2,213	763	31.6	11,050	9.6	YES
	PM	2	888	1,503	1,369	481	32.5	6,975	2,010	1,830	942	63.7	13,675	31.2	YES
I-15 SB / I-8 - Friars Rd Loop On-Ramp	AM	1	N/A	914	914	N/A	N/A	N/A	1,028	1,028	N/A	N/A	N/A	N/A	NO
	PM	1	660	929	929	269	24.5	7,800	1,118	1,118	458	41.7	13,300	17.2	YES
I-15 SB - Friars Rd Direct On-Ramp	AM	1	N/A	751	751	N/A	N/A	N/A	954	954	N/A	N/A	N/A	N/A	NO
	PM	1	996	1,104	1,104	108	6.5	3,150	1,494	1,494	498	30.0	14,425	23.5	YES
I-8 EB - SB Fairmount Ave	AM	1	N/A	302	302	N/A	N/A	N/A	432	432	N/A	N/A	N/A	N/A	NO
	PM	1	492	664	664	172	21.0	5,000*	900	900	408	49.7	11,825	28.7	YES

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

Notes:

¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed.

² Demand is the peak hour demand projected to use the on-ramp.

³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Undesirable delays in excess of 15 minutes are highlighted in **bold**.

⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.

* Field observations of existing conditions indicate that operations may be better than calculated.

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Table 4.15-33. Horizon Year Plus Project Without Event Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95 th Percentile Queue (ft)	
				Horizon Year Without the Project Conditions	Horizon Year Plus Project Conditions
1. SR-163 SB off-ramp at Friars Rd/Ulric St	AM	NBL	1,200	211	211
		NBT		104	104
		NBR		487	502
	PM	NBL	1,200	263	263
		NBT		62	62
		NBR		485	523
2. SR-163 NB off-ramp at Friars Rd	AM	SBL	700	444	505
		SBT		0	0
		SBR		305	318
	PM	SBL	700	418	456
		SBT		0	0
		SBR		447	456
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	460	482
		SBT		449	470
		SBR		257	500
	PM	SBL	1,200	842	911
		SBT		845	911
		SBR		80	168
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0	0
		SBR	1,300	0	0
	PM	NBR	1,500	0	0
		SBR	1,300	0	0
29. I-8 WB off-ramp at Qualcomm Way/Camino del Rio N	AM	WBL	3,200	0	0
		WBT		221	243
		WBR		740	824
	PM	WBL	3,200	0	0
		WBT		394	411
		WBR		545	585
30. I-8 EB off-ramp at Qualcomm Way/Texas St	AM	EBR	900	169	169
	PM	EBR	900	274	270
35. I-8 WB off-ramp at Fairmount Ave/Alvarado Canyon Rd/Camino del Rio N	AM	WBL	1,000	627	713
		WBT		607	680
		WBR		269	394
	PM	WBL	1,000	714	714
		WBT		464	601
		WBR		308	468
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	484	505
		EBR		493	508
	PM	EBL	4,100	1,099	1,113
		EBR		1,659	1,665

Source: Appendix 4.15-1.

4.15.7.3.2 Horizon Year (2037) Plus Project – Plus Stadium Event Conditions

This section presents the results of the operations analysis under the Horizon Year (2037) scenario with buildout of the proposed project, including the Stadium. Under this scenario, Stadium event trips were added to the Horizon Year Plus Project Conditions to analyze conditions under which a sold-out Stadium event occurs on a typical weekday. The Horizon Year Plus Project Plus Stadium Event Conditions roadway network is the same network as that assumed under the Horizon Year Plus Project scenario. As was the case under Without Event conditions, the analysis presented here addresses intersections, roadway segments, freeway segments, metered ramps, and off-ramp queues.

Intersections

Turning movement traffic volumes and intersection lane configurations for the Horizon Year (2037) Plus Project Plus Stadium Event Conditions are shown on Figure 4.15-14. This data was used to calculate operations under this scenario. Table 4.15-34 presents the intersection operating conditions and significant traffic impacts under the Horizon Year Plus Project Plus Stadium Event Conditions by comparing the projected levels of service at each study area intersection under this scenario to the Horizon Year Without Project Conditions. The corresponding LOS calculation sheets are included in TIA Appendix E.

As shown in Table 4.15-34, in addition to the significantly impacted intersections identified for the Horizon Year Plus Project Without Stadium Event Conditions, the addition of Stadium traffic would result in a significant impact at the following additional intersections on those infrequent occasions when a Stadium event is taking place:

- 3. Frazee Road & Friars Road (PM peak hour)
- 11. Stadium Way (Street A) & Friars Road (PM peak hour)
- 15. Street D & Street 4 (PM peak hour)

Therefore, under this scenario, the proposed project would result in significant cumulative impacts at the following locations:

- 1. **SR-163 Southbound Ramps/Ulric Street & Friars Road** – Event traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 13.3 seconds. Therefore, impacts would be **potentially significant (TR-28A)**.
- 3. **Frazee Road & Friars Road** – Event traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 22.6 seconds. Therefore, impacts would be **potentially significant (TR-28B)**.
- 8. **River Run Drive & Friars Road** – Event traffic would degrade LOS E operations to LOS F in the PM peak hour and would increase delay by 86.8 seconds. Therefore, impacts would be **potentially significant (TR-28C)**.
- 9. **Fenton Pkwy & Friars Road** – Event traffic would exacerbate LOS F operations in the PM peak hour and would increase delay by 86.3 seconds. Therefore, impacts would be **potentially significant (TR-28D)**.
- 10. **Northside Drive & Friars Road** – Event traffic would exacerbate LOS F operations in the PM peak hour and would increase delay by 68.7 seconds. Therefore, impacts would be **potentially significant (TR-28E)**.
- 11. **River Run Drive & Friars Road** – Event traffic would degrade free-flow operations to LOS F. Therefore, impacts would be **potentially significant (TR-28F)**.
- 14. **Street D & Street 4** – Event traffic would result in LOS F operations. Therefore, impacts would be **potentially significant (TR-28G)**.

17. **I-15 SB Ramps & Friars Road** – Event traffic would degrade LOS D operations to LOS F operations in the AM peak hour, would degrade LOS E operations to LOS F in the PM peak hour, and would increase delay by 78.3 and 70.6 seconds, respectively. Therefore, impacts would be **potentially significant (TR-28H)**.
18. **I-15 NB Ramps & Friars Road** – Event traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 54.1 and 150.8 seconds, respectively. Therefore, impacts would be **potentially significant (TR-28I)**.
19. **Rancho Mission Road & Friars Road** – Event traffic would degrade LOS E operations to LOS F in the AM and PM peak hours and would increase delay by 3.5 and 21.7 seconds, respectively. Therefore, impacts would be **potentially significant (TR-28J)**.
22. **Mission Gorge Road & Friars Road** – Event traffic would degrade LOS D operations to LOS E in the PM peak hour and would increase delay by 11.5 seconds. Therefore, impacts would be **potentially significant (TR-28K)**.
27. **Fairmount Avenue & San Diego Mission Road/Twain Avenue** – Event traffic would degrade LOS C operations to LOS F in the AM and PM peak hour, and would increase delay by 77.6 and 104.3 seconds, respectively. Therefore, impacts would be **potentially significant (TR-28L)**.
31. **Texas Street & Camino del Rio N** – Event traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 7.6 and 18.4 seconds, respectively. Therefore, impacts would be **potentially significant (TR-28M)**.
32. **Ward Road & Rancho Mission Road** – Event traffic would degrade LOS D to LOS F operations in the AM and PM peak hours and would increase delay by 104.2 and 2,109.6 seconds, respectively. The addition of project traffic also would satisfy the peak hour signal warrant per the California MUTCD. Therefore, impacts would be **potentially significant (TR-28N)**.
34. **Fairmount Avenue & Mission Gorge Road** – Event traffic would degrade LOS C to LOS E operations in the PM peak hour and increase delay by 36.2 seconds. Therefore, impacts would be **potentially significant (TR-28O)**.
35. **Fairmount Avenue & Camino del Rio North** – Event traffic would exacerbate LOS F operations in the AM and PM peak hours and increase delay by 27.8 and 100.6 seconds, respectively. Therefore, impacts would be **potentially significant (TR-28P)**.
41. **Ruffin Road & Aero Drive** – Event traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 15.0 seconds. Therefore, impacts would be **potentially significant (TR-28Q)**.

For information purposes, the locations that would exceed the City of San Diego significance criteria are the same as those noted above.

Roadway Segments

The roadway segment LOS analysis is based on the City of San Diego impact thresholds and is provided for information purposes only. To conduct the analysis, Stadium event traffic traversing the study area roadway segments was added to Horizon Year Plus Project Without Stadium Event Conditions peak hour volumes. Table 4.15-35 illustrates the LOS analysis for the study area roadway segments under Horizon Year Plus Project Plus Stadium Event Conditions and compares the projected levels of service at each segment in 2037 with the proposed project and Stadium event traffic to conditions without the project. As shown in the table, in addition to those segments previously identified as operating unacceptably under Horizon Year Plus Project Without Stadium Event Conditions, the following study area roadway segments also are projected to operate at LOS E or F under this scenario:

5. Friars Road from Fenton Parkway to Northside Drive
7. Friars Road from Stadium Way (Street A) to Mission Village Drive

10. Friars Road from Rancho Mission Road to Santo Road

Freeway Segments

Table 4.15-36 illustrates freeway operations under Horizon Year Plus Project Plus Stadium Event Conditions. As shown on the table, all freeway segments are expected to operate at undesirable levels (LOS E or F) under Horizon Year Conditions without and with the project. As to significant impacts, in addition to those impacts previously identified under Horizon Year Plus Project Without Stadium Event Conditions, the addition of Stadium event trips will further exacerbate operations and result in a significant cumulative impact on the following additional five freeway segments:

1. SR-163 from 6th Avenue to I-8
2. SR-163 I-8 to Friars Road
3. SR-163 from Friars Road to Mesa College Drive
9. I-805 from SR-163 to Balboa Avenue
- 17-19. I-8 from SR-163 to I-805
22. I-8 from Fairmount Avenue to College Avenue

Therefore, under this scenario, the proposed project would result in significant cumulative impacts at the following segments:

1. **SR-163 from 6th Avenue to I-8 (NB, PM peak hour; SB, PM peak hour). Potentially significant (TR-29A).**
2. **SR-163 I-8 to Friars Road (NB, PM peak hour). Potentially significant (TR-29B).**
3. **SR-163 from Friars Road to Mesa College Drive (SB, PM peak hour) Potentially significant (TR-29C).**
9. **I-805 from SR-163 to Balboa Avenue (SB, PM peak hour). –Potentially significant (TR-29D).**
9. **I-805 from SR-163 to Balboa Avenue (SB, PM peak hour). Potentially significant (TR-29E).**
10. **I-15 from Adams Avenue to I-8 (NB, AM and PM peak hours; SB, PM peak hour). Potentially significant (TR-29F).**
11. **I-15 from I-8 to Friars Road (NB auxiliary lanes, PM peak hour; SB auxiliary lanes to I-8, AM and PM peak hours; SB auxiliary lane to I-15 SB, PM peak hour). Potentially significant (TR-29G).**
12. **I-15 from Friars Road to Aero Drive (NB, AM peak hour; SB, PM peak hour). Potentially significant (TR-29H).**
13. **I-15 from Aero Drive to Balboa Avenue/Tierrasanta Boulevard (both directions, AM and PM peak hours). Potentially significant (TR-29I).**
14. **I-8 from Morena Boulevard to Taylor Street (EB, PM peak hour). Potentially significant (TR-29J).**
- 15-16. **I-8 from Taylor Street to Hotel Circle and Hotel Circle to SR-163 (EB, AM and PM peak hours; WB, PM peak hour). Potentially significant (TR-29K and TR-29L).**
17. **I-8 from SR-163 to Mission Center Road (EB, PM peak hour and WB, PM peak hour). Potentially significant (TR-29M).**
18. **I-8 from Mission Center Road to Texas Street (WB, PM peak hour; EB, PM peak hour). Potentially significant (TR-29N).**
19. **I-8 from Texas Street to I-805 (EB, PM peak hour; WB, AM peak hour). Potentially significant (TR-29O).**
20. **I-8 from I-805 to I-15 (EB, PM peak hour; WB, AM and PM peak hours). Potentially significant (TR-29P).**

21. **I-8 from Fairmount Avenue to Waring Road** (EB, PM peak hour; WB, AM and PM peak hours). **Potentially significant (TR-29Q).**
23. **I-8 from Waring Road to College Avenue** (EB and WB, PM peak hour; WB, AM peak hour). **Potentially significant (TR-29R).**

For information purposes, application of the City of San Diego significance criteria for freeway segments would result in the impacted locations as noted above or under Horizon Year Plus Project Without Stadium Event Conditions as well as the following threshold exceedances:

3. **SR-163 from Friars Road to Mesa College Drive** (NB, PM peak hour)
19. **I-8 from Texas Street to I-805** (WB AM peak hour)

Ramp Metering

Table 4.15-37 illustrates the results of the ramp metering analysis conducted at the metered freeway on-ramps in the study area under Horizon Year Plus Project Plus Stadium Event Conditions. As shown in Table 4.15-37, all ramps are expected to operate with unacceptable delays during one or both peak hours, as was the case under Horizon Year Plus Project Without Stadium Event Conditions. Additionally, at all ramps on-ramp capacity is not sufficient to accommodate the peak hour demand during metered peak periods; thus, ramp queues are expected to spill back onto the arterial street.

As to significant impacts, the proposed project would increase delay by more than two minutes, when compared to Horizon Year Conditions, for those on-ramps operating with delays above 15 minutes and, therefore, would result in a significant cumulative impact at the following locations, which are the same locations identified under the Horizon Year Plus Project Without Stadium Event Conditions.

- **I-15 NB On-ramp from Friars Road** – operates at 22.0 minutes of delay in the AM peak hour and 32.5 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 9.5 minutes to a total delay of 31.6 minutes in the AM peak hour and 34.6 minutes to a total of 67.1 minutes in the PM peak hour. Therefore, impacts would be **potentially significant (TR-30A).**
- **I-15 SB/I-8 Loop On-ramp from Friars Road** – operates at 24.5 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 20.0 minutes to a total delay of 44.5 minutes. Therefore, impacts would be **potentially significant (TR-30B).**
- **I-15 SB Direct On-ramp from Friars Road** – operates at 6.5 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 24.5 minutes to a total delay of 31.0 minutes. Therefore, impacts would be **potentially significant (TR-30C).**
- **I-8 EB On-ramp from SB Fairmount Avenue** – operates at 21.0 minutes of delay in the PM peak hour without the project. The addition of project traffic would further exacerbate operations and increase delay by 33.0 minutes to a total delay of 54.0 minutes. Therefore, impacts would be **potentially significant (TR-30D).**

Off-Ramp Queuing

Table 4.15-38 illustrates the results of the off-ramp queuing analysis conducted at the SR-163 and I-15 off-ramps at Friars Road, and the I-8 off-ramps at Qualcomm Way/Texas Street and Fairmount Avenue. As shown on the table, under the Horizon Year Plus Project Plus Stadium Event Conditions scenario, all off-ramp queues can be accommodated by the existing storage capacity and, therefore, impacts would be **less than significant**.

Table 4.15-34. Horizon Year (2037) Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
1. SR-163 SB Ramps/Ulric St & Friars Rd*	Signalized	AM	45.2	D	45.3	D	1.4	NO
		PM	54.5	D	70.2	E	13.3	YES
2. SR-163 NB Ramps & Friars Rd*	Signalized	AM	19.8	B	29.5	C	3.3	NO
		PM	32.4	C	42.5	D	9.0	NO
3. Frazee Rd & Friars Rd*	Signalized	AM	45.2	D	50.6	D	1.6	NO
		PM	44.8	D	65.6	E	22.6	YES
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	12.8	B	13.3	B	0.5	NO
		PM	14.1	B	15.0	B	0.9	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	16.8	B	16.7	B	-0.1	NO
		PM	36.2	D	38.3	D	2.1	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	15.9	B	17.0	B	1.1	NO
		PM	24.5	C	24.9	C	0.4	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.6	A	6.2	A	0.6	NO
		PM	12.8	B	13.2	B	0.4	NO
8. River Run Dr & Friars Rd	Signalized	AM	23.0	C	25.0	C	2.0	NO
		PM	59.6	E	146.4	F	86.8	YES
9. Fenton Pkwy & Friars Rd	Signalized	AM	27.9	C	22.1	C	-5.8	NO
		PM	92.8	F	179.1**	F	86.3	YES
10. Northside Dr & Friars Rd*	Signalized	AM	34.9	C	34.8	C	-0.1	NO
		PM	122.1	F	156.8**	F	34.7	YES
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A	10.4	B	N/A	NO
		PM	-	N/A	134.6	F	N/A	YES
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	30.1	C	28.8	C	-1.3	NO
		PM	52.0	D	36.6	D	-15.4	NO
13. Mission Village Dr/Street D & Friars Rd EB Ramps*	Signalized	AM	173.4**	F	17.0	B	-156.4	NO
		PM	94.0	F	31.7	C	-62.3	NO

Table 4.15-34. Horizon Year (2037) Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
14. Street D & Street 4	Signalized	AM	DNE	N/A	23.7	C	N/A	NO
		PM		N/A	370.0**	F	N/A	YES
15. Street F & Street 4	Signalized	AM	DNE	N/A	27.0	C	N/A	NO
		PM		N/A	31.7	C	N/A	NO
16. Street F & Street 6/San Diego Mission Rd	Roundabout	AM	DNE	N/A	8.1	A	N/A	NO
		PM		N/A	13.3	B	N/A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	46.3	D	124.6	F	78.3	YES
		PM	67.3	E*** (F)	137.9	F (F)	70.6	YES
18. I-15 NB Ramps & Friars Rd	Signalized	AM	83.5	F*** (F)	137.6	F (F)	54.1	YES
		PM	67.3	E*** (F)	218.1	F (F)	150.8	YES
19. Rancho Mission Rd & Friars Rd	Signalized	AM	30.3	C*** (E)	33.8	C (F)	3.5	YES*****
		PM	72.4	E*** (E)	94.1	F (F)	21.7	YES
20. Santo Rd & Friars Rd	Signalized	AM	38.1	D	47.1	D	9.0	NO
		PM	16.8	B	19.4	B	2.6	NO
21. Riverdale St & Friars Rd	Signalized	AM	37.4	D	43.8	D	6.4	NO
		PM	37.4	D	44.7	D	7.3	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	44.1	D	46.5	D	2.4	NO
		PM	44.5	D	56.0	E	11.5	YES
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	19.3	B	22.1	C	2.8	NO
		PM	44.4	D	50.1	D	5.7	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	12.9	B	13.6	B	0.7	NO
		PM	25.1	D	32.7	D	7.6	NO
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	16.7	B	17.0	B	0.3	NO
		PM	27.7	C	28.8	C	1.1	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	31.0	C	46.0	D	15.0	NO
		PM	30.0	C	51.1	D	21.1	NO

Table 4.15-34. Horizon Year (2037) Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
27. Fairmount Ave & San Diego Mission Rd/Twain Ave	Signalized	AM	23.5	C	101.1	F	77.6	YES
		PM	26.7	C	131.0	F	104.3	YES
28. Qualcomm Way & Camino del Rio N/Camino de la Reina	Signalized	AM	21.3	C	21.8	C	0.5	NO
		PM	71.0	E	71.1	E	0.1	NO
29. Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio N	Signalized	AM	20.5	C	21.8	C	1.3	NO
		PM	73.6	E	77.3	E	3.7	NO****
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.2	A	1.2	A	0.0	NO
		PM	4.9	A	4.9	A	0.0	NO
31. Texas St & Camino del Rio S	Signalized	AM	104.1	F	111.7	F	7.6	YES
		PM	85.0	F	103.4	F	18.4	YES
32. Ward Rd & Rancho Mission Rd	SSSC	AM	26.9	D	131.2	F	104.3	YES
		PM	29.9	D	2,135.4**	F	2,105	YES
33. Camino del Rio N & Ward Ave	Signalized	AM	15.4	B	25.3	C	9.9	NO
		PM	15.9	B	31.8	C	15.9	NO
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	22.0	C	27.6	C	5.6	NO
		PM	28.1	C	64.3	E	36.2	YES
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	94.7	F	122.5	F	27.8	YES
		PM	104.7	F	205.3**	F	100.6	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	17.7	B	20.5	C	2.8	NO
		PM	44.3	D	53.4	D	9.1	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	46.9	D	49.2	D	2.3	NO
		PM	50.0	D	54.7	D	4.7	NO
38. Mission Village Dr & Shawn Ave	Signalized	AM	6.2	A	6.4	A	0.2	NO
		PM	10.8	B	15.4	B	4.6	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	14.5	B	15.5	B	1.0	NO
		PM	11.3	B	15.3	B	4.0	NO

Table 4.15-34. Horizon Year (2037) Plus Project Plus Event Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	20.5	C	32.6	C	12.1	NO
		PM	24.5	C	41.8	D	17.3	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	35.7	D	36.8	D	1.1	NO
		PM	52.6	D	67.6	E	15.0	YES
42. Gramercy Dr & Mobley St	Signalized	AM	7.1	A	7.2	A	0.1	NO
		PM	6.0	A	6.1	A	0.1	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	9.1	A	9.3	A	0.2	NO
		PM	11.7	B	11.9	B	0.2	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the Highway Capacity Manual (HCM) method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way (Street A) & Friars Road intersection is only used during Stadium events.
- * Existing or proposed signal phasing prevents the use of HCM 6 at this intersection. The HCM 2000 method was applied instead.
- ** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- *** Ramp metering during the peak hours under existing conditions results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation.
- **** Intersection would exceed the City of San Diego impact threshold.
- ***** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would cause a significant impact.

Table 4.15-35. Horizon Year Plus Project Plus Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year Without the Project Conditions			Horizon Year Plus Project Plus Event Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
Friars Rd												
1	Frazee Rd	Mission Center Rd	8P	80,000	52,600	0.66	C	60,743	0.76	C	0.10	NO
2	Mission Center Rd	Qualcomm Way	6E	80,000	48,594	0.61	B	58,063	0.73	C	0.12	NO
3	Qualcomm Way	River Run Dr	6E	80,000	42,681	0.53	C	54,138	0.68	C	0.15	NO
4	River Run Dr	Fenton Pkwy	6P	60,000	43,198	0.72	C	54,943	0.92	D	0.20	NO
5	Fenton Pkwy	Northside Dr	6P	60,000	45,271	0.75	C	56,901	0.95	E	0.20	YES
6	Northside Dr	Stadium Way (Street A)	6E – 6P with project	80,000 – 60,000	54,457	0.68	C	66,564	1.11	F	0.43	YES
7	Stadium Way (Street A)	Mission Village Dr	6E	80,000	54,457	0.68	C	75,210	0.94	E	0.26	YES
8	Mission Village Dr	I-15 Ramps	6E	80,000	52,850	0.66	C	81,713	1.02	F	0.36	YES
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	72,970	1.04	F	80,933	1.16	F	0.12	YES
10	Rancho Mission Rd	Santo Rd	7P	70,000	61,340	0.88	D	65,103	0.93	E	0.05	YES
11	Santo Rd	Riverdale St	6P	60,000	60,170	1.00	F	63,259	1.05	F	0.05	YES
12	Riverdale St	Mission Gorge Rd	6P	60,000	54,675	0.91	D	57,638	0.96	E	0.05	YES
Qualcomm Way												
13	Friars Rd	Rio San Diego Dr	6M	50,000	22,813	0.46	B	24,188	0.48	B	0.02	NO

Table 4.15-35. Horizon Year Plus Project Plus Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year Without the Project Conditions			Horizon Year Plus Project Plus Event Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
Rio San Diego Dr												
14	Qualcomm Way	River Run Dr	4M	40,000	15,876	0.40	B	16,875	0.42	B	0.02	NO
15	River Run Dr	Fenton Pkwy	4C/M	30,000	13,246	0.44	B	14,322	0.48	C	0.04	NO
Fenton Pkwy												
16	Rio San Diego Dr/ Fenton Marketplace Dwy	Northside Dr	4M	40,000	6,240	0.16	A	7,741	0.19	A	0.03	NO
San Diego Mission Rd												
17	Mission Village Dr/Street F	Rancho Mission Rd	4C w/o CLTL	15,000	9,254	0.62	C	18,942	1.26	F	0.64	YES
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	13,240	0.88	E	19,943	1.33	F	0.45	YES
Rancho Mission Rd												
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	18,681	0.83	D	24,842	1.10	F	0.27	YES
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	11,576	0.77	D	13,722	0.91	E	0.14	YES
21	West of Ward Rd		2C	10,000	1,824	0.18	A	7,503	0.75	D	0.57	NO
Ward Rd												
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	12,047	0.80	D	18,329	1.22	F	0.42	YES
Fairmount Ave												
23	San Diego Mission Rd/Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	8,719	0.29	A	13,560	0.45	B	0.16	NO

Table 4.15-35. Horizon Year Plus Project Plus Event Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year Without the Project Conditions			Horizon Year Plus Project Plus Event Conditions			V/C Delta	Requires Additional Analysis?
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}		
Mission Village Dr												
24	Ruffin Rd	Shawn Ave	4C	30,000	18,344	0.61	C	23,307	0.78	D	0.17	NO
25	Shawn Ave	Ronda Ave	4C	30,000	14,912	0.50	C	20,101	0.67	D	0.17	NO
26	Ronda Ave	Friars Rd	4M	40,000	17,204	0.43	B	22,437	0.56	C	0.13	NO
Ruffin Rd												
27	Aero Dr	Mission Village Dr	4C	30,000	16,451	0.55	C	19,516	0.65	C	0.10	NO
Gramercy Dr												
28	Mobley St	Ruffin Rd	4M	40,000	9,456	0.24	A	11,023	0.28	A	0.04	NO
Aero Dr												
29	Sandrock Rd	Ruffin Rd	4M	40,000	24,167	0.60	C	25,759	0.64	C	0.04	NO
30	Ruffin Rd	Daley Center Dr	4M	40,000	31,494	0.79	D	32,783	0.82	D	0.03	NO
Camino del Rio N												
31	Qualcomm Way	Mission City Pkwy	4C	30,000	11,608	0.39	B	12,124	0.40	B	0.02	NO
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	10,318	0.69	D	11,289	0.75	D	0.06	NO
33	Ward Rd	Fairmount Ave	4C	30,000	14,706	0.49	C	20,528	0.68	D	0.19	NO
Camino del Rio S												
34	Texas St	Mission City Pkwy	2C	10,000	13,888	1.39	F	14,118	1.41	F	0.02	YES

Source: Appendix 4.15-1

Notes:

- ¹ 2C w/CLTL = 2-lane collector with center left-turn lane
 3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane;
 4C w/o CLTL = 4-lane collector without center left-turn lane
 4C = 4-lane collector
 4M = 4-lane major arterial
 6M = 6-lane major arterial
 6P = 6-lane primary arterial
 7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add 5,000 ADT for LOS A, 7,500 ADT for LOS B, and 10,000 ADT for LOS C, D, and E per the Mission Valley Community Plan Update
 8P = 8-lane primary arterial
 6E = 6-lane expressway
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using City of San Diego Traffic Impact Study Manual (1998) and the Mission Valley Community Plan Update (2019)
- ⁴ Unacceptable ADT volumes per segment and LOS highlighted in **bold**.

Table 4.15-36 – Horizon Year Plus Project Plus Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year Without the Project Conditions						Horizon Year Plus Project Plus Event Conditions						V/C Delta		Significant Impact?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
State Route 163																				
1	6 th Ave to I-8	NB	3M+1A	6,600	6,350	6,892	0.96	1.04	E	F(0)	6,407	7,100	0.97	1.08	E	F(0)	0.01	0.03	NO	YES
		SB	3M+2A	7,800	10,832	9,690	1.39	1.24	F(2)	F(0)	10,868	9,773	1.39	1.25	F(2)	F(1)	0.00	0.01	NO	YES
2	I-8 to Friars Rd	NB	2A	2,400	1,958	2,125	0.82	0.89	D	D	2,083	2,475	0.87	1.03	D	F(0)	0.05	0.15	NO	YES
		SB	4M+2A	9,600	9,908	9,049	1.03	0.94	F(0)	E** (F)	9,944	9,138	1.04	0.95	F(0)	E (F)	0.00	0.01	NO	NO
3	Friars Rd to Mesa College Dr ⁵	NB	5M	9,000	11,141	8,973	1.24	1.00	F(0)	E	11,154	9,019	1.24	1.00	F(0)	F(0)	0.00	0.01	NO	NO*
		SB	4M	7,200	7,446	7,713	1.03	1.07	F(0)	F(0)**(F)	7,464	7,858	1.04	1.09	F(0)	F(0)	0.00	0.02	NO	YES
4	Mesa College Dr to I-805	NB	4M+2A	9,600	9,392	8,718	0.98	0.91	E	D	9,403	8,760	0.98	0.91	E	D	0.00	0.00	NO	NO
		SB	4M+1A	8,400	8,551	7,471	1.02	0.89	F(0)	D** (F)	8,567	7,602	1.02	0.91	F(0)	D (F)	0.00	0.02	NO	NO
Interstate 805																				
5	Madison Ave to I-8	NB	4M+1A	8,400	10,241	5,976	1.22	0.71	F(0)	C	10,275	6,026	1.22	0.72	F(0)	C	0.00	0.01	NO	NO
		SB	6M	10,800	5,454	11,453	0.50	1.06	B	F(0)**(F)	5,475	11,495	0.51	1.06	B	F(0) (F)	0.00	0.00	NO	NO
6	I-8 to Murray Ridge Rd/ Phyllis Pl	NB	5M	9,000	11,876	6,885	1.32	0.77	F(1)	C	11,886	6,908	1.32	0.77	F(1)	C	0.00	0.00	NO	NO
		SB	4M+2A	9,600	6,216	11,119	0.65	1.16	C	F(0)	6,232	11,142	0.65	1.16	C	F(0)	0.00	0.00	NO	NO
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/Kearny Villa Rd	NB	5M	9,000	11,865	6,854	1.32	0.76	F(1)	C	11,875	6,877	1.32	0.76	F(1)	C	0.00	0.00	NO	NO
		SB	5M	9,000	5,975	10,851	0.66	1.21	C	F(0)	5,992	10,873	0.67	1.21	C	F(0)	0.00	0.00	NO	NO
8	Mesa College Dr/Kearny Villa Rd to SR-163	NB	5M	9,000	9,896	5,830	1.10	0.65	F(0)**(F)	C	9,905	5,852	1.10	0.65	F(0) (F)	C	0.00	0.00	NO	NO
		SB	4M	7,200	4,290	6,701	0.60	0.93	B	E** (F)	4,305	6,723	0.60	0.93	B	E (F)	0.00	0.00	NO	NO
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	7,077	5,952	0.84	0.71	D** (F)	C	7,098	6,016	0.84	0.72	D (F)	C	0.00	0.01	NO	NO
		SB	4M+2A	9,600	6,693	9,068	0.70	0.94	C	E** (F)	6,724	9,220	0.70	0.96	C	E	0.00	0.02	NO	YES
Interstate 15																				
10	Adams Ave to I-8	NB	3M+2A	7,800	7,624	8,470	0.98	1.09	E	F(0)	7,978	8,912	1.02	1.14	F(0)	F(0)	0.05	0.06	YES	YES
		SB	5M	9,000	6,077	10,152	0.68	1.13	C	F(0)	6,298	10,579	0.70	1.18	C	F(0)	0.02	0.05	NO	YES
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,381	2,140	0.58	0.89	B	D	1,880	2,606	0.78	1.09	C	F(0)	0.21	0.19	NO	YES
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	4,390	5,796	1.22	1.61	F(0)	F(3)	4,504	6,001	1.25	1.67	F(1)	F(3)	0.03	0.06	YES	YES
	Friars Rd Direct Ramp to I-15 SB	SB	1A	1,200	751	1,104	0.63	0.92	C	E	954	1,510	0.80	1.26	C	F(1)	0.17	0.34	NO	YES
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	9,691	7,115	1.15	0.85	F(0)	D	9,964	7,675	1.19	0.91	F(0)	D	0.03	0.07	YES	NO
		SB	5M+1A	10,200	8,245	11,344	0.81	1.11	D	F(0)	8,680	12,231	0.85	1.20	D	F(0)	0.04	0.09	NO	YES
13	Aero Dr to Balboa Ave/ Tierrasanta Blvd	NB	4M+1A	8,400	10,881	8,205	1.30	0.98	F(1)	E	11,125	8,707	1.32	1.04	F(1)	F(0)	0.03	0.06	YES	YES
		SB	4M+1A	8,400	8,446	10,169	1.01	1.21	F(0)	F(0)	8,835	10,962	1.05	1.31	F(0)	F(1)	0.05	0.09	YES	YES
Interstate 8																				
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	7,276	9,089	0.87	1.08	D	F(0)	7,382	9,311	0.88	1.11	D	F(0)	0.01	0.03	NO	YES
		WB	5M	9,000	8,564	7,482	0.95	0.83	E	D	8,630	7,617	0.96	0.85	E	D	0.01	0.02	NO	NO
15	Taylor St to Hotel Cir	EB	4M	7,200	7,129	9,532	0.99	1.32	E	F(1)	7,243	9,771	1.01	1.36	F(0)	F(2)	0.02	0.03	YES	YES
		WB	4M+1A	8,400	9,871	8,430	1.18	1.00	F(0)	F(0)	9,942	8,575	1.18	1.02	F(0)	F(0)	0.01	0.02	NO*	YES

Table 4.15-36 – Horizon Year Plus Project Plus Event Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year Without the Project Conditions						Horizon Year Plus Project Plus Event Conditions						V/C Delta		Significant Impact?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 8																				
16	Hotel Cir to SR-163	EB	4M+2A	9,600	8,841	10,972	0.92	1.14	E	F(0)	8,956	11,214	0.93	1.17	E	F(0)	0.01	0.03	YES	YES
		WB	5M	9,000	10,030	8,245	1.11	0.92	F(0)	D	10,101	8,392	1.12	0.93	F(0)	E	0.01	0.02	NO*	YES
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,770	7,084	0.52	0.98	B	E** (F)	3,834	7,187	0.53	1.00	B	E (F)	0.01	0.01	NO	YES
		WB	3M+2A	7,800	10,364	9,544	1.33	1.22	F(1)	F(0)	10,435	9,683	1.34	1.24	F(1)	F(0)	0.01	0.02	NO*	YES
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	6,280	11,826	0.75	1.41	C	F(2)	6,344	11,929	0.76	1.42	C	F(2)	0.01	0.01	NO	YES
		WB	4M+1A	8,400	10,786	9,995	1.28	1.19	F(1)	F(0)	10,857	10,135	1.29	1.21	F(1)	F(0)	0.01	0.02	NO*	YES
19	Texas St to I-805	EB	4M	7,200	3,980	7,765	0.55	1.08	B	F(0)**(F)	4,044	7,868	0.56	1.09	B	F(0) (F)	0.01	0.01	NO	YES
		WB	4M	7,200	7,554	5,996	1.05	0.83	F(0)**(F)	D	7,625	6,136	1.06	0.85	F(0) (F)	D	0.01	0.02	NO	NO
20	I-805 to I-15	EB	4M+2A	9,600	7,374	12,462	0.77	1.30	C	F(1)	7,489	12,624	0.78	1.31	C	F(1)	0.01	0.02	NO	YES
		WB	4M+2A	9,600	12,644	10,240	1.32	1.07	F(1)	F(0)	12,742	10,420	1.33	1.09	F(1)	F(0)	0.01	0.02	YES	YES
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	7,378	11,546	0.77	1.20	C	F(0)	7,406	11,629	0.77	1.21	C	F(0)	0.00	0.01	NO	NO*
		WB	4M+2A	9,600	8,956	6,605	0.93	0.69	E** (F)	C	9,017	6,965	0.94	0.73	E (F)	C	0.01	0.04	NO	NO
22	Fairmount Ave to Waring Rd	EB	5M	9,000	8,018	12,782	0.89	1.42	D	F(2)	8,161	13,098	0.91	1.46	D	F(3)	0.02	0.04	NO	YES
		WB	6M	10,800	12,116	9,572	1.12	0.89	F(0)	D	12,345	10,217	1.14	0.95	F(0)	E	0.02	0.06	YES	YES
23	Waring Rd to College Ave	EB	5M	9,000	7,722	12,056	0.86	1.34	D	F(1)	7,864	12,368	0.87	1.37	D	F(2)	0.02	0.03	NO	YES
		WB	5M	9,000	11,307	9,051	1.26	1.01	F(1)	F(0)	11,533	9,690	1.28	1.08	F(1)	F(0)	0.03	0.07	YES	YES

Source: Appendix 4.15-1

Notes:

- ¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane
M = mainline lane
A = auxiliary lane
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using City of San Diego Traffic Impact Study Manual (1998)
- ⁴ Unacceptable V/C and LOS highlighted in **bold**.
- ⁵ No data available from Genesee Ave to Mesa College Dr - assumed equivalent to the segment from Friars Rd to Genesee Ave
- * Freeway segment would exceed the City of San Diego impact threshold.
- ** Traffic data indicate existing operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

Table 4.15-37. Horizon Year (2037) Plus Project Plus Event Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Horizon Year Without the Project Conditions					Horizon Year Plus Project Plus Event Conditions					Delay Delta	Significant Impact?
				Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)		
				Mixed Flow & HOV	Mixed Flow only				Mixed Flow & HOV	Mixed Flow only					
I-15 NB - Friars Rd On-Ramp	AM	2	1,450	2,345	1,983	533	22.0	7,725	2,617	2,213	763	31.6	11,050	9.5	YES
	PM	2	888	1,503	1,369	481	32.5	6,975	2,065	1,880	992	67.1	14,400	34.6	YES
I-15 SB / I-8 - Friars Rd Loop On-Ramp	AM	1	N/A	914	914	N/A	N/A	N/A	1,028	1,028	N/A	N/A	N/A	N/A	NO
	PM	1	660	929	929	269	24.5	7,800	1,149	1,149	489	44.5	14,200	20.0	YES
I-15 SB - Friars Rd Direct On-Ramp	AM	1	N/A	751	751	N/A	N/A	N/A	954	954	N/A	N/A	N/A	N/A	NO
	PM	1	996	1,104	1,104	108	6.5	3,150	1,511	1,511	515	31.0	14,925	24.5	YES
I-8 EB - SB Fairmount Ave	AM	1	N/A	302	302	N/A	N/A	N/A	432	432	N/A	N/A	N/A	N/A	NO
	PM	1	492	664	664	172	21.0	5,000*	935	935	443	54.0	12,850	33.0	YES

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

Notes:

¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed.

² Demand is the peak hour demand projected to use the on-ramp.

³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Undesirable delays in excess of 15 minutes are highlighted in bold.

⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.

* Field observations of existing conditions indicate that operations may be better than calculated.

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Table 4.15-38. Horizon Year Plus Project Plus Event Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95th Percentile Queue (ft)	
				Horizon Year Without the Project Conditions	Horizon Year Plus Project Plus Event Conditions
1. SR-163 SB off-ramp at Friars Rd/Ulric St	AM	NBL	1,200	211	211
		NBT		104	104
		NBR		487	502
	PM	NBL	1,200	263	263
		NBT		62	62
		NBR		485	669
2. SR-163 NB off-ramp at Friars Rd	AM	SBL	700	444	505
		SBT		0	0
		SBR		305	318
	PM	SBL	700	418	645
		SBT		0	0
		SBR		447	456
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	460	482
		SBT		449	470
		SBR		257	500
	PM	SBL	1,200	842	911
		SBT		845	911
		SBR		80	395
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0	0
		SBR	1,300	0	0
	PM	NBR	1,500	0	0
		SBR	1,300	0	0
29. I-8 WB off-ramp at Qualcomm Way/Camino del Rio N	AM	WBL	3,200	0	0
		WBT		221	243
		WBR		740	824
	PM	WBL	3,200	0	0
		WBT		394	411
		WBR		545	594
30. I-8 EB off-ramp at Qualcomm Way/Texas St	AM	EBR	900	169	169
	PM	EBR	900	274	270
35. I-8 WB off-ramp at Fairmount Ave/Alvarado Canyon Rd/ Camino del Rio N	AM	WBL	1,000	627	713
		WBT		607	680
		WBR		269	394
	PM	WBL	1,000	714	783
		WBT		464	758
		WBR		308	491
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	484	505
		EBR		493	508
	PM	EBL	4,100	1,099	1,127
		EBR		1,659	1,672

Source: Appendix 4.15-1.

4.15.7.4 Mission Valley Community Plan Update

Concurrent with the preparation of the impact analysis presented here, the city of San Diego was undertaking an update to the Mission Valley Community Plan (MVCP) adopted in 1985. The update was comprehensive and included an evaluation of new proposed land uses, mobility infrastructure, policies, and implementation actions. The updated plan being considered involves intensifying, mixing, and redeveloping land uses in Mission Valley to take advantage of the central location of the valley within the San Diego region, as well as planned service expansion of the San Diego Trolley Green Line. Much of the new development contemplated by the update would be focused in transit priority areas (TPAs) at trolley stations where roadway capacity is limited in some cases, although new active transportation connections would enhance accessibility for valley residents, employees, and visitors.

In May 2019, the Final Program Environmental Impact Report (PEIR) for the MVCP Update (MVCPU) was issued and a Final Draft of the Community Plan (June 2019) released; as of this writing, further action by the City of San Diego City Council is pending. The following proposed changes to the MVCP are of note to the analysis presented here, although these changes were not assumed as part of the SDSU Mission Valley Campus Horizon Year analysis as the MVCPU has not yet been approved at the time of Draft EIR preparation, nor were funding mechanisms for the proposed infrastructure identified.

4.15.7.4.1 MVCPU Roadway Improvements

As proposed, the MVCPU includes several roadway improvements, including two new multimodal crossings of the San Diego River to enhance vehicular and bus transit connectivity, expansion of the pedestrian and bicycle and pedestrian network, and the provision of additional high-water street crossings of the river where regular flooding and street closures occur on other existing roadways.

The planned roadway improvement that has the greatest influence on circulation adjacent to the SDSU Mission Valley Campus site would be the extension of Fenton Parkway over the San Diego River that would connect to Camino del Rio North opposite Mission City Parkway. This extension would require the construction of a new bridge structure over the river and would require full environmental review and permitting, as well as funding, prior to its implementation. The extension was included in the previously approved 1985 MVCP as a two-lane roadway (i.e., one lane in each direction), but no construction timeframe is or has been identified and only a portion of the necessary funding, \$2.7 million dollars of an approximate total \$10 million, has been identified.

The 2019 MVCPU includes a Year 2050 forecast traffic volume of 13,800 vehicles per day on the planned extension, which warrants a two-lane facility from a volume perspective, although the MVCP ultimately recommends construction of a four-lane extension in order to provide additional capacity for emergency purposes (due to the limited number of high-water crossings in Mission Valley) and Stadium event traffic. However, because no dedicated funding or construction schedule for either a two-lane or four-lane bridge has been identified, and because the extension and bridge are not part of the SDSU Mission Valley Campus project, the Fenton Parkway extension was not included in the baseline horizon year evaluation for this analysis. In addition, the results of the analysis presented here do not propose the extension as mitigation for the SDSU Mission Valley Campus project since such extension is not required to reduce an identified significant impact. Nonetheless, in response to a request by the City of San Diego, an analysis of the project's potential impacts to all study area facilities under a future baseline scenario that includes both a 2-Lane and 4-Lane Fenton Parkway bridge and extension is provided in Section 4.15.11.

In addition to the extension of Fenton Parkway, the street classifications for sections of Rancho Mission Road and Ward Road would be reduced from a four-lane collector to a two-lane collector with a center left-turn lane. It should be noted, however, that under existing conditions, there are 15,210 daily vehicles traveling between Friars Road and San Diego Mission Road, which already exceeds the capacity of the proposed two-lane collector with a center left-turn lanes, and the MVCPU forecasted volume in 2050 is larger yet at 19,000 daily vehicles.

Additionally, the street classification for Rio San Diego Drive from River Run Drive to Fenton Parkway would be reduced from a four-lane collector to a two-lane collector with center left-turn pockets. This proposed restriping would cause the proposed project to have an additional significant impact along this segment. The MVCPU forecasted volume on this segment is 13,900, which would result in LOS E operations as a two-lane collector.

The MVCPU Final PEIR identifies potential intersection and roadway improvements (i.e., additional through and turn lanes) at multiple locations – including along the Rancho Mission Road/Ward Road and Rio San Diego Drive segments identified above – to mitigate identified significant impacts that would result from projected traffic increases attributable to new development and redevelopment. However, the MVCPU does not propose to implement any of these roadway mitigation measures because they would conflict with planned active and transit improvements. The Final PEIR also includes references to a Specific Plan, or Campus Master Plan, that is expected to be completed for the existing SDCCU Stadium property and defers any proposed roadway improvements in the vicinity of the Stadium site to that related analysis. The analysis presented in the TIA, and this EIR, provides the analysis for the study referenced in the PEIR.

4.15.7.4.2 MVCPU Proposed Bicycle Facility Improvements

Based on the draft Final MVCPU, Friars Road and Rancho Mission Road/Ward Road are planned to include future one-way cycle tracks. Additionally, Frazee Road, San Diego Mission Road and Rio San Diego Drive are planned to include future bike lanes. Finally, the San Diego River Trail is planned to be extended to connect with the existing multi-use path along the eastern edge of the project site, parallel to I-15. A pedestrian and bicycle bridge would also be constructed to connect the San Diego River Trail to Camino del Rio S parallel to and west of I-15. The northern terminus of this new pedestrian bridge would be located within the proposed SDSU Mission Valley Campus area, but the landing area is located within the future River Park area that will be owned by the City of San Diego.

4.15.7.4.3 MVCPU Proposed Pedestrian Facility Improvements

The MVCPU includes a variety of improvements to fill gaps in the pedestrian connections within the SDSU Mission Valley Campus project study area. In the immediate vicinity of the project, there are two segments that would receive new sidewalks:

- Friars Road, east of Mission Village Drive ramps to east of I-15 NB ramps (north and south side)
- San Diego Mission Road, from approximately 480' east of Mission Village Drive to Rancho Mission Road (north side)

Implementation of the proposed Mission Valley Campus project would not preclude these improvements from going forward as funding becomes available.

4.15.7.4.4 MVCPU Proposed Transit Facility Improvements

The proposed new Purple Line trolley route is included in the currently approved RTP, and also is included in the MVCPU. The route is planned to extend as an above-ground trolley route from South Bay to Kearney Mesa and to include a station within the project site with a pedestrian connection to the existing Green Line Stadium Station. While there are multiple potential alignments within the vicinity of the proposed project, the preferred alignment from the perspective of SDSU is along the eastern edge of the site. The Executive Director of SANDAG recently indicated that the Purple Line may be more productive as a transit facility if it were underground to allow it to more directly serve communities and transit patrons.

4.15.7.5 Parking Assessment

4.15.7.5.1 Overall Parking Supply

The proposed project would include a total of approximately 13,192 on-site parking spaces. The supply will include dedicated spaces for the residents and guests of the residential uses, metered on-street public spaces, shared spaces to support the campus office and retail uses, dedicated spaces for hotel guests and employees, and special event spaces to supplement the overall supply. Table 4.15-39 summarizes the proposed parking supply by land use or area within the project site.

The overall supply, combined with anticipated parking costs for shared spaces, is intended to provide an appropriate supply for the proposed uses but also to encourage the use of non-auto modes to access the site and minimize overall vehicle trip generation. All shared spaces within the site will be managed similar to other urban core/downtown environments. The on-street spaces will be metered and the campus office and retail spaces will be gate controlled, where the cost for parking will be integrated with individual leases or obtained through a validation/permit program. Validation will allow management of spaces during Stadium events to ensure that an appropriate supply is always available for retail customers.

In general, the limited availability of free parking would help to encourage the use of other modes of travel and reduce overall parking demand as evidenced in numerous urban centers and downtown environments, including downtown San Diego. The presence of a trolley stop within an approximate 1,500 feet radius of nearly all the proposed project uses, as well as the integration of residential, employment, and supporting retail uses with a robust pedestrian and bicycle network, will provide attractive mobility options to the use of a private vehicle. This combination of factors is expected to reduce the overall parking and traffic demand at the site consistent with the trip reductions applied to the proposed project vehicle trip generation estimates. This parking strategy approach is encouraged for all locations within transit priority areas (TPAs) within the City of San Diego and other jurisdictions within the County. Therefore, excluding event conditions, the proposed project would result in **less than significant** impacts to parking facilities.

Table 4.15-39. Proposed Parking Supply

Land Use/Supply	Description	Function	Number of Spaces
Residential	Structured/underground/wrap; only available to residents and guests (ratio of 1.23 spaces/unit)	Dedicated	5,662

Table 4.15-39. Proposed Parking Supply

Land Use/Supply	Description	Function	Number of Spaces
Hotel	Structured/underground; only available to hotel guests/conference facility attendees (ratio of 1.2 spaces/room)	Dedicated	485
<i>Dedicated Subtotal</i>			<i>6,147</i>
Campus Office and Retail	Structured/underground with some daylight; paid parking available for shared use with Stadium events (ratio of 3.05 spaces/1,000 sf of space)	Shared	5,065
Tailgate Park	Surface lot on grass; only available for Stadium and other special events	Shared	1,140
On-Street	Surface parking located throughout site; expected to be metered during the day and free during evening hours; spaces in River Park areas are expected to be free to provide public access to the park but would be time-constrained (e.g., 3-hour maximum.)	Shared	840
<i>Shared Subtotal</i>			<i>7,045</i>
Total Parking Supply			13,192

Source: Carrier-Johnson 2019.

4.15.7.5.2 Stadium Parking Supply and Demand

Parking demand for the Stadium is expected to be served by the parking structure under the campus office space and by the surface spaces located in Tailgate Park, both of which are immediately adjacent to the Stadium. These areas will provide a total of 6,205 spaces. The vast majority of Stadium events will be held on weekend afternoons and evenings when the demand for the campus office uses will be negligible. As previously explained, a TPMP is proposed as part of the project that would manage parking demand and traffic associated with various Stadium event attendance levels.

Similar to events at the existing SDCCU Stadium, attendees would have a variety of travel modes available to get to the new Stadium facility. In addition to the trolley and private vehicles, visitors would arrive by bus/shuttle, transportation network companies (TNC) such as Uber and Lyft, taxi, walking, and bicycling. The use of TNCs has dramatically increased over the last several years⁷ and specifically as it relates to the trip-sharing among Stadium patrons.

To estimate the number of parking spaces that would be needed for the proposed Stadium, the number of patrons arriving by private vehicle must first be calculated. Table 4.15-40 presents the transportation mode share (i.e., transit, private auto, etc.; see Sections 4.15.3.5.6 and 4.15.7.1.2) of event attendees for a sold out event of 35,000 persons, as well as attendance levels of 30,000 and 25,000.

The number of parking spaces needed to meet the demand for each attendance level will depend on the number of attendees arriving in each vehicle, or the average vehicle occupancy (AVO). Typical AVOs for sporting events can range from 2.5 persons to 3.5 persons depending on the sport, venue, location, parking costs, etc. While AVO was observed at a recent Aztec football game to be approximately 2.29 (see Section 4.15.3.5.6), this was not a sold-

⁷ Per www.sfmta.com/sites/default/files/reports/2017/Travel_Decision_Survey_Comparison_Report_2017.pdf, www.universityofcalifornia.edu/news/how-ride-hailing-could-improve-public-transportation-instead-undercutting-it and <http://www.schallerconsult.com/rideservices/automobility.pdf>

out event where attendees are expected to avoid driving alone to a greater extent. Table 4.15-40 illustrates the expected parking demand for the three attendance levels and AVOs ranging from 2.5 to 3.78 persons per vehicle.

As shown in Table 4.15-41, the parking demand for a capacity crowd at the proposed Stadium could range from less than 5,000 spaces to nearly 9,400 spaces depending on the AVO. At an AVO of 3.78 persons/vehicle, the parking demand would require essentially every one of the 6,204-shared supply spaces within the proposed project site. If the AVO were lower, there would be a parking deficiency, and patrons desiring to get to the site would likely park in adjacent areas and walk to the facility unless another convenient off-site supply was provided. For an event that attracts 85% of the Stadium capacity, the AVO would have to be 3.24 to roughly match the on-site shared space supply. For an event of 25,000 attendees with a 2.70 AVO, the Stadium demand would require the entire campus office supply.

Even on weekend days, the campus office will still generate a small amount of parking demand that will have to be accommodated by the shared space supply. Similarly, while many of the retail/restaurant patrons are also expected to attend a Stadium event, those stores, restaurants, and the grocery store will still generate some demand for parking by others.

These findings indicate that an additional off-site parking supply will likely need to be provided for events exceeding 25,000 attendees regardless of day of week. The Stadium TDM Program (**PDF-TRA-2**) and the TPMP Program (**PDF-TRA-4**) will help to minimize overall parking demand and to identify off-site parking supplies as appropriate. The number of additional spaces needed for a capacity event of 35,000 attendees could range from 1,000 to 2,500 depending on the AVO, and available parking at the existing SDSU College Area campus with direct trolley service to the site will be one option identified in the TPMP. In addition, parking for most events is expected to be pre-paid so that attendees will know if they have a space at the site or if they will have to find another means of traveling to and from the site (e.g., park elsewhere and take the trolley, rideshare, etc.). However, even with a successful TDM program and TPMP measures in place, parking impacts for some major and all high attendance events are expected to be **potentially significant (TR-31)**.

Table 4.15-40. Projected Share of Stadium Attendees by Mode

Mode Share ¹	Attendees
	35,000 (100% of Capacity)
22%	7,700
8%	2,800
1%	350
2%	700
67%	23,450

Source: Fehr & Peers 2019.

Notes:

- ¹ Percent of attendees driving and using TNC/Taxi for general major events is estimated to be higher than observed for an SDSU Aztec football game (**Section 3.8**) given fewer students traveling by trolley to the Stadium. Other mode share is based on engineering judgement.
- ² TNC = Transportation Network Company (e.g., Uber, Lyft)
- ³ Estimated to be 4 trips per vehicle and 2.75 persons per vehicle
- ⁴ Estimated to be 4 trips per vehicle and 15 persons per vehicle
- ⁵ Estimated to be 2 trips per vehicle and 2.75 persons per vehicle

Table 4.15-41. Estimated Parking Demand for Proposed Stadium by Attendance Level

Average Vehicle Occupancy (AVO in persons/vehicle)	Parking Demand Based on Number of Attendees ¹		
	35,000 (100% of Capacity)	30,000 (86% of Capacity)	25,000 (71% of Capacity)
2.50	9,380	8,040	6,700
2.70	8,685	7,444	6,204
2.75	8,527	7,309	6,091
3.00	7,817	6,700	5,583
3.24	7,238	6,204	5,170
3.25	7,215	6,185	5,154
3.50	6,700	5,743	4,786
3.75	6,253	5,360	4,467
3.78	6,204	5,317	4,431

Source: Fehr & Peers 2019.

Notes:

- ¹ **Bold** demand number identifies AVO that would need to be achieved to be equivalent to total shared supply, with the understanding that the campus office and retail uses will generate some demand during weekend games. Shared parking supply for 25,000 attendees would accommodate all Stadium patrons and provide nearly 350 additional spaces for office and retail uses.

4.15.7.6 Multimodal Assessment

4.15.7.6.1 Pedestrian Facilities

The proposed project would not conflict with any existing or planned pedestrian facilities and would improve existing facilities. The dense and extensive network of on-site pedestrian facilities will provide new connections parallel to the Friars Road environment that will enhance pedestrian accessibility adjacent to and within the site for area residents, employees and visitors. Additionally, the proposed site connection to Fenton Parkway would provide an additional walkable connection to the shops and restaurants at Fenton Marketplace, as well as the low-volume east-west connection provided by Rio San Diego Drive. The proposed connections will provide an improved pedestrian link between the existing neighborhoods along Rancho Mission Road and Fenton Marketplace area. This new connection will be a substantial improvement over the current walking path through the Friars Road/I-15 interchange. Additionally, the site connection to Rancho Mission Road will provide a walkable route to the bus stops along Rancho Mission Road.

Within the site itself, nearly all roadways will include a sidewalk or path on both sides of the street. For the few segments with a walking facility on only one side that will serve a pedestrian destination, appropriate street crossings treatments will be provided within a reasonable walking distance. These treatments include traffic signals, raised crosswalks, or stop signs to delineate right of way. Therefore, the proposed project would result in **less than significant** impacts on pedestrian facilities.

4.15.7.6.2 Bicycle Facilities

The proposed project would not conflict with any existing or planned bicycle facilities, and would substantially enhance bicycle travel adjacent to and through the site. The existing protected bike lanes on the Mission Village Drive overpass over Friars Road would be maintained with the proposed widening of the overpass, and they would connect to bike lanes on Street D through the center of the site. A connection to existing bike lanes on Friars Road will also be provided by the signalized intersection at Stadium Way (Street A). A new on-site path system along the

northern and eastern edges of the site (connecting to San Diego and Rancho Mission Roads) will provide a safer and lower stress option for cyclists traveling from west of Stadium Way (Street A) to east of I-15. Another on-site path system along the southern edge of the site will provide a critical connection between the San Diego River Trail and the path parallel to I-15. Additionally, the proposed site connection to Fenton Parkway provides a convenient bikeable connection to the shops and restaurants at Fenton Marketplace, improving the link between the Rio San Diego neighborhood and the Rancho Mission Road neighborhood east of I-15. Additionally, the site connection to Rancho Mission Road will provide a bikeable route to the bus stops along Rancho Mission Road and Camino del Rio North. Therefore, the proposed project would result in **less than significant** impacts to bicycle facilities.

4.15.7.6.3 Transit Facilities

As noted in the project's trip generation estimate shown in Table 4.15-10, the total trip reduction attributable to transit, bicycle and pedestrian trips is expected to be 4,599 daily trips. The higher of the inbound or outbound volumes that comprise this reduction are 361 and 407 during the AM and PM peak hours, respectively, which include the transit alightings and boardings at the project site. The trip reduction provided by MXD does not segregate between modes of transportation, (i.e., between transit, bicycle, and pedestrian trips), but based on professional experience and engineering judgment and considering adjacent developments and facilities, the highest mode share is expected to be transit trips.

Using a transit mode share of 85% (with the remaining 15% constituting bicycle and pedestrian trips), the proposed project would add roughly 4,000 daily transit trips ($4,599 \times .85 = 3,909$) to and from the site, with the vast majority of those trips expected to be trolley trips, rather than bus trips, due to the nearby convenient location of the Stadium trolley stop within the project site. Conservatively assuming that all peak hour transit trips are trolley trips, this would equate to roughly 309 and 346 peak directional trolley trips in the AM and PM peak hours, respectively. Based on engineering judgment, the transportation engineers estimate that a conservative 65% of these peak hour trips would occur in the peak direction (westbound in the morning and eastbound in the evening) consistent with the existing directional split. This split would result in roughly 202 and 226 trips in the peak direction during each commute hour. With the current 15-minute headways (or four (4) trains per hour) and assuming an equal number of riders per train, the proposed project would add up to 50 and 56 patrons in the AM and PM peak directional hours, respectively.

As noted in Section 4.15.3.4, Existing Transit Services, the total number of existing boardings and alightings at Stadium Station is only 391 per day with extensive person capacity available during the peak hours. Accordingly, the addition of the projected trolley ridership of up to 56 passengers to a given train (with lower numbers for non-peak trains), which for a typical 3-car train would be fewer than 20 passengers per car, is not expected to result in any train or station operational impacts to the trolley system. Therefore, the proposed project would result in **less than significant** impacts related to transit operations.

4.15.7.7 Construction Impacts

As the proposed project builds out over time, there will be temporary construction related traffic on the study roadway network. Construction traffic will consist of private automobiles driven by workers, as well as trucks transporting materials to and from the site. Potential access points for construction-generated vehicle trips will include Friars Road, Mission Village Drive, and San Diego Mission Road, and possibly Rancho Mission Road. The busiest construction period involving truck traffic is expected during site grading, the bulk of which is planned to occur during the early phases of site development through Year 2022 as excavation and movement of earth will be

required as part of the construction of the proposed Stadium, as well as preparation of the building pads for the non-Stadium uses across the site.

Detailed information related to calculating the number of construction-related vehicles was provided by the air quality consultant, Ramboll. Table 4.15-42 provides the estimated number of construction trips that would be generated in connection with each phase of site development (e.g., grading, site preparation, paving, building construction, etc.), including worker, vendor, and haul truck trips. As shown in Table 4.15-42, the highest number of vehicle trips that would be generated during a given phase of construction would result from trucks removing excavation material from the project site (i.e., trucks arriving at the site empty and leaving with material). This phase will generate an estimated average of 375 trips per day, and the total daily construction traffic volume during this phase is estimated to be 395 trips per day. Staging areas will be provided on-site and out of the public right-of-way to minimize heavy equipment trips on surrounding roadways, and to provide parking for construction workers.

Overall, the number of daily construction-related trips during the site development and during vertical construction, and the associated impacts, will be very limited compared to the projected number of net new daily vehicle trips (over 58,000 vehicles per day) generated at project buildout and full occupancy. In addition, many of the daily construction vehicle trips will occur outside of the peak commute hours when volumes on the study area roadways adjacent to the site are at their highest as construction workers typically arrive before the AM peak commute hour and often depart prior to the PM peak hour. Additionally, many of the heavy truck trips will occur outside of the AM and PM peak hours in order to avoid congestion and, as a result, these trips will not substantially influence peak period travel.

Nonetheless, as stated in Section 4.15.1.3, in order to minimize the potential temporary impacts on the roadway network resulting from construction-related traffic, CSU/SDSU or its designee will prepare a Construction Traffic Management Plan (**PDF-TRA-3**) in consultation with the City of San Diego and Caltrans and affected adjacent property owners as appropriate prior to initiating any construction activities. The Construction Traffic Management Plan will specifically address project construction traffic and parking, and will address truck haul routes, truck turning movements at the proposed project driveways, traffic control signage, accommodation of bicycle and pedestrian traffic, restriction of hauling activities to specific time periods, on-site circulation and staging areas, traffic control plans indicating temporary lane closures, and monitoring of traffic control to implement revisions, if necessary. Necessary encroachment and transportation permits will be obtained by CSU/SDSU or its designee prior to construction.

Beyond site development and construction of the proposed Stadium, the timing of vertical construction of the residential, campus office/retail, and hotel buildings is not known at this time. Buildings may be constructed individually or in multiples and will involve varying levels of construction traffic. Accordingly, specific Construction Traffic Management Plans will be developed for each specific phase of construction as site and building development progress based on the proposed construction activities and then-current traffic conditions and transportation network. While implementation of the Construction Traffic Management Plan (**PDF-TRA-3**) will help to minimize most construction traffic impacts, some temporary **potentially significant (TR-32)** impacts are expected to occur during both site preparation and vertical construction (e.g., lane closures during the widening of the off-ramp from Friars Road to Mission Village Drive). These impacts are expected to include increased intersection delay (due to slow-moving vehicles or lane closures) though will be temporary in duration and will likely vary in location from day to day.

Table 4.15-42. Construction Trips by Phase

Construction Phase Name	Worker Trips per Day ¹	Vendor Trips per Day ¹	Hauling Truck Trips per Day ²	Total Trips per Day ²
Grading Phase A	20	0	87	107
Site Preparation Phase A	18	0	0	18
Building Construction Stadium (Phase A)	271	106	0	377
Grading Phase A (cont'd)	20	0	0	20
Grading Phase B (Rough Residential Pad & Initial River Park)	20	0	375	395
Site Preparation Phase B (utilities)	18	0	0	18
Paving Stadium (Phase A)	15	0	0	15
Demolition of SDCCU (Phase A)	15	0	69	84
Architectural Coating Stadium (Phase A)	54	0	0	54
Demolition of SDCCU (Phase B)	15	0	96	111
Finish Phase B (Finish Residential Pad and River Park)	18	0	0	18
Grading Phase C	20	0	114	134
Building Construction Phase C1	189	58	0	247
Site Preparation - Off-Site Improvements	18	0	0	18
Paving Phase C1	15	0	0	15
Architectural Coating Phase C1	38	0	0	38
Building Construction Phase C2	122	32	0	154
Paving Phase C2	15	0	0	15
Architectural Coating Phase C2	24	0	0	24
Building Construction Phase C3	122	32	0	154
Paving Phase C3	15	0	0	15
Architectural Coating Phase C3	24	0	0	24

Source: California Emissions Estimator Model SDCCU - SDCCU Stadium (CalEEMod) and Fehr & Peers 2019.

Notes:

- ¹ Trips are presented as one-way trips and are based on CalEEMod® defaults.
- ² Trips are presented as one-way trips and represent the average daily trips for the phase. Hauling trips reflect project specific estimates of the volume of soil imported during Grading Phases A, B, and C; and demolition waste hauled during the Demolition Phases A and B.

4.15.7.8 Emergency Access

The proposed project includes a network of streets, promenades, and paved paths that will provide for vehicular access for emergency personnel responding to an incident. In the case of streets, all roadways have been designed or planned based on City of San Diego standards. Consistency with City standards indicates that adequate emergency access is available on these facilities. In addition, the site will include six access points to adjacent public streets to facilitate emergency response and evacuation as needed. Since the final design for all campus buildings has not yet been completed, an assessment of each building cannot be completed at this time. Because a complete evaluation cannot be completed based on the information available, this impact is considered **potentially significant (TR-33)**.

4.15.7.9 Vehicle Miles Traveled (VMT)

4.15.7.9.1 Background of SB 743 Legislation

On September 27, 2013, former Governor Jerry Brown signed SB 743 into law, starting a process that will fundamentally change the way transportation impact analysis is conducted under CEQA. These changes include elimination of auto delay, or LOS, and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. One of the primary goals of SB 743 is to streamline the environmental review process for projects that result in overall reductions in vehicular travel and to encourage infill and mixed-use developments, especially around high-capacity transit stations. These types of projects have a much higher propensity for travelers to use non-automobile modes and to make shorter vehicle trips for all their needs, including commuting to and from work. The proposed SDSU Mission Valley Campus project is the specific type of development that this legislation is intended to encourage because the proposed project would be located in an urban, infill setting within the Mission Valley area, and would be serviced by an existing and potential future trolley line, and regularly scheduled bus routes.

In response to SB 743, in December 2018, the state Resources Agency approved revised CEQA Guidelines, Section 15064.3 (see below), which provides the framework for moving forward with the analysis of vehicle related impacts based on assessment of a project's VMT as compared to the current methodology based on LOS; VMT is the amount and distance of automobile travel attributable to a project. Lead agencies can begin implementation of the VMT format any time between now and July 1, 2020, but must do so after that date; thus, lead agencies have until July 1, 2020 to begin implementing the new VMT analysis metric. To assist lead agencies in conducting such analyses, the state Office of Planning and Research (OPR) prepared a "Technical Advisory on Evaluating Transportation Impacts in CEQA" (Technical Advisory). For land use projects such as the proposed project, the Technical Advisory specifies that automobile VMT be measured by land use type for specific trip purposes or tours depending on the type of forecasting model being used.

OPR's Technical Advisory contains specifications for VMT analysis methodology and recommendations for significance thresholds. The Technical Advisory and related CEQA Guidelines contain sufficient information to inform lead agencies how to conduct the proposed analyses under the transition to a VMT metric. In response to SB 743 and the revised CEQA Guidelines, CSU has revised its Transportation Impact Study Manual (revised CSU TISM) so that it now provides the analysis methodology for analyzing impacts based on VMT, which is the new metric recommended in the CEQA Guidelines adopted in response to SB 743. The revised CSU TISM provides that transportation analyses prepared for CSU projects within the transition period between the present and July 2020 may include both types of analyses to provide information to both the CSU Board of Trustees, affected agencies, and the general public. Thus, the VMT analysis presented here is provided for information purposes only, and it is not used to identify environmental impacts.

4.15.7.9.2 SB 743 VMT Assessment Thresholds

The revised CEQA Guidelines, Section 15064.3, provide that VMT "generally is the most appropriate measure of transportation impacts." (Section 15064.3, subsection (a).) For land use projects such as the proposed Campus Master Plan, the Guidelines state that VMT "exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact." (Section 15064.3, subsection (b)(1).)

As to the methodology to be used when conducting a VMT analysis, the Guidelines provide that “a lead agency has discretion to choose the most appropriate methodology to evaluate a project’s VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project’s VMT, and may revise those estimates to reflect professional judgment based on substantial evidence.” (Section 15064.3, subsection (b)(4).)

The proposed project is located in a Transit Priority Area (TPA), which Section 15064.3, the OPR Technical Advisory, and the revised CSU TISM note are areas where new land use projects generally are exempt from project-level VMT assessment. TPAs are areas within ½-mile of either a high-quality (e.g., passenger rail) transit station or a bus stop with headways of 15 minutes or less. As previously explained, the SDSU Mission Valley Campus site contains the Green Line Stadium Station, which provides light-rail transit with existing peak hour headways of 15 minutes. The Guidelines, as noted, and the OPR Technical Advisory state that projects to be developed in these areas are “generally” screened out from needing to conduct project-level VMT. Use of the modifier “generally” implies that some developments may still result in project-level impacts. Therefore, a project-level VMT analysis was performed to fully evaluate this metric.

The project-level impact threshold for mixed-use projects like the SDSU Mission Valley Campus Master Plan development is project-generated VMT per service population that is 15% below the existing regional, subregional or Citywide VMT per service population (see Table 2: VMT Significance Thresholds on page 14 of the revised CSU TISM). Service population is defined as the sum of the population and employees within the subject area (e.g., region or project site). For this evaluation, the regional VMT per service population or travel efficiency is used as the comparative metric since the scale of this project is regional in nature and preliminary discussions of local jurisdiction’s SB 743 guidelines indicate a preference for a regional comparison.

In addition, to the project-level assessment, a cumulative impact assessment is also required per the revised CSU TISM in order to assess the project’s consistency with assumptions in the Regional Transportation Plan (RTP), in this case for the SANDAG region. This evaluation determines the project’s *effect* on overall VMT, and the cumulative impact threshold is whether the VMT per service population under the regional “with project” condition exceeds that of the “without project” scenario.

4.15.7.9.3 VMT Analysis

A VMT assessment for the proposed project was completed using output from the SANDAG regional travel demand model. As previously explained, the SANDAG regional travel demand model is the best available planning tool for forecasting travel demand in the greater San Diego area over the next 20 to 30 years. The model is also the most appropriate tool for determining how a development project the scope of the SDSU Mission Valley Campus Master Plan would affect regional and area-wide trip-making patterns in terms of VMT. The SANDAG Year 2012 regional travel demand model, which is the latest validation year model available and therefore the best tool for evaluating baseline conditions, was used to establish existing conditions, while the Year 2035 model was used to establish the future baseline conditions without and with the proposed project.

As noted in previous sections, the SANDAG 2035 regional travel demand model was used to establish long-term baseline traffic volumes on the roadway network just prior to the time of project buildout in 2037, and assuming no new development on the site. This scenario assumed that the project site would remain in operation as SDCCU Stadium through 2035 and that only a negligible amount of traffic would be generated on site during a typical weekday and during the normal AM and PM commute peak periods. That traffic would be primarily attributable to

the presence of the Stadium Station trolley stop and vehicles using the site as a park and ride facility, as well as from any minor Stadium maintenance activities.

The SANDAG model was subsequently run with the proposed project in place to determine both the amount of project-generated VMT and how the proposed project is expected to affect regional VMT. The proposed land uses were input to the model in place of the existing SDCCU Stadium, and the model trips were assigned to and from each traffic analysis zone within the region using complex algorithms based on existing travel patterns and household survey data. This “Plus Project” model run illustrates how the proposed development would change regional and area-wide travel patterns relative to VMT.

The VMT for various scenarios is presented in Table 4.15-43. The table lists the total regional VMT for the baseline conditions, as well as 2035 conditions without and with the project. Also shown in the table is the proposed project’s project-generated VMT, and the project-generated VMT after application of the 14.41% TDM reduction described in Section 4.15.1.2.

For the project-level VMT assessment, the results of the analysis were that the 2035 project-generated VMT per service population of 25.52 is 25.7% lower than the existing baseline efficiency metric of 34.34. Thus, the project-generated VMT would be more than 15% below the existing VMT, which is the applicable threshold established in both the revised CSU TISM and OPR Technical Advisory and, therefore, the project-generated VMT would be below the applicable thresholds and within the acceptable levels established by the State.

For the cumulative impact analysis, the long-range regional VMT per service population would decrease from 32.95 without the proposed project to 32.89 with the project. Given that the proposed project would reduce regional VMT per service population as compared to the RTP scenario (i.e., the scenario without the project), the 2035 plus project scenario would be below the applicable threshold and, thus, also within acceptable levels established by the State.

In addition to the above analysis, which was conducted based on the SANDAG regional model, due to the project site location within the City of San Diego, an additional evaluation was conducted comparing the project-generated VMT to the City-wide VMT per service population. The results of this supplemental analysis are similar to those based on the SANDAG model in that both project- and cumulative level impacts are below the applicable threshold. See TIA Appendix K for additional information regarding this supplemental analysis.

Table 4.15-43. VMT Analysis

Metric	Project-Level Assessment		Cumulative Level Assessment	
	2012 Baseline	Project Buildout	2035 No Project	2035 With Project
Vehicle Miles Traveled	157,783,545	358,758	185,304,624	185,460,707
Service Population	4,594,395	14,058	5,623,920	5,637,978
VMT Per Service Population	34.34	25.52	32.95	32.89
% Decrease from 2012 Baseline		25.7%		

Source: SANDAG 2035 Regional Activity-Based Travel Demand Model (Series 13) and Appendix 4.15-1.

4.15.7.10 CEQA Appendix G Criteria Analysis

The following is a summary of the results of the impact analysis relative to the significance criteria set forth in Appendix G of the CEQA Guidelines:

Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

As explained in the analysis presented above, the Existing Plus Project, both with and without Stadium event scenarios, is a hypothetical scenario provided for information purposes only. In contrast, the Existing Plus Stadium Event scenario provides a reasonable assessment of the proposed Stadium's potential traffic-related impacts as the Stadium is proposed to be built in the relative near-term. Impacts under this latter scenario, as disclosed in Section 4.15.7.1.3, would be **potentially significant (TR-1)**.

As presented in the analysis above (Section 4.15.7.3.1), under the Horizon Year (2037) Without Stadium Event scenario, the proposed project would result in **potentially significant** impacts to: 13 intersections (**TR-2** through **TR-14**); 12 individual freeway segments (encompassed within **TR-15** through **TR-23**); and 4 freeway ramp meters (**TR-24** through **TR-27**). Impacts related to off-ramp freeway ramp queuing would be **less than significant** under this scenario.

As presented in the analysis above (Section 4.15.7.3.2), under the Horizon Year (2037) With Stadium Event scenario, the proposed project would result in **potentially significant** impacts to: the same 13 intersections identified under the Without Stadium Event scenario, plus an additional 4 intersections (**TR-28A** through **TR-28Q**); the same 12 freeway segments plus five additional freeway segments (**TR-29A** through **TR-29R**); and the same 4 ramp meters (**TR-30A** through **TR-30D**). Impacts related to off-ramp freeway ramp queuing would be **less than significant** under this scenario.

Section 4.15.7.5, Parking Assessment, provides an analysis of overall parking supply, as well as Stadium parking supply and demand. As presented in Section 4.15.7.5.2, Stadium Parking Supply and Demand, even with implementation of a successful TDM Program (**PDF-TRA-1** and **PDF-TRA-2**) and TPMP measures (**PDF-TRA-4**), parking impacts for some major and all high attendance events are expected to be **potentially significant (TR-31)**.

As presented in Section 4.15.7.6, Multimodal Assessment, the proposed project would have **less than significant** impacts associated with pedestrian, bicycle, and transit facilities.

As presented in Section 4.15.7.7, Construction Impacts, while implementation of the Construction Traffic Management Plan (**PDF-TRA-3**) will help to minimize most construction traffic impacts, some temporary **potentially significant (TR-32)** impacts are expected to occur during both site preparation and vertical construction (e.g., lane closures during the widening of the off-ramp from Friars Road to Mission Village Drive).

Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

As presented above in Section 4.15.7.9, Vehicle Miles Traveled, the analysis of the project's impacts relative to VMT was provided for information purposes only. Nonetheless, when viewed at a project-level, the VMT generated by the proposed project, with application of the project's TDM Program, would be below the applicable threshold. As to the cumulative impact analysis, the regional VMT per service population would decrease in 2035 from 32.95 without the proposed project to 32.89 with the project. Given that the proposed project would reduce regional VMT per service population compared to the RTP scenario (i.e., without the project), the proposed project's cumulative impacts relative to VMT

would be below the applicable threshold. Therefore, impacts relative to VMT would be below the applicable thresholds of significance.

Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No potentially hazardous roadway design features (e.g., sharp curves or dangerous intersections) are proposed as part of the project. The installation and maintenance of sight-distance corridors would ensure that unobstructed line of sight is available on the approach to project intersections and driveways to maximize the length of roadway visible to motorists. At Friars Road & Stadium Way (Street A), the intersection will be re-constructed to appropriately size the roadway for the proposed project and to enhance safety for bicyclists and pedestrians. To improve safety and operations, the proposed project will also realign San Diego Mission Road east of Mission Village Drive to connect within the project site and to convert the Mission Village Drive & Friars Road Eastbound Ramps intersection to a standard four-legged configuration. Nearly all on-site intersections will include curb extensions and bulbouts, several on-site roadways will include raised crosswalks, and two roundabouts within the project site will help to manage travel speeds and enhance pedestrian safety. Additionally, all streets within the project site will include sidewalks on both sides of the street, or will include a multi-use path on one side of the street with enhanced pedestrian crossings. Separate pedestrian phases at signalized intersections to enhance safety and raise driver awareness will also be provided. As previously explained, the campus loop and other paths will provide in excess of two miles of pedestrian paths in addition to sidewalks. Compliance with Engineering Standards, safety-related policies, and incorporation of the project's TDM Program and transportation-related project design features would ensure that the impacts of the proposed project relative to traffic hazards would be **less than significant**.

Would the project result in inadequate emergency access?

As presented in Section 4.15.7.8, Emergency Access, the proposed project includes a network of streets, promenades, and paved paths that will provide for vehicular access for emergency personnel responding to an incident. In the case of streets, all roadways have been designed or planned based on City of San Diego standards. Consistency with City standards will ensure that adequate emergency access is available on these facilities. In addition, the site will include six access points to adjacent public streets to facilitate emergency response and evacuation as needed. However, since the final design for all campus buildings has not yet been completed, an assessment of each building cannot be completed at this time. Because a complete evaluation cannot be completed based on the information available, this impact is considered **potentially significant (TR-33)**.

4.15.8 Summary of Significant Impacts Prior to Mitigation

The following section summarizes the impacts that have been identified as potentially significant prior to mitigation.

4.15.8.1 Existing Plus Project – With and Without Stadium Event Conditions

As previously explained, due to the long-term buildout nature of the proposed project, the Existing Plus Project analysis presented in this section is provided for information purposes only; that is, for CEQA purposes, the identification of significant impacts and mitigation recommended for adoption is based on the Horizon Year (2037) Plus Project Conditions, which more appropriately reflects future cumulative traffic conditions, as well as future road improvements, forecast to be in place at the time the proposed project reaches buildout.

4.15.8.2 Existing Plus Stadium Event Conditions

Because the Stadium component of the project, separate and apart from the rest of the Project, is planned to be built in the near-term (i.e., 2022), the Existing Plus Stadium Event analysis presented in Section 4.15.7.1.3 presents a realistic scenario and, therefore, significant impacts and mitigation are identified under this scenario. While no significance threshold is available to assess impacts based on the relatively limited duration and number of days in a year that Stadium event traffic congestion would occur, the anticipated increase in the number of Stadium events over the number of events presently taking place at the Stadium would result in a potentially significant impact. Although implementation of the proposed Stadium TDM (**PDF-TRA-2**) and TPMP (**PDF-TRA-4**) Programs would help to minimize congestion associated with these additional events, the impact would remain **potentially significant (TR-1)**.

4.15.8.3 Horizon Year (2037) Plus Project Without Stadium Event Conditions

Intersections

Under Horizon Year Without Stadium Event conditions, the proposed project would contribute to **potentially significant** cumulative impacts to the following 13 intersections:

1. SR-163 Southbound Ramps/Ulric Street & Friars Road – Impact **TR-2**.
8. River Run Drive & Friars Road – Impact **TR-3**.
9. Fenton Pkwy & Friars Road – Impact **TR-4**.
10. Northside Drive & Friars Road – Impact **TR-5**.
17. I-15 SB Ramps & Friars Road – Impact **TR-6**.
18. I-15 NB Ramps & Friars Road – Impact **TR-7**.
19. Rancho Mission Road & Friars Road – Impact **TR-8**.
27. Fairmount Avenue & San Diego Mission Road/Twain Avenue Impact **TR-9**.
31. Texas Street & Camino del Rio N – Impact **TR-10**.
32. Ward Road & Rancho Mission Road – Impact **TR-11**.
34. Fairmount Avenue & Mission Gorge Road – Impact **TR-12**.
35. Fairmount Avenue & Camino del Rio North – Impact **TR-13**.
41. Ruffin Road & Aero Drive – Impact **TR-14**.

Freeway Segments

Under Horizon Year (2037) Plus Project conditions, all study area freeway segments are expected to operate at undesirable levels (LOS E or F) both without and with the project. Based on the applicable impact criteria, the proposed project would result in **potentially significant** cumulative impacts on the following freeway segments:

10. I-15 from Adams Avenue to I-8 – Impact **TR-15**
11. I-15 from I-8 to Friars Road – Impact **TR-16**
12. I-15 from Friars Road to Aero Drive – Impact **TR-17**
13. I-15 from Aero Drive to Balboa Avenue/Tierrasanta Boulevard – Impact **TR-18**

14. I-8 from Morena Boulevard to Taylor Street – Impact **TR-19**
- 15-16. I-8 from Taylor Street to SR-163 – Impact **TR-20**
- 17-18. I-8 from SR-163 to Texas Street – Impact **TR-21**
20. I-8 from I-805 to I-15 – Impact **TR-22.**
- 22-23. I-8 from Fairmount Avenue to College Avenue – Impact **TR-23.**

Ramp Metering

The proposed project would increase delay by more than two (2) minutes compared to Horizon Year conditions without the proposed project at those on-ramps operating with delays above 15 minutes and, therefore, would result in a **potentially significant** cumulative impact at the following four ramp locations:

- I-15 NB On-ramp from Friars Road – Impact **TR-24.**
- I-15 SB/I-8 Loop On-ramp from Friars Road – Impact **TR-25.**
- I-15 SB Direct On-ramp from Friars Road – Impact **TR-26.**
- I-8 EB On-ramp from SB Fairmount Avenue – Impact **TR-27.**

4.15.8.4 Horizon Year (2037) Plus Project Plus Stadium Event Conditions

Intersections

Under the Horizon Year Plus Project Plus Stadium Event conditions, the proposed project would result in significant impacts at four additional intersections beyond those impacted under Without Stadium Event conditions. The following is a complete list of all intersections at which the proposed project would result in a **potentially significant** cumulative impact under the Horizon Year (2037) Plus Project Plus Stadium Event conditions:

1. SR-163 Southbound Ramps/Ulric Street & Friars Road – Impact **TR-28A.**
3. Frazee Road & Friars Road – Impact **TR-28B**
8. River Run Drive & Friars Road – Impact **TR-28C.**
9. Fenton Pkwy & Friars Road – Impact **TR-28D.**
10. Northside Drive & Friars Road – Impact **TR-28E.**
11. River Run Drive & Friars Road – Impact **TR-28F**
14. Mission Village Drive/Aztec Way (Street D) & Street 2 – Impact **TR-28G**
17. I-15 SB Ramps & Friars Road – Impact **TR-28H.**
18. I-15 NB Ramps & Friars Road – Impact **TR-28I.**
19. Rancho Mission Road & Friars Road – Impact **TR-28J.**
27. Mission Gorge Road & Friars Road – Impact **TR-28K.**
28. Fairmount Avenue & San Diego Mission Road/Twain Avenue Impact **TR-28L.**
31. Texas Street & Camino del Rio N – Impact **TR-28M.**
32. Ward Road & Rancho Mission Road – Impact **TR-28N.**
34. Fairmount Avenue & Mission Gorge Road – Impact **TR-28O.**
35. Fairmount Avenue & Camino del Rio North – Impact **TR-28P.**

41. Ruffin Road & Aero Drive – Impact **TR-28Q**.

Freeway Segments

Under the Horizon Year Plus Project Plus Stadium Event scenario, the proposed project would result in potentially significant impacts at five additional freeway segments beyond those impacted under Without Stadium Event conditions. The following is a complete list of all freeway segments at which the proposed project would result in a **potentially significant** cumulative impact under the Horizon Year (2037) Plus Project Plus Stadium Event conditions:

1. SR-163 from 6th Avenue to I-8 – Impact **TR-29A**.
2. SR-163 I-8 to Friars Road – Impacts **TR-29B**.
- 2-4 SR-163 from I-8 to I-805 – Impacts **TR-29C**.
5. I-805 from Madison Avenue to I-8 – Impacts **TR-29D**.
- 8-9. I-805 from Mesa College/Kearny Villa Road to Balboa Avenue – Impacts **TR-29E**.
9. I-805 from SR-163 to Balboa Avenue – Impacts **TR-29F**.
10. I-15 from Adams Avenue to I-8 – Impacts **TR-29G**.
11. I-15 from I-8 to Friars Road – Impacts **TR-29H**.
12. I-15 from Friars Road to Aero Drive – Impacts **TR-29I**.
13. I-15 from Aero Drive to Balboa Avenue/Tierrasanta Boulevard – Impacts **TR-29J**.
14. I-8 from Morena Boulevard to Taylor Street – Impacts **TR-29K**.
- 15-17. I-8 from Taylor Street to SR-163 – Impacts **TR-29L**.
17. I-8 from SR-163 to Mission Center Road – Impacts **TR-29M**.
18. I-8 from Mission Center Road to Texas Street – Impacts **TR-29N**.
19. I-8 from Texas Street to I-805 – Impacts **TR-29O**.
20. I-8 from I-805 to I-15 – Impacts **TR-29P**.
21. I-8 from I-15 to Fairmount Avenue – Impacts **TR-29Q**.
- 22-23. I-8 from Fairmount Avenue to College Avenue – Impacts **TR-29R**.

Ramp Metering

The proposed project would increase delay by more than two (2) minutes compared to Horizon Year conditions without the project at those on-ramps operating with delays above 15 minutes and, therefore, would result in a **potentially significant** cumulative impact at the same four ramp locations as under the Without Stadium Event scenario:

- I-15 NB On-ramp from Friars Road – Impact **TR-30A**.
- I-15 SB/I-8 Loop On-ramp from Friars Road – Impact **TR-30B**.
- I-15 SB Direct On-ramp from Friars Road – Impact **TR-30C**.
- I-8 EB On-ramp from SB Fairmount Avenue – Impact **TR-30D**.

4.15.8.5 Stadium Parking Supply and Demand

Based on the analysis presented in this section, an additional off-site parking supply will likely need to be provided for Stadium events exceeding 25,000 attendees regardless of day of week. While the Stadium TDM and TPMP

Programs will help to minimize overall parking demand and also identify off-site parking supplies as appropriate, the number of additional parking spaces needed for a capacity event of 35,000 attendees could range from 1,000 to 2,500 depending on the AVO. Thus, even with successful TDM and TPMP Programs in place, parking impacts for some major and all high attendance events are expected to be **potentially significant (TR-31)**.

4.15.8.6 Construction-Related Impacts

As explained in Section 4.15.7.7, while implementation of the Construction Traffic Management Plan will help to minimize most construction traffic impacts, some temporary **potentially significant (TR-32)** impacts are expected to occur during both site preparation and vertical construction (e.g., lane closures during the widening of the off-ramp from Friars Road to Mission Village Drive). These impacts will be temporary in duration and will likely vary in location from day to day, but they are expected to include increased intersection delay (due to slow-moving vehicles or lane closures) for some short time periods relative to the overall development schedule of the project.

4.15.8.7 Emergency Access

As explained in Section 4.15.7.8, the proposed project includes a network of streets, promenades, and paved paths that will provide for vehicular access for emergency personnel responding to an incident. In the case of streets, all roadways have been designed or planned based on City of San Diego standards. Consistency with City standards ensures that adequate emergency access would be available on these facilities. In addition, the site will include six access points to adjacent public streets to facilitate emergency response and evacuation as needed. However, since the final design for all campus buildings has not yet been completed, an assessment of each building cannot be completed at this time. Because a complete evaluation cannot be completed based on the information available, this impact is considered **potentially significant (TR-33)**.

4.15.9 Mitigation Measures

4.15.9.1 Existing Plus Project – With and Without Stadium Event Conditions

As previously explained, due to the long-term buildout nature of the proposed project, the Existing Plus Project analysis presented in this section is provided for information purposes only; that is, for CEQA purposes, the identification of significant impacts and recommended mitigation is based on the Horizon Year (2037) Plus Project Conditions, which more appropriately reflects future cumulative traffic conditions, as well as future road improvements, forecast to be in place at the time the proposed project reaches full buildout. For information purposes, hypothetical mitigation measures that could be used to reduce significant impacts under the existing plus project scenarios are provided in **Appendix 4.15-1, Section 9.1**.

4.15.9.2 Existing Plus Stadium Event Conditions

As previously explained in the Existing Plus Stadium Event analysis presented in Section 4.15.7.1.3, under the proposed project there would be an increase in the number of events held at the Stadium. While these events would be infrequent, and the Stadium TDM and TPMP Programs to be implemented as part of the proposed project (**PDF-TRA-2** and **PDF-TRA-4**, respectively) would help to reduce the potentially significant impacts related to increased congestion associated with these additional events, there is no feasible mitigation that would reduce the remaining impacts to less than significant.

4.15.9.3 Horizon Year (2037) Plus Project Without Stadium Event Conditions

Intersections

Each of the following proposed mitigation measures would eliminate the project's incremental impact once implemented, resulting in operations at or slightly better than Horizon Year Without Project conditions. In those instances in which the payment of funds or construction of improvements is required on the part of CSU/SDSU, the mitigation measure includes an implementation trigger, expressed as "DUEs" or dwelling unit equivalents, directing the timing of payment or construction, as applicable.⁸ Additionally, for reference purposes, the agency with jurisdiction and control over the recommended improvement (e.g., Caltrans, City of San Diego) is noted in parentheses. Table 4.15-44, Transportation Improvement Implementation Plan, illustrates the proposed mitigation improvements, the applicable DUE, and the Project's share of future growth, or applicable mitigation fair-share percentage; the table also lists the intersection improvements to be constructed as part of the proposed project and the corresponding DUE.

MM-TRA-1 Intersection 1: SR-163 Southbound Ramps/Ulric Street & Friars Road (Caltrans) – The recommended improvement would be to re-optimize the coordinated signal offset. This action would result in a less than significant impact per the CSU TISM. Signal timing modifications would normally be implemented periodically at an intersection in order to optimize operations and address changing traffic volumes regardless of the addition of project traffic. Regarding the recommended signal offset optimization, CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvement from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the improvement is considered infeasible.

MM-TRA-2 Intersection 8: River Run Drive & Friars Road (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 5,160 DUEs, CSU/SDSU shall pay its fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) in order to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic.

Alternative mitigation would be to widen Friars Road eastbound to add a fourth through lane, although widening this segment of Friars Road is not consistent with the 1985 Mission Valley Community Plan or the proposed Mission Valley Community Plan update (June 2019); therefore, for CEQA purposes, such physical mitigation is considered infeasible. The recommended mitigation to pay a fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) would improve operations in the PM peak hour to 32.9 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego

⁸ The dwelling unit equivalent (DUE) normalizes land use quantities for various uses relative to the trip generation of a typical dwelling unit, in this case an apartment dwelling. Each of the proposed project's land uses has an average daily trip generation rate, which rate was divided by the average apartment rate of 6 daily trips. For example, Scientific Research uses have a daily trip generation rate of 8 trips per thousand square feet. By dividing this rate (8) by the average daily trip generation rate for apartments (6), the result is that one thousand square feet of Scientific Research uses is equivalent to 1.33 dwelling units, or DUEs. Thus, the total proposed 301 thousand square feet of Scientific Research space, which would generate 2,408 average daily trips, is equivalent to approximately 401 DUEs. Based on the proposed project phasing, in combination with the results of the impact analysis, a DUE trigger identifying when the mitigation improvement is necessary, can then be determined. For additional information regarding the DUE calculation, please see TIA Appendix I.

facility and, therefore, cannot guarantee implementation of the recommended improvement. Accordingly, the mitigation is considered infeasible.

MM-TRA-3 Intersection 9: Fenton Pkwy & Friars Road (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 4,150 DUEs, CSU/SDSU shall pay its fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic.

Alternative mitigation would be to widen Friars Road eastbound to add a fourth through lane, although widening this segment of Friars Road is not consistent with the 1985 Mission Valley Community Plan or the proposed Mission Valley Community Plan update (June 2019); therefore, for CEQA purposes, such physical mitigation is considered infeasible. The recommended mitigation to pay a fair-share towards the cost to optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) would improve operations in the PM peak hour to 83.2 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the recommended improvement. Accordingly, the mitigation is considered infeasible.

MM-TRA-4 Intersection 10: Northside Drive & Friars Road (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 5,270 DUEs, CSU/SDSU shall pay its fair-share towards the cost to add a second northbound right-turn lane and optimize the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic.

Alternative mitigation would be to widen Friars Road eastbound to add a fourth through lane, although widening this segment of Friars Road is not consistent with the 1985 Mission Valley Community Plan or the proposed Mission Valley Community Plan update (June 2019). The recommended mitigation to pay a fair-share towards the cost to add a second northbound right-turn lane is warranted by the projected right-turn volume of approximately 800 vehicles in the PM peak hour for this movement. The existing width for the northbound approach is approximately 50 feet, so the landscape strip could be converted to widen the road by four feet to provide a 13' outside right turn lane and an 11' inside right turn-lane (assuming the left-turn and through lanes are 10' wide). To address potential pedestrian safety related impacts, it also is recommended that a protected pedestrian phase be provided with this improvement to avoid the dual threat conflict. This option would improve operations in the PM peak hour to 51.8 seconds of delay. However, as to the physical improvement, there is no plan or program in place to provide the necessary additional funding and construct the improvement; therefore, the addition of a second northbound right-turn lane is infeasible. As to optimization of the traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A), while CSU would be responsible for the full cost of this improvement, because CSU does not have jurisdiction over this City of San Diego facility it cannot guarantee implementation of the improvement. Accordingly, the mitigation is considered infeasible.

MM-TRA-5 Intersection 17: I-15 SB Ramps & Friars Road (Caltrans) – The recommended improvement would be to reconstruct the intersection to add a second eastbound left-turn lane, a second eastbound right-turn lane, and a second westbound right-turn lane. Implementation of these improvements

would require widening both on-ramps to allow for two receiving lanes. If this improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of pedestrian and bicycle enhancements. Accordingly, the westbound right-turn lane would be squared off to improve pedestrian safety, and the westbound right-turn would be provided with an overlap phase. It should be noted that the Civita (Quarry Falls) development is also required to implement a portion of these improvements, including the addition of the second eastbound left-turn lane and squaring up the westbound right-turn movement; the SDSU Mission Valley Campus improvements would provide substantially more vehicle queuing approaching the ramp intersections, including on the bridge. Caltrans is expected to additionally require that sidewalks and buffered bike lanes are provided as part of this improvement, and that a blank-out No Right Turn sign be installed at the dual eastbound and westbound right turn lanes. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian calls will be very rare and, accordingly, were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. Implementation of these improvements would result in operations in the AM and PM peak hours of 52.0 and 67.0 seconds of delay, respectively. These calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queuing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the improvement is considered infeasible.

MM-TRA-6

Intersection 18: I-15 NB Ramps & Friars Road (Caltrans) – The recommended improvement would be to reconstruct the intersection to add a second eastbound left-turn lane. It should be noted that the Civita (Quarry Falls) development is also required to implement this improvement but that it does not include any widening of the Friars Road bridge; the SDSU Mission Valley Campus improvements would provide substantially more vehicle queuing approaching the ramp intersections, including on the bridge. If this improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of sidewalks and buffered bike lanes be provided as part of this improvement, which would require widening the Friars Road overpass to I-15. Caltrans is expected to additionally require that the southbound approach be squared off and converted to two right-turn lanes provided with an overlap phase, and that a blank-out No Right Turn sign be installed for the westbound approach to improve pedestrian safety. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian calls will be very rare and, accordingly, were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. In the PM peak hour, re-optimization would include coordinating the signal with the adjacent I-15 Southbound Ramps & Friars Road intersection and the adjacent Rancho Mission Road & Friars Road intersection, where coordination is already in place in the AM peak hour. These improvements would result in operations in the AM and PM peak hours of 80.7 and 53.5 seconds of delay, respectively. These calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queuing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding

sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the improvement is considered infeasible.

- MM-TRA-7** Intersection 19: Rancho Mission Road & Friars Road (City of San Diego) – The recommended improvement is signal optimization at the adjacent I-15 Northbound Ramps & Friars Road intersection (Intersection 18), where coordination is already in place in the AM peak hour. This mitigation would improve operations at Intersection 19 in the PM peak hour to 67.2 seconds of delay. These calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queuing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. However, as stated above with respect to Intersection 18, because CSU cannot guarantee that Caltrans will be able to obtain the funds necessary to implement signal optimization at Intersection 18, the improvement is considered infeasible.
- MM-TRA-8** Intersection 27: Fairmount Avenue & San Diego Mission Road/Twain Avenue (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 8,940 DUEs, CSU/SDSU shall pay its fair-share to re-stripe San Diego Mission Road to add a separate eastbound left-turn lane. This re-striping would result in an 11'-wide right-turn lane and 10' left-turn and through lanes for the eastbound approach. To properly align the east-west approaches, the westbound approach of Twain Avenue should also be re-striped to provide a separate left-turn lane. On this approach, the re-striping would result in a 12' curb lane that is a shared right-turn and through lane, an 11' exclusive through lane, and a 10' left-turn lane. Protected left-turn phasing is assumed to be provided for both eastbound and westbound approaches. This mitigation would improve operations in the AM peak hour to 35.3 seconds of delay and in the PM peak hour to 33.1 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.
- MM-TRA-9** Intersection 31: Texas Street & Camino del Rio S (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 5,130 DUEs, CSU/SDSU shall restripe both the eastbound and westbound through lanes to be shared left-turn and through lanes and performing signal re-optimization, which is standard practice with intersection reconfiguration. This mitigation would improve operations in the AM peak hour to 108.4 seconds of delay and in the PM peak hour to 86.9 seconds of delay, and would result in a less than significant impact per the CSU TISM. However, CSU does not have jurisdiction over this City of San Diego facility, and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.
- MM-TRA-10** Intersection 32: Ward Road & Rancho Mission Road (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 3,950 DUEs, CSU/SDSU shall install a traffic signal at this intersection. This improvement would improve operations in the AM and PM peak hours to 4.2 and 6.3 seconds of delay, respectively. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.
- MM-TRA-11** Intersection 34: Fairmount Avenue & Mission Gorge Road (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 10,160 DUEs, CSU/SDSU shall optimize the signal timing to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This mitigation would improve operations in the PM peak hour to 54.1

seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.

MM-TRA-12 Intersection 35: Fairmount Avenue & Camino del Rio North (Caltrans) – The required improvement would be to restripe the eastbound approach to provide a second eastbound right-turn lane as an approximately 150-foot pocket lane and increase the traffic signal cycle length from 130 to 150 seconds. Signal re-optimization is standard practice with intersection reconfiguration. Note that this signal is coordinated with the signal at Fairmount Avenue & Mission Gorge Road. Northbound and southbound through volumes are high enough to warrant additional capacity at this intersection, and a road widening to add lanes is recommended in the current Navajo Community Plan (adopted 2015). However, this mitigation is currently considered infeasible due to physical limitations beneath the adjacent bridges serving the I-8 mainline, I-8 ramp, and trolley. It also should be noted that the Mission Valley Community Plan Update Final PEIR (May 2019) identified mitigation at this intersection but determined that roadway widening was infeasible due to limited right-of-way. The mitigation to add a second eastbound right-turn lane would improve operations to 95.2 and 109.0 seconds of delay in the AM and PM peak hours, respectively. To the extent Caltrans seeks to pursue the improvements, CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, and for the other reasons noted above relating to physical and regulatory obstacles, the recommended improvements are considered infeasible.

MM-TRA-13 Intersection 41: Ruffin Road & Aero Drive (City of San Diego) – Prior to the issuance of the applicable CSU building permit for, or occupancy of, 9,780 DUEs, CSU/SDSU shall optimize the signal timing at the intersection to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This mitigation would improve operations in the PM peak hour to 49.8 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the mitigation is considered infeasible.

Table 4.15-44 Transportation Improvement Implementation Plan

Improvement	Development Trigger (DUEs1)	Project Share of Future Growth2
<i>Initial Improvements with Stadium Only</i>		
Stadium Transportation and Parking Management Plan (TPMP)	w/Stadium only	N/A
<i>Proposed Project Features</i>		
<i>Intersection 11. Friars Road & Stadium Way (Street A) – Feature:</i> Install a new traffic signal, replace the existing free eastbound right-turn lane with a single right-turn lane (squared up at the signal), install an eastbound protected bike lane, and construct and two westbound left-turn lanes. Reconstruct Stadium Way (Street A) at Friars Road to accommodate two southbound departure lanes, and modify the northbound approach to include two left-turn lanes and two-right turn lanes. Lanes can be temporarily reconfigured during major stadium events as part of the TPMP noted above. See TIA Figure 11 .	w/first office building on main campus or completion of the shared use campus loop path	N/A

Table 4.15-44 Transportation Improvement Implementation Plan

Improvement	Development Trigger (DUEs ¹)	Project Share of Future Growth ²
<i>Intersection 13. Mission Village Drive/Street D & Friars Road EB Ramps – Feature:</i> Widen the eastbound off-ramp approach to include a shared left-turn/through lane and dual right turn lanes at Mission Village Drive. Widen the northbound approach to provide dual right-turn lanes, and widen the EB-on ramp from Mission Village Road to Friars Road to two lanes along the entire length and extend a new lane to the I-15 S Ramps intersection. This includes widening of the Friars Road bridge over tank farm access road. See TIA Figure 11 .	4,270	N/A
<i>Intersection 12. Mission Village Drive & Friars Road WB Ramps – Feature:</i> Widen the Friars Road WB Off-Ramp to add a separate westbound left-turn pocket (maintaining the existing shared through/left-turn lane). Widen the Mission Village Drive overpass to Friars Road in both directions to provide a second northbound left-turn lane at this intersection (and a second southbound left-turn lane at (Intersection 13). Buffered bike lanes and sidewalks will be maintained. See TIA Figure 11 .	7,840	N/A
Proposed Project Mitigation		
<i>Intersection 32. Ward Road & Rancho Mission Road – Mitigation:</i> Install a traffic signal.	3,950	69.1%
<i>Intersection 9. Fenton Parkway & Friars Road – Mitigation:</i> Optimize signals within corridor of Friars Road from River Run Drive to Stadium Way (Street A).	4,510	41.5%
<i>Intersection 31. Texas Street & Camino del Rio S – Mitigation:</i> Restripe to convert WBT lane to a shared WBT/L lane and EBT to EBT/L lane; re-optimize signal timing splits.	5,130	9.0%
<i>Intersection 8. River Run Drive & Friars Road – Mitigation:</i> Optimize signals within corridor of Friars Road from River Run Drive to Stadium Way (Street A).	5,160	47.8%
<i>Intersection 10. Northside Drive & Friars Road – Mitigation:</i> Optimize signals within corridor of Friars Road from River Run Drive to Stadium Way (Street A).	5,270	44.2%
<i>Intersection 19. Rancho Mission Road & Friars Road – Mitigation:</i> Coordinate signal with I-15 NB Ramps & Friars Rd in the PM peak hour.	5,830	38.6%
<i>Intersection 27. Fairmount Ave & San Diego Mission Rd/ Twain Ave – Mitigation:</i> Restripe the eastbound and westbound approaches to provide each with a dedicated left-turn lane (see TIA Figure 26). Signal modification (including new heads) to provide protected left turn phases on these approaches.	8,940	49.9%
<i>Intersection 41. Ruffin Road & Aero Drive – Mitigation:</i> Optimize signal timing splits.	9,780	26.2%
<i>Intersection 34. Fairmount Ave & Mission Gorge Rd – Mitigation:</i> Optimize signal timing splits.	10,160	32.5%

Source: Appendix 4.15-1

Notes:¹ DUEs=dwelling unit equivalents

² Project share of future growth is calculated as a percentage = (Project Traffic) / (Horizon Year Plus Project Traffic – Existing Traffic). For impacts in both the AM and PM peak hour, the larger of the two peak hour project shares is applied. While the proposed project share of future growth generally is equivalent to the project's "fair-share" in the context of mitigation payments, in those instances in which mitigation is available that would return operations to pre-project conditions consistent with CEQA's mitigation requirements but would not necessarily result in acceptable levels of service (e.g., traffic signal optimization), the proposed project "fair-share" is the full cost of the recommended improvement, or 100%, rather than the percentage project share of future growth.

Freeway Segments

As shown in Table 4.15-31, the proposed project would contribute to significant cumulative impacts to 20 individual study area freeway segments on SR-163, I-15, and I-8 during one or both peak hours under Horizon Year Plus Project Conditions. Mitigation of freeway impacts would theoretically involve widening of the freeway facility to provide additional mainline or auxiliary lane capacity to reduce the projected V/C ratio(s). However, widening mainline freeway segments is beyond the scope of a single development project due to numerous factors including the potential complexities of modifying adjacent interchanges, acquiring right-of-way, proximity of existing building structures and roadways, high construction costs, etc. In addition, no established mechanism (i.e., fee program) exists for any of the three facilities to obtain a fair-share contribution from all new development in the area and region.

SANDAG, as the regional planning agency in San Diego County, has completed various studies regarding improvements along all the major freeways within the study area. In particular, SANDAG, in collaboration with Caltrans, the City of San Diego, the Metropolitan Transit System, and other key stakeholders, is developing a multimodal corridor study for the section of I-8 located within the City of San Diego. The Preliminary Draft Report for the *I-8 Corridor Study* (August 2016) considers future improvements, as well as other feasible concepts, describes existing conditions, identifies future deficiencies, develops multimodal alternatives and measures, performs technical analysis, and proposes an implementation strategy. The study addresses various topics, including: right-of-way constraints, transit services, freeway interchanges, select local streets and intersections, bike and pedestrian access (active transportation), TDM, Transportation Systems Management (TSM), and other strategies to encourage the use of alternative travel modes.

Additionally, Caltrans recently completed an I-805 Transportation Concept Report that addresses congestion and operations along the entire length of the corridor. A combination of strategies is planned and incorporated in the Regional Transportation Plan (RTP), including high capacity transit projects, managed lanes, active transportation projects, auxiliary lanes, and ramp metering. Many of the concepts addressed in the I-8 and I-805 studies can be applied to other freeways, including I-15. Caltrans is also considering implementing managed lane strategies within the I-15 corridor in the future to address congestion and enhance mobility.

In furtherance of these studies, CSU/SDSU will support Caltrans in its efforts to obtain funding from the state Legislature for the costs to prepare a Project Study Report-Project Development Support-Project Initiation Document (Study) to evaluate alternatives to increase capacity, improve mobility, and relieve congestion on impacted segments or adjacent interchanges. Alternatives to be considered include enhanced acceleration/deceleration lanes and interconnecting ramp meters. Dependent upon the outcome of the Study, CSU/SDSU will continue to support Caltrans in its efforts to obtain funding from the state Legislature for the costs to implement the capital improvements identified in the Study.

In addition, as previously discussed, the proposed project would implement a TDM Program to reduce the number of site-generated vehicle trips beyond the level used in this analysis (see Section 4.15.1.2). Additionally, as a mixed-use project located in a transit priority area (TPA) with a high-capacity transit station that is centrally located in the region, the proposed project will minimize the number of trips and corresponding VMT within the region, including on the freeway system as compared to other development projects within the County located beyond the reach of a transit station. Accordingly, the SDSU Mission Valley Campus Master Plan project would reduce its freeway impacts to the greatest extent feasible.

Ramp Metering

I-15 NB On-Ramp at Friars Road – Delays could be reduced to below 15 minutes by the addition of a third mixed flow lane. However, this ramp already consists of two mixed flow lanes and one HOV lane, which is the maximum number of lanes typically designed by Caltrans. Therefore, additional roadway capacity is infeasible. As traffic patterns change, it may be possible to adjust the metering rate, particularly with I-15 corridor improvements such as managed lanes.

MM-TRA-14 I-15 SB Loop On-Ramp at Friars Road - Delays could be reduced to below 15 minutes by the addition of a second mixed flow lane on this ramp. To provide a second lane on this ramp would require widening a bridge structure over both the multi-use path connecting the site to Murphy Canyon Road and a drainage channel. CSU will support Caltrans in its effort to obtain funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended mitigation is considered infeasible.

MM-TRA-15 I-15 SB On-Ramp at Friars Road - Delays could be reduced to below 15 minutes by the addition of a second mixed flow lane on this ramp. To provide a second lane on this ramp will require widening of a bridge structure over the multi-use path connecting the site to Murphy Canyon Road. CSU will support Caltrans in its effort to obtain funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended mitigation is considered infeasible.

I-15 EB On-Ramp at SB Fairmount Avenue - Delays could be reduced to below 15 minutes by the addition of a second mixed flow lane. However, this improvement is infeasible due to the insufficient right-of-way. Therefore, no additional on-ramp capacity is recommended. As such, mitigation is infeasible. As traffic patterns change, the metering rate may be able to be adjusted, particularly with I-8 corridor improvements such as managed lanes.

4.15.9.4 Horizon Year (2037) Plus Project Plus Stadium Event Conditions

Intersections

Mitigation measures **MM-TRA-1** through **MM-TRA-13** also are applicable under this scenario to help reduce potentially significant impacts to intersections during Stadium events (Impacts **TR-28A to TR-28Q**). Assuming all proposed improvements are implemented, under stadium event conditions, significant cumulative impacts would remain at the following intersections: (3) Frazee Road & Friars Road; (9) Fenton Parkway & Friars Road; (10) Northside Drive & Friars Road; (11) Staidum Way (Street A) & Friars Road; (14) Street D & Street 4; (22) Mission Gorge Road & Friars Road; and (34) Fairmount Avenue & Mission Gorge Road (see TIA Table 52). These same intersection also would exceed the City of San Diego thresholds.

Strategies to assist in the reduction of weekday Stadium event traffic and related impacts would be implemented through the TDM and TPMP Programs previously described. Event-generated congestion (albeit at a lesser level) is also expected to occur for other major and high-attendance weekday events with attendance levels ranging from 5,000 to 20,000 or more. However, feasible mitigation to reduce potential significant impacts at all affected intersections is not available.

Freeway Segments

The same mitigation analysis presented above under Horizon Year (2037) Existing Plus Project Without Stadium Event scenario also applies to this scenario relative to impacts TR-35A to TR-35R. As previously stated, CSU/SDSU will support Caltrans in its efforts to obtain funding from the state Legislature for the costs to prepare a Project Study Report-Project Development Support-Project Initiation Document (Study) to evaluate alternatives to increase capacity, improve mobility, and relieve congestion on impacted segments or adjacent interchanges. In addition, the proposed project is located in a TPA and would implement a TDM Program to reduce the number of site-generated vehicle trips beyond the level used in this analysis (see Section 4.15.1.2).

Ramp Metering

Mitigation measures **MM-TRA-14** and **MM-TRA-15** would also be applied under this scenario to help reduce potentially significant impacts associated with freeway ramp metering; however, mitigation to reduce the impacts to less than significant is infeasible.

4.15.9.5 Stadium Parking Supply and Demand

Regarding impact **TR-31** (Stadium Parking Supply and Demand), parking demand for the Stadium is expected to be served by the parking structure under the campus office space and by the surface spaces in Tailgate Park, both of which are immediately adjacent to the Stadium. These areas will provide a total of 6,205 spaces. The vast majority of Stadium events will be held on weekend afternoons and evenings when the demand for the campus office uses will be negligible. For all events, the TPMP Program will be implemented to manage parking demand and traffic associated with various attendance levels (**PDF-TRA-2**). However, mitigation to fully reduce all potential impacts to less than significant is infeasible.

4.15.9.6 Construction-Related Impacts

As previously explained, in order to minimize the potential temporary impacts on the roadway network resulting from construction-related traffic (**TR-32**), as part of the proposed project a Construction Traffic Management Plan will be implemented (**PDF-TRA-3**). However, mitigation to fully reduce all potential impacts to less than significant is infeasible.

4.15.9.7 Emergency Access

The following mitigation measure would address potentially significant impact **TR-33** regarding emergency access:

MM-TRA-16 As part of the building construction and occupancy permitting process, emergency access to each building will be reviewed for consistency with and adherence to standards identified in applicable regulatory documents including but not limited to the Uniform Building Code and California Fire Code. In addition, buildings will be inspected by emergency responder entities including the City of San Diego Fire Department, which has a station located on the north side of Friars Road just east of the Stadium Way (Street A) intersection.

4.15.10 Level of Significance After Mitigation

4.15.10.1 Existing Plus Project – With and Without Stadium Event Conditions

As previously stated, due to the long-term nature of the buildout project, the Existing Plus Project analysis presented herein is provided for information purposes only; that is, for CEQA purposes, the identification of significant impacts and mitigation recommended for adoption is based on the Horizon Year (2037) Plus Project Conditions, which more appropriately reflects future cumulative traffic conditions, as well as future road improvements, forecast to be in place at the time the proposed project reaches full buildout.

4.15.10.2 Existing Plus Stadium Event Conditions

While a single event at the new Stadium would result in traffic operations that are the same or better than existing conditions, the new Stadium may hold more total events in a given year with attendance levels of 20,000 patrons or more. Under Existing Conditions, five high-attendance events (i.e., events with over 20,000 attendees) were held on a weekday. One of those events (the Beyonce and Jay-Z concert) had 40,885 attendees, which would have been limited to 35,000 persons with the new facility. The proposed Stadium is expected to hold 11 weekday high-attendance events annually, of which approximately four (4) are planned to be professional soccer games, which will not occur unless a professional team is based in San Diego. Thus, two to six additional events with 20,000 or more attendees are expected to take place annually with the new Stadium. While no significance threshold is available to assess impacts of this type that would occur on an infrequent and irregular basis, the anticipated increase in the number of Stadium events would result in a potentially significant impact. Although implementation of the proposed Stadium TDM and TPMP Programs (**PDF-TRA-2** and **PDF-TRA-4**, respectively) would help to minimize congestion associated with these additional events and reduce potential impacts, there is no feasible mitigation to fully reduce all impacts to less than significant and, therefore, the impact would remain **significant and unavoidable (TR-1)**.

4.15.10.3 Horizon Year (2037) Plus Project Without Stadium Event Conditions

Intersections

1. SR-163 Southbound Ramps/Ulric Street & Friars Road (Caltrans) – Impact **TR-2** would be **significant and unavoidable** because CSU cannot guarantee that Caltrans will be able to obtain the funding necessary to implement the improvements recommended by **MM-TRA-1** and, therefore, mitigation is considered infeasible.
8. River Run Drive & Friars Road (City of San Diego) – Impact **TR-3** would be **significant and unavoidable** because CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-2**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended traffic signal optimization, thereby reducing the project's impact to less than significant.
9. Fenton Pkwy & Friars Road (City of San Diego) – Impact **TR-4** would be **significant and unavoidable** because CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-3**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended traffic signal optimization, thereby reducing the project's impact to less than significant.
10. Northside Drive & Friars Road (City of San Diego) – Impact **TR-5** would be **significant and unavoidable** because as to the recommended physical improvements there is no plan or program in place to provide

the necessary additional funding, in combination with the CSU fair-share, to implement the improvement. Additionally, as to the recommended signal optimization, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-4**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended signal optimization, although impacts would not be fully mitigated by this improvement alone.

17. I-15 SB Ramps & Friars Road (Caltrans) – Impact **TR-6** would be **significant and unavoidable** because CSU cannot guarantee that Caltrans will be able to obtain the funding necessary to implement the improvements recommended by **MM-TRA-5** and, therefore, mitigation is considered infeasible.
18. I-15 NB Ramps & Friars Road (Caltrans) – Impact **TR-7** would be **significant and unavoidable** because CSU cannot guarantee that Caltrans will be able to obtain the funding necessary to implement the improvements recommended by **MM-TRA-6** and, therefore, mitigation is considered infeasible.
19. Rancho Mission Road & Friars Road (Caltrans) – Impact **TR-8** would be **significant and unavoidable** because CSU cannot guarantee that Caltrans will be able to obtain the funding necessary to implement the improvements recommended by **MM-TRA-7** and, therefore, mitigation is considered infeasible.
27. Fairmount Avenue & San Diego Mission Road/Twain Avenue (City of San Diego) - Impact **TR-9** would be **significant and unavoidable** because CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-8**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less than significant.
31. Texas Street & Camino del Rio N (City of San Diego) – Impact **TR-10** would be **significant and unavoidable** because CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-9**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less than significant.
32. Ward Road & Rancho Mission Road (City of San Diego) – Impact **TR-11** would be **significant and unavoidable** because CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-10**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less than significant.
34. Fairmount Avenue & Mission Gorge Road (City of San Diego) – Impact **TR-12** would be **significant and unavoidable** because CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-11**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less than significant.
35. Fairmount Avenue & Camino del Rio North (Caltrans) – Impact **TR-13** would be **significant and unavoidable** because CSU cannot guarantee that Caltrans will be able to obtain the funding necessary to implement the improvements recommended by **MM-TRA-12** and, therefore, mitigation is considered infeasible.
41. Ruffin Road & Aero Drive (City of San Diego) – Impact **TR-14** would be **significant and unavoidable** because CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of the improvement recommended by **MM-TRA-13**. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less than significant.

Table 4.15-45 summarizes impacts after implementation of proposed intersection mitigation, and is illustrated in Figure 4.15-15, Traffic Impacts and Improvements for Buildout.

Freeway Segments

As previously explained, CSU/SDSU will support Caltrans in its efforts to obtain funding from the state Legislature for the costs to prepare a Project Study Report-Project Development Report-Project Initiation Document to evaluate alternatives to increase capacity, improve mobility, and relieve congestion on the significantly impacted segments or adjacent interchanges. In addition, also as previously explained, the proposed project is located in a TPA and would implement a TDM Program as part of the proposed project that would reduce the number of site-generated vehicle trips to the extent feasible (see Section 4.15.1.2). However, although the proposed project would reduce its freeway impacts to the greatest extent feasible, freeway mainline impacts (**TR-15** through **TR-23**) would remain **significant and unavoidable**.

Ramp Metering

The significant impacts associated with the following impacted freeway ramp meters would remain significant and unavoidable due to infeasible or unfunded mitigation:

- I-15 NB On-ramp from Friars Road – Impact **TR-24** would remain **significant and unavoidable** because the necessary mitigation, the addition of a third mixed flow lane, is not feasible.
- I-15 SB/I-8 Loop On-ramp from Friars Road – Impact **TR-25** would remain **significant and unavoidable** because CSU cannot guarantee that Caltrans will be able to obtain the funds necessary to implement the improvements recommended by **MM-TRA-14**. Therefore, the recommended mitigation is considered infeasible.
- I-15 SB Direct On-ramp from Friars Road – Impact **TR-26** would remain **significant and unavoidable** because CSU cannot guarantee that Caltrans will be able to obtain the funds necessary to implement the improvements recommended by **MM-TRA-15**. Therefore, the recommended mitigation is considered infeasible.
- I-8 EB On-ramp from SB Fairmount Avenue – Impact **TR-27** would remain **significant and unavoidable** because the necessary improvement is infeasible due to insufficient right-of-way.

Table 4.15-45. Horizon Year (2037) Plus Project Conditions With Mitigation Improvements Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Horizon Year Plus Project Conditions after Mitigations		Significant Impact After Mitigation?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	
1. SR-163 SB Ramps/Ulric St & Friars Rd*	Signalized	AM	45.2	D	45.3	D	45.3	D	NO
		PM	54.5	D	62.1	E	62.1	E	YES
2. SR-163 NB Ramps & Friars Rd*	Signalized	AM	19.8	B	29.5	C	29.5	C	NO
		PM	32.4	C	36.2	D	36.2	D	NO
3. Frazee Rd & Friars Rd*	Signalized	AM	45.2	D	50.6	D	50.6	D	NO
		PM	44.8	D	46.9	D	46.9	D	NO
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	12.8	B	13.3	B	13.3	B	NO
		PM	14.1	B	15.0	B	15.0	B	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	16.8	B	16.7	B	16.7	B	NO
		PM	36.2	D	38.1	D	38.1	D	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	15.9	B	17.0	B	17.0	B	NO
		PM	24.5	C	24.9	C	24.9	C	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.6	A	6.2	A	6.2	A	NO
		PM	12.8	B	13.3	B	13.3	B	NO
8. River Run Dr & Friars Rd	Signalized	AM	23.0	C	25.0	C	25.0	C	NO
		PM	59.6	E	94.9	F	32.9	C	NO
9. Fenton Pkwy & Friars Rd	Signalized	AM	27.9	C	22.1	C	28.2	C	NO
		PM	92.8	F	126.6	F	83.2	F	NO
10. Northside Dr & Friars Rd*	Signalized	AM	34.9	C	34.8	C	54.7	D	NO
		PM	122.1	F	128.6	F	51.8	D	NO
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A	10.4	B	10.4	B	NO
		PM	-	N/A	22.9	C	34.3	C	NO
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	30.1	C	28.8	C	28.8	C	NO
		PM	52.0	D	33.6	C	33.6	C	NO
13. Mission Village Dr/Street D & Friars Rd EB Ramps/San Diego Mission Rd*	Signalized	AM	173.4**	F	17.0	B	17.0	B	NO
		PM	94.0	F	30.0	C	30.0	C	NO

Table 4.15-45. Horizon Year (2037) Plus Project Conditions With Mitigation Improvements Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Horizon Year Plus Project Conditions after Mitigations		Significant Impact After Mitigation?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	
14. Street D & Street 4	Signalized	AM	DNE	N/A	23.7	C	23.7	C	NO
		PM		N/A	40.9	D	40.9	D	NO
15. Street B & Street 2	Signalized	AM	DNE	N/A	27.0	C	27.0	C	NO
		PM		N/A	35.1	D	35.1	D	NO
16. Street F & Street 6/San Diego Mission Rd	Roundabout	AM	DNE	N/A	8.1	A	8.1	A	NO
		PM		N/A	9.3	A	9.3	A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	46.3	D	124.6	F	124.6	F	YES
		PM	67.3	E*** (F)	100.6	F (F)	100.6	F (F)	YES
18. I-15 NB Ramps & Friars Rd	Signalized	AM	83.5	F*** (F)	137.6	F (F)	137.6	F (F)	YES
		PM	67.3	E*** (F)	208.4**	F (F)	208.4	F (F)	YES
19. Rancho Mission Rd & Friars Rd	Signalized	AM	30.3	C*** (E)	33.8	C (F)	27.9	C (F)	YES*****
		PM	72.4	E*** (E)	83.2	F (F)	83.2	F (F)	YES
20. Santo Rd & Friars Rd	Signalized	AM	38.1	D	47.1	D	47.1	D	NO
		PM	16.8	B	19.0	B	19.0	B	NO
21. Riverdale St & Friars Rd	Signalized	AM	37.4	D	43.8	D	43.8	D	NO
		PM	37.4	D	43.8	D	43.8	D	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	44.1	D	46.5	D	46.5	D	NO
		PM	44.5	D	54.2	D	54.2	D	NO
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	19.3	B	22.1	C	22.1	C	NO
		PM	44.4	D	49.6	D	49.6	D	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	12.9	B	13.6	B	13.6	B	NO
		PM	25.1	D	30.8	D	30.8	D	NO

Table 4.15-45. Horizon Year (2037) Plus Project Conditions With Mitigation Improvements Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Horizon Year Plus Project Conditions after Mitigations		Significant Impact After Mitigation?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	16.7	B	17.0	B	17.0	B	NO
		PM	27.7	C	28.7	C	28.7	C	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	31.0	C	46.0	D	46.0	D	NO
		PM	30.0	C	48.4	D	48.4	D	NO
27. Fairmount Ave & San Diego Mission Rd/Twain Ave	Signalized	AM	23.5	C	101.1	F	35.3	D	NO
		PM	26.7	C	73.2	E	33.1	C	NO
28. Qualcomm Way & Camino del Rio N/Camino de la Reina	Signalized	AM	21.3	C	21.8	C	21.8	C	NO
		PM	71.0	E	71.0	E	71.0	E	NO
29. Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio N	Signalized	AM	20.5	C	21.8	C	21.8	C	NO
		PM	73.6	E	77.2	E	77.2	E	NO****
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.2	A	1.2	A	1.2	A	NO
		PM	4.9	A	4.9	A	4.9	A	NO
31. Texas St & Camino del Rio S	Signalized	AM	104.1	F	111.7	F	108.4	F	NO****
		PM	85.0	F	103.3	F	86.9	F	NO****
32. Ward Rd & Rancho Mission Rd	SSSC	AM	26.9	D	131.2	F	4.2	A	NO
		PM	29.9	D	321.1**	F	6.3	A	NO
33. Camino del Rio N & Ward Ave	Signalized	AM	15.4	B	25.3	C	25.3	C	NO
		PM	15.9	B	29.6	C	29.6	C	NO
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	22.0	C	27.6	C	27.6	C	NO
		PM	28.1	C	62.1	E	54.1	D	NO
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	94.7	F	122.5	F	122.5	F	YES
		PM	104.7	F	176.5**	F	176.6**	F	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	17.7	B	20.5	C	20.5	C	NO
		PM	44.3	D	52.7	D	52.7	D	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	46.9	D	49.2	D	49.2	D	NO
		PM	50.0	D	53.5	D	53.5	D	NO

Table 4.15-45. Horizon Year (2037) Plus Project Conditions With Mitigation Improvements Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Conditions		Horizon Year Plus Project Conditions after Mitigations		Significant Impact After Mitigation?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}	
38. Mission Village Dr & Shawn Ave	Signalized	AM	6.2	A	6.4	A	6.4	A	NO
		PM	10.8	B	13.6	B	13.6	B	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	14.5	B	15.5	B	15.5	B	NO
		PM	11.3	B	13.9	B	13.9	B	NO
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	20.5	C	32.6	C	32.6	C	NO
		PM	24.5	C	36.4	D	36.4	D	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	35.7	D	36.8	D	36.8	D	NO
		PM	52.6	D	63.2	E	49.8	D	NO
42. Gramercy Dr & Mobley St	Signalized	AM	7.1	A	7.2	A	7.2	A	NO
		PM	6.0	A	6.1	A	6.1	A	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	9.1	A	9.3	A	9.3	A	NO
		PM	11.7	B	11.9	B	11.9	B	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the Highway Capacity Manual (HCM) method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way & Friars Road intersection is only used during Stadium events.
- * Existing or proposed signal phasing prevents the use of HCM 6 at this intersection. The HCM 2000 method was applied instead.
- ** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- *** Ramp metering during the peak hours under existing conditions results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation. This additional delay is estimated to result in operations as shown in parentheses.
- **** Intersection would exceed the City of San Diego impact threshold.
- ***** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would cause a significant impact.

4.15.10.4 Horizon Year (2037) Plus Project Plus Stadium Event Conditions

Intersections

Because the mitigation recommended to reduce the identified significant impacts under the Without Stadium Event scenario, which is also necessary to mitigate related impacts under the With Stadium Event scenario, is infeasible due either to pending necessary City authorization or the lack of City fair-share funding notwithstanding CSU's willing payment, the significant impacts identified under the With Stadium Event scenario (**TR-28A** through **TR-28Q**) would remain **significant and unavoidable** as well. Nonetheless, strategies to assist in the reduction of weekday Stadium event traffic and related impacts would be implemented through the TDM and TPMP Programs previously described. Although intersection operations under this scenario would likely remain significant and unavoidable, this scenario represents a sold-out event (i.e., 35,000 attendees) that occurs on a weekday, which will occur only up to a few times per year.

Table 4.15-46 summarizes impacts after implementation of proposed intersection mitigation, and is illustrated in Figure 4.15-15, Traffic Impacts and Improvements for Buildout.

Freeway Segments

As previously explained, CSU/SDSU will support Caltrans in its efforts to obtain funding from the state Legislature for the costs to prepare a Project Study Report-Project Development Support-Project Initiation Document (Study) to evaluate alternatives to increase capacity, improve mobility, and relieve congestion on impacted freeway segments or adjacent interchanges. In addition, the proposed project, which is located in a TPA, would implement a TDM Program to reduce the number of site-generated vehicle trips (see Section 4.15.1.2). Although the proposed project would reduce its freeway impacts to the greatest extent feasible, freeway mainline impacts under the With Stadium Event scenario (**TR-29A** through **TR-29R**) would remain **significant and unavoidable**.

Ramp Metering

Stadium event traffic would not cause any additional impacts under Horizon Year Plus Project with Stadium Event Conditions than under Without Stadium Event Conditions. Therefore, the mitigation identified under the Without Stadium Event scenario (**MM-TRA-14** and **MM-TRA-15**) would apply under the With Stadium Event Conditions scenario as well. However, as previously explained, the referenced mitigation is either infeasible or uncertain to be implemented due to funding constraints and, therefore, impacts under the With Stadium Event scenario (**TR-30A** through **TR-30D**) would remain **significant and unavoidable**.

Table 4.15-46. Horizon Year Plus Project Plus Event with Project Mitigation Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event with Project Mitigation Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
1. SR-163 SB Ramps/Ulric St & Friars Rd*	Signalized	AM	45.2	D	45.3	D	1.4	NO
		PM	54.5	D	70.2	E	13.3	YES
2. SR-163 NB Ramps & Friars Rd*	Signalized	AM	19.8	B	29.5	C	3.3	NO
		PM	32.4	C	42.5	D	9.0	NO
3. Frazee Rd & Friars Rd*	Signalized	AM	45.2	D	50.6	D	1.6	NO
		PM	44.8	D	65.6	E	22.6	YES
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	12.8	B	13.3	B	0.5	NO
		PM	14.1	B	15.0	B	0.9	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	16.8	B	16.7	B	-0.1	NO
		PM	36.2	D	38.3	D	2.1	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	15.9	B	17.0	B	1.1	NO
		PM	24.5	C	24.9	C	0.4	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	5.6	A	6.2	A	0.6	NO
		PM	12.8	B	13.2	B	0.4	NO
8. River Run Dr & Friars Rd	Signalized	AM	23.0	C	25.0	C	2.0	NO
		PM	59.6	E	60.9	E	1.3	NO****
9. Fenton Pkwy & Friars Rd	Signalized	AM	27.9	C	28.2	C	0.3	NO
		PM	92.8	F	123.2	F	30.4	YES
10. Northside Dr & Friars Rd*	Signalized	AM	34.9	C	54.7	D	19.8	NO
		PM	122.1	F	82.8	F	-39.3	NO
11. Stadium Way (Street A) & Friars Rd*	Signalized	AM	-	N/A	10.4	B	N/A	NO
		PM	-	N/A	142.5	F	N/A	YES
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	30.1	C	28.8	C	-1.3	NO
		PM	52.0	D	36.6	D	-15.4	NO
13. Mission Village Dr & Friars Rd EB Ramps/ San Diego Mission Rd*	Signalized	AM	173.4**	F	17.0	B	-156.4	NO
		PM	94.0	F	31.9	C	-62.1	NO

Table 4.15-46. Horizon Year Plus Project Plus Event with Project Mitigation Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event with Project Mitigation Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
14. Mission Village Dr/Aztec Way & Street 2	Signalized	AM	DNE	N/A	23.7	C	N/A	NO
		PM		N/A	370.0	F	N/A	YES
15. Street B & Street 2	Signalized	AM	DNE	N/A	27.0	C	N/A	NO
		PM		N/A	31.8	C	N/A	NO
16. Murphy Creek Rd & Street B/ San Diego Mission Rd	Roundabout	AM	DNE	N/A	8.1	A	N/A	NO
		PM		N/A	13.3	B	N/A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	46.3	D	124.6	F	78.3	NO
		PM	67.3	E*** (F)	137.9	F (F)	70.6	YES*****
18. I-15 NB Ramps & Friars Rd	Signalized	AM	83.5	F*** (F)	137.6	F (F)	54.1	YES*****
		PM	67.3	E*** (F)	218.1	F (F)	150.8	YES*****
19. Rancho Mission Rd & Friars Rd	Signalized	AM	30.3	C*** (E)	27.9	C (F)	3.9	YES*****
		PM	72.4	E*** (E)	106.4	F (F)	33.6	YES*****
20. Santo Rd & Friars Rd	Signalized	AM	38.1	D	47.1	D	9.0	NO
		PM	16.8	B	19.4	B	2.6	NO
21. Riverdale St & Friars Rd	Signalized	AM	37.4	D	43.8	D	6.4	NO
		PM	37.4	D	44.7	D	7.3	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	44.1	D	46.5	D	2.4	NO
		PM	44.5	D	56.0	E	11.5	YES
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	19.3	B	22.1	C	2.8	NO
		PM	44.4	D	50.1	D	5.7	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	12.9	B	13.6	B	0.7	NO
		PM	25.1	D	32.7	D	7.6	NO
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	16.7	B	17.0	B	0.3	NO
		PM	27.7	C	28.8	C	1.1	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	31.0	C	46.0	D	15.0	NO
		PM	30.0	C	51.1	D	21.1	NO

Table 4.15-46. Horizon Year Plus Project Plus Event with Project Mitigation Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event with Project Mitigation Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
27. Fairmount Ave & San Diego Mission Rd/Twain Ave	Signalized	AM	23.5	C	35.3	D	11.8	NO
		PM	26.7	C	51.7	D	25.0	NO
28. Qualcomm Way & Camino del Rio N/ Camino de la Reina	Signalized	AM	21.3	C	21.8	C	0.5	NO
		PM	71.0	E	71.1	E	0.1	NO
29. Qualcomm Way & I-8 WB Off-Ramp/ Camino del Rio N	Signalized	AM	20.5	C	21.8	C	1.3	NO
		PM	73.6	E	77.8	E	4.2	NO****
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.2	A	1.2	A	0.0	NO
		PM	4.9	A	4.9	A	0.0	NO
31. Texas St & Camino del Rio S	Signalized	AM	104.1	F	108.4	F	4.3	NO****
		PM	85.0	F	87.0	F	2.0	NO****
32. Ward Rd & Rancho Mission Rd	SSSC converted to Signalized	AM	27.0	D	4.2	A	-22.7	NO
		PM	25.8	D	8.5	A	-21.4	NO
33. Camino del Rio N & Ward Ave	Signalized	AM	15.4	B	25.3	C	9.9	NO
		PM	15.9	B	31.8	C	15.9	YES
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	22.0	C	27.6	C	5.6	NO
		PM	28.1	C	56.4	E	28.3	YES
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	94.7	F	122.5	F	27.8	YES
		PM	104.7	F	150.4**	F	45.7	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	17.7	B	20.5	C	2.8	NO
		PM	44.3	D	53.4	D	9.1	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	46.9	D	49.2	D	2.3	NO
		PM	50.0	D	54.7	D	4.7	NO
38. Mission Village Dr & Shawn Ave	Signalized	AM	6.2	A	6.4	A	0.2	NO
		PM	10.8	B	15.4	B	4.6	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	14.5	B	15.5	B	1.0	NO
		PM	11.3	B	15.3	B	4.0	NO

Table 4.15-46. Horizon Year Plus Project Plus Event with Project Mitigation Conditions Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year Without the Project Conditions		Horizon Year Plus Project Plus Event with Project Mitigation Conditions		Delay Delta	Significant Impact?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	20.5	C	32.6	C	12.1	NO
		PM	24.5	C	41.5	D	17.0	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	35.7	D	36.8	D	1.1	NO
		PM	52.6	D	53.9	D	1.3	NO
42. Gramercy Dr & Mobley St	Signalized	AM	7.1	A	7.2	A	0.1	NO
		PM	6.0	A	6.1	A	0.1	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	9.1	A	9.3	A	0.2	NO
		PM	11.7	B	11.9	B	0.2	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the Highway Capacity Manual (HCM) method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Existing Conditions, the Stadium Way & Friars Road intersection is only used during Stadium events.
- * Existing or proposed signal phasing prevents the use of HCM 6 at this intersection. The HCM 2000 method was applied instead.
- ** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- *** Ramp metering during the peak hours under existing conditions results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation.
- **** Exceeds the City of San Diego impact threshold.
- ***** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would cause a significant impact.

4.15.10.5 Stadium Parking Supply and Demand

The analysis presented in this section determined that an additional off-site parking supply will likely need to be provided for Stadium events exceeding 25,000 attendees regardless of day of week. The Stadium TDM and TPMP Programs (**PDF-TRA-2** and **PDF-TRA-4**, respectively) will help to minimize overall parking demand and to identify off-site parking supplies as appropriate. However, even with a successful TDM Program and TPMP measures in place, parking impacts for some major and all high attendance events are expected to be **significant and unavoidable (TR-31)**.

4.15.10.6 Construction-Related Traffic

Construction-related traffic impacts will be temporary in duration, will likely vary in location from day to day, and are expected to include increased intersection delay (due to slow-moving vehicles or lane closures) for some short time periods relative to the overall development schedule of the project. While implementation of the Construction Traffic Management Plan will help to minimize most construction traffic impacts, some temporary **significant and unavoidable (TR-32)** impacts are expected to occur during both site preparation and vertical construction (e.g., lane closures during the widening of the off-ramp from Friars Road to Mission Village Drive).

4.15.10.7 Emergency Access

Implementation of **MM-TRA-16** would reduce impact **TR-33** associated with emergency access to **less than significant**.

4.15.11 Fenton Parkway Bridge Baseline (2037) Plus Project Analysis

As previously explained in section 4.15.7.4.1, the analysis presented previously in this section 4.15 evaluated the potential traffic impacts of the proposed project, with significant impacts identified and mitigation measures recommended, under a future baseline scenario that does not include the extension of Fenton Parkway to Camino del Rio No. opposite Mission City Parkway, including a new bridge (collectively, the “bridge”) over the San Diego River. While a 4-lane bridge is included in the MVCP update presently being considered for approval by the City of San Diego, and the City Council-adopted 1985 MVCP included a 2-lane bridge over the River, funding sufficient to construct either the 2-lane or 4-lane bridge proposal has not been identified, no environmental review has been completed as to either proposal, nor has a timeframe for the bridge’s construction been established. Moreover, the bridge is not a part of the proposed project, nor, as shown in the analyses presented in this section 4.15, is the bridge required as mitigation for the proposed project’s impacts; that is, construction of the bridge is not required to accommodate project traffic or to reduce any of the proposed project’s identified significant impacts.

Because the 4-lane bridge is a long-range improvement included in the draft MVCP Update, City staff requested that an analysis be conducted of traffic conditions both with and without the 4-lane bridge be conducted for their review, including analysis of the effect of the proposed project under such scenario. Accordingly, a new Horizon Year (2037) baseline scenario without the proposed project was developed that includes the 4-lane Fenton Parkway bridge across the San Diego River and the associated redistribution of baseline traffic volumes. In addition to the 4-lane bridge analysis, 2-lane bridge conditions with and without the proposed project also were developed and are presented here in response to meetings with the City in which staff have stated that: 1) a 4-lane bridge is not mandated in the MVCP Update, and 2) the City is willing to consider a two-lane bridge based on considerations of congestion, connectivity, accessibility, and public safety.

The effect of adding the proposed project's-generated traffic to this new network configuration, both 2-lane and 4-lane, was evaluated for all study facilities (plus several additional locations that would otherwise not be affected by project traffic). All other technical assumptions under Horizon Year Plus Project Conditions (e.g., project trip generation and distribution) and the use of CSU TISM impact criteria remain unchanged from the no bridge scenario analysis. Notations are included where the proposed project may cause an exceedance of City of San Diego threshold criteria under this scenario. Because the 2-lane and 4-lane bridge and roadway extension are not fully funded and their ultimate construction timeframe is uncertain, the analyses presented in this section 4.15.11 are provided for information purposes only.

4.15.11.1 Description of Fenton Parkway Extension and Bridge

The planned roadway extension across the San Diego River would connect the existing southern terminus of Fenton Parkway at the San Diego Trolley line to Camino del Rio North opposite Mission City Parkway. Under the scenarios analyzed here, the extension and bridge would be constructed as either a two-lane or four-lane collector, as applicable, with a center left-turn lane for its entire length. The center turn lane would be striped as an exclusive left-turn lane at intersections but could be used as a travel lane when manual traffic control was employed during an emergency situation, or fully attended stadium events, etc.

With development of the SDSU Mission Valley Campus, direct vehicular access to the project site would be provided via River Park Road (also known as Mission City Street I in the MVCP update). The Fenton Parkway/River Park Road intersection (Intersection 49) would be signalized with permitted left-turns to facilitate automobile, bicycle, and pedestrian movements, as well as to control traffic when a trolley vehicle is crossing Fenton Parkway. The proposed intersection lane configuration under the 2-lane scenario would include: one northbound through lane, one northbound right turn lane, one southbound through lane, one southbound left turn lane, one westbound left-turn lane, and one westbound right-turn lane (see Figure 4.15-18). Under the 4-lane scenario, the proposed intersection configuration would include: one northbound through lane, one shared northbound through/right lane, one southbound through lane, one shared southbound through/left lane, one westbound left-turn lane, and one westbound right-turn lane (see Figure 4.15-19).

4.15.11.2 Traffic Redistribution With Bridge

With the bridge in place, vehicle trips with origins and destinations in the immediate vicinity of the bridge are expected to take different paths across the study roadway network; that is, the bridge would alter traffic distribution as compared to a without bridge scenario. Accordingly, a new run of the SANDAG Series 13 Year 2035 travel demand model was performed with both a 2-lane and 4-lane Fenton Parkway bridge in place. The results of this new run were then compared to the previous run without the bridge to determine where traffic volumes would shift to with the new connection. The comparison identified that some traffic that is projected to travel on I-8 east of I-15 without the bridge would shift to Montezuma Road and travel via Fairmount Avenue and Camino del Rio N to use the new bridge connection. Similarly, some traffic projected to travel on I-15 south of Friars Road under future conditions without the bridge would shift to travel south on Fenton Parkway to Camino del Rio S and access I-15 via the Camino del Rio S interchange. These and other changes in travel pattern and paths will affect operations at selected intersections, roadway segments, ramps, freeway segments, and off-ramps in the area immediately surrounding the project site.

The total Horizon Year (2037) No Project and Horizon Year (2037) Plus Project traffic volumes at all study area locations are presented on Figures 4.15-16 and 4.15-18, and Figures 4.15-17 and 4.15-19, for the 2-lane and 4-lane scenarios, respectively. Traffic volume redistribution for each applicable turning movement with the 2-lane and 4-lane Fenton Parkway bridge in place (compared to “no bridge” conditions) is illustrated on Figures 4.15-20 and 4.15-21, respectively, with positive numbers indicating volume increases and negative numbers showing decreases in traffic. Volumes are also included for intersections on Camino del Rio North and South that were not included in the primary analysis presented in the preceding sections. These locations would serve a negligible amount of project traffic without the bridge, but would see a substantial increase in baseline and project-generated traffic with either a 2-lane or 4-lane bridge in place.

4.15.11.3 Intersection Analysis

All 43 of the study area intersections were analyzed using the anticipated Horizon Year intersection lane configurations and the traffic volumes illustrated on Figures 4.15-18 and 4.15-19 for plus Project Conditions under the 2-lane and 4-lane scenarios, respectively. As noted above, additional intersections along Camino del Rio N and Camino del Rio S were analyzed due to the anticipated change in traffic on those facilities with the bridge in place. The Horizon Year No Project lane configuration at the southern bridge intersection (Intersection 44) was obtained from the Mission Valley Community Plan Update: Final Environmental Impact Report Traffic Impact Analysis Appendix D – (May 2019) (MVCPU FEIR). Otherwise, existing lane configurations were used for the other additional locations (Intersections 45 through 48). Existing volumes for the additional study area intersections were also obtained from the MVCPU FEIR and factored to account for growth (at 1% per year compounded) up to 2037, which is the study horizon year for this analysis and consistent with the approach used in the analyses presented above based on SANDAG model projections.

Tables 4.15-47 and 4.15-48 present intersection operations under the Horizon Year Plus Project Conditions *with* the 2-lane and 4-lane Fenton Parkway bridge in place, respectively, and compares the projected LOS at each study area intersection to the Horizon Year No Project Conditions with the bridge. The corresponding LOS calculation sheets for all intersections are included in TIA Appendix X.

Table 4.15-47.- Horizon Year (2037) Plus Project Conditions Intersection Level of Service with 2-Lane Fenton Bridge

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
1. SR-163 SB Ramps/Ulric St & Friars Rd*	Signalized	AM	43.9	D	45.3	D	1.4	NO
		PM	56.7	E	62.1	E	5.4	YES
2. SR-163 NB Ramps & Friars Rd*	Signalized	AM	26.2	C	29.5	C	3.3	NO
		PM	29.8	C	36.2	D	6.4	NO
3. Frazee Rd & Friars Rd*	Signalized	AM	49.0	D	50.6	D	1.6	NO
		PM	44.8	D	46.9	D	2.1	NO
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	12.8	B	13.3	B	0.5	NO
		PM	14.1	B	15.0	B	0.9	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	16.8	B	16.7	B	-0.1	NO
		PM	36.2	D	38.1	D	1.9	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	15.5	B	16.7	B	1.2	NO
		PM	24.0	C	24.5	C	0.5	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	6.0	A	6.6	A	0.6	NO
		PM	11.0	B	11.6	B	0.6	NO
8. River Run Dr & Friars Rd	Signalized	AM	24.4	C	27.3	C	2.9	NO
		PM	61.4	E	95.9	F	34.5	YES
9. Fenton Pkwy & Friars Rd	Signalized	AM	43.6	D	41.4	D	-2.2	NO
		PM	63.9	E	92.5	F	28.6	YES
10. Northside Dr & Friars Rd	Signalized	AM	34.8	C	27.4	C	-7.4	NO
		PM	75.0	E	79.5	E	4.5	NO****
11. Stadium Way & Friars Rd ⁴	Signalized	AM	-	N/A	9.7	A	9.7	NO
		PM	-	N/A	14.3	B	14.3	NO
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	21.1	C	28.4	C	7.3	NO
		PM	52.8	D	32.7	C	-20.1	NO
13. Mission Village Dr & Friars Rd EB Ramps/San Diego Mission Rd*	Signalized	AM	117.9	F	16.9	B	-101.0	NO
		PM	71.9	E	25.5	C	-46.4	NO
14. Mission Village Dr/Aztec Way & Street 2	Signalized	AM	DNE	N/A	21.3	C	N/A	NO
		PM		N/A	51.7	D	N/A	NO
15. Street B & Street 2	Signalized	AM	DNE	N/A	25.9	C	N/A	NO
		PM		N/A	30.6	C	N/A	NO

Table 4.15-47.– Horizon Year (2037) Plus Project Conditions Intersection Level of Service with 2-Lane Fenton Bridge

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
16. Murphy Creek Rd & Street B/San Diego Mission Rd	Roundabout	AM	DNE	N/A	7.2	A	N/A	NO
		PM		N/A	8.0	A	N/A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	40.4	D	93.7	F	53.3	YES
		PM	57.7	E*** (F)	85.4	F*** (F)	27.7	YES
18. I-15 NB Ramps & Friars Rd	Signalized	AM	87.7	F*** (F)	140.6	F*** (F)	52.9	YES
		PM	66.7	E*** (F)	206.3**	F*** (F)	139.6	YES
19. Rancho Mission Rd & Friars Rd	Signalized	AM	30.9	C*** (E)	35.1	D*** (F)	4.2	YES*****
		PM	64.2	E*** (E)	75.8	E*** (F)	11.6	YES
20. Santo Rd & Friars Rd	Signalized	AM	38.1	D	47.1	D	9.0	NO
		PM	16.8	B	19.0	B	2.2	NO
21. Riverdale St & Friars Rd	Signalized	AM	37.4	D	43.8	D	6.4	NO
		PM	37.4	D	43.8	D	6.4	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	44.1	D	46.5	D	2.4	NO
		PM	44.5	D	54.2	D	9.7	NO
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	18.9	B	22.4	C	3.5	NO
		PM	39.1	D	42.9	D	3.8	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	13.3	B	14.1	B	0.8	NO
		PM	37.6	E	45.9	E	8.3	YES
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	20.0	B	20.5	C	0.5	NO
		PM	40.2	D	43.5	D	3.3	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	24.1	C	33.6	C	9.5	NO
		PM	23.7	C	34.2	C	10.5	NO
27. Fairmount Ave & San Diego Mission Rd/Twain Ave	Signalized	AM	20.9	C	55.5	E	34.6	YES
		PM	19.6	B	41.1	D	21.5	NO
28. Qualcomm Way & Camino del Rio N/Camino de la Reina	Signalized	AM	20.2	C	20.7	C	0.5	NO
		PM	68.7	E	70.8	E	2.1	NO*****
29. Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio N	Signalized	AM	20.0	B	21.1	C	1.1	NO
		PM	74.0	E	77.6	E	3.6	NO*****
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.1	A	1.1	A	0.0	NO
		PM	4.8	A	4.8	A	0.0	NO

Table 4.15-47.– Horizon Year (2037) Plus Project Conditions Intersection Level of Service with 2-Lane Fenton Bridge

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
31. Texas St & Camino del Rio S	Signalized	AM	108.4	F	119.6	F	11.2	YES
		PM	87.8	F	107.2	F	19.4	YES
32. Ward Rd & Rancho Mission Rd	SSSC	AM	22.0	C	65.1	F	43.1	YES
		PM	24.5	C	165.9**	F	141.4	YES
33. Camino del Rio N & Ward Ave	Signalized	AM	14.0	B	20.3	C	6.3	NO
		PM	14.1	B	24.8	C	10.7	NO
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	22.1	C	27.0	C	4.9	NO
		PM	27.2	C	58.2	E	31.0	YES
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	99.7	F	133.2	F	33.5	YES
		PM	112.5	F	187.6**	F	75.1	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	18.8	B	22.9	C	4.1	NO
		PM	45.2	D	54.8	D	9.6	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	47.0	D	48.6	D	1.6	NO
		PM	49.9	D	53.3	D	3.4	NO
38. Mission Village Dr & Shawn Ave	Signalized	AM	6.2	A	6.4	A	0.2	NO
		PM	10.8	B	13.6	B	2.8	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	14.5	B	15.5	B	1.0	NO
		PM	11.3	B	13.9	B	2.6	NO
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	20.5	C	32.6	C	12.1	NO
		PM	24.5	C	36.4	D	11.9	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	35.7	D	36.8	D	1.1	NO
		PM	52.6	D	63.2	E	10.6	YES
42. Gramercy Dr & Mobley St	Signalized	AM	7.1	A	7.2	A	0.1	NO
		PM	6.0	A	6.1	A	0.1	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	9.1	A	9.3	A	0.2	NO
		PM	11.7	B	11.9	B	0.2	NO
44. Fenton Pkwy/Mission City Pkwy & Camino del Rio N	Signalized	AM	76.8	E	105.1	F	28.3	YES
		PM	38.4	D	58.9	E	20.5	YES
45. Mission City Pkwy & Camino del Rio S	Signalized	AM	8.9	A	10.9	B	2.0	NO
		PM	42.5	D	55.8	E	13.3	YES

Table 4.15-47.– Horizon Year (2037) Plus Project Conditions Intersection Level of Service with 2-Lane Fenton Bridge

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
46. I-15 SB Off-Ramp & Camino del Rio S	Signalized	AM	50.1	D	68.1	E	18.0	YES
		PM	36.3	D	46.8	D	10.5	NO
47. I-15 SB On-Ramp & Camino del Rio S	Signalized	AM	2.1	A	2.3	A	0.2	NO
		PM	8.1	A	10.8	B	2.7	NO
48. I-15 NB Ramps & Camino del Rio S	Signalized	AM	19.9	B	29.0	C	9.1	NO
		PM	24.8	C	33.8	C	9.0	NO
49. Fenton Pkwy & River Park Rd	Signalized	AM	DNE	N/A	5.4	A	N/A	NO
		PM		N/A	6.1	A	N/A	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the *Highway Capacity Manual (HCM)* method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Horizon Year Conditions without the project, the Stadium Way & Friars Road intersection would only be used intermittently during stadium events (i.e., outside the typical AM and PM hours).
- * Existing or proposed signal phasing prevents the use of *HCM 6* at this intersection. The *HCM 2000* method was applied instead.
- ** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- *** Ramp metering during the peak hours under existing conditions results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation and affects operations at the subject intersection.
- **** Intersection would exceed the City of San Diego impact threshold.
- ***** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would cause a significant impact.

Table 4.15-48. Horizon Year (2037) Plus Project Conditions with 4-Lane Fenton Bridge Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
1. SR-163 SB Ramps/Ulric St & Friars Rd*	Signalized	AM	43.9	D	45.3	D	1.4	NO
		PM	56.7	E	62.1	E	5.4	YES
2. SR-163 NB Ramps & Friars Rd*	Signalized	AM	26.2	C	29.5	C	3.3	NO
		PM	29.8	C	36.2	D	6.4	NO
3. Frazee Rd & Friars Rd*	Signalized	AM	49.0	D	50.6	D	1.6	NO
		PM	44.8	D	46.9	D	2.1	NO
4. Mission Center Rd & Friars Rd WB Ramps	Signalized	AM	12.8	B	13.3	B	0.5	NO
		PM	14.1	B	15.0	B	0.9	NO
5. Mission Center Rd & Friars Rd EB Ramps	Signalized	AM	16.8	B	16.7	B	-0.1	NO
		PM	36.2	D	37.3	D	1.1	NO
6. Qualcomm Way & Friars Rd WB Ramps	Signalized	AM	15.3	B	16.6	B	1.3	NO
		PM	23.7	C	24.2	C	0.5	NO
7. Qualcomm Way & Friars Rd EB Ramps	Signalized	AM	6.2	A	7.0	A	0.8	NO
		PM	10.3	B	10.9	B	0.6	NO
8. River Run Dr & Friars Rd	Signalized	AM	24.9	C	28.2	C	3.3	NO
		PM	62.3	E	96.4	F	34.1	YES
9. Fenton Pkwy & Friars Rd	Signalized	AM	79.9	E	71.6	E	-8.3	NO
		PM	43.5	D	75.4	E	31.9	YES
10. Northside Dr & Friars Rd	Signalized	AM	35.1	D	28.0	C	-7.1	NO
		PM	77.2	E	72.8	E	-4.4	NO
11. Stadium Way & Friars Rd ⁴	Signalized	AM	-	N/A	9.3	A	9.3	NO
		PM	-	N/A	12.7	B	12.7	NO
12. Mission Village Dr & Friars Rd WB Ramps	Signalized	AM	18.1	B	28.3	C	10.2	NO
		PM	53.5	D	32.4	C	-21.1	NO
13. Mission Village Dr & Friars Rd EB Ramps/San Diego Mission Rd*	Signalized	AM	93.5	F	17.2	B	-76.3	NO
		PM	69.8	E	24.8	C	-45.0	NO
14. Mission Village Dr/Aztec Way & Street 2	Signalized	AM	DNE	N/A	21.4	C	N/A	NO
		PM		N/A	49.9	D	N/A	NO
15. Street B & Street 2	Signalized	AM	DNE	N/A	25.8	C	N/A	NO
		PM		N/A	31.4	C	N/A	NO

Table 4.15-48. Horizon Year (2037) Plus Project Conditions with 4-Lane Fenton Bridge Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
16. Murphy Creek Rd & Street B/San Diego Mission Rd	Roundabout	AM	DNE	N/A	6.7	A	N/A	NO
		PM		N/A	7.4	A	N/A	NO
17. I-15 SB Ramps & Friars Rd	Signalized	AM	37.6	D	81.3	F	43.7	YES
		PM	56.1	E*** (F)	78.8	E*** (F)	22.7	YES
18. I-15 NB Ramps & Friars Rd	Signalized	AM	89.8	F*** (F)	142.2	F*** (F)	52.4	YES
		PM	66.6	E*** (F)	205.4	F*** (F)	138.8	YES
19. Rancho Mission Rd & Friars Rd	Signalized	AM	31.2	C*** (F)	36.2	D*** (F)	5.0	YES*****
		PM	59.1	E*** (F)	71.7	E*** (F)	12.6	YES
20. Santo Rd & Friars Rd	Signalized	AM	38.1	D	47.1	D	9.0	NO
		PM	16.8	B	19.0	B	2.2	NO
21. Riverdale St & Friars Rd	Signalized	AM	37.4	D	43.8	D	6.4	NO
		PM	37.4	D	43.8	D	6.4	NO
22. Mission Gorge Rd & Friars Rd	Signalized	AM	44.1	D	46.5	D	2.4	NO
		PM	44.5	D	54.2	D	9.7	NO
23. Qualcomm Way & Rio San Diego Dr	Signalized	AM	19.6	B	23.3	C	3.7	NO
		PM	39.5	D	43.3	D	3.8	NO
24. Rio San Diego Dr & River Run Dr	AWSC	AM	13.5	B	14.3	B	0.8	NO
		PM	48.0	E	57.1	F	9.1	YES
25. Fenton Pkwy & Rio San Diego Dr/ Fenton Marketplace Dwy	Signalized	AM	21.7	C	22.3	C	0.6	NO
		PM	47.2	D	51.4	D	4.2	NO
26. Rancho Mission Rd & San Diego Mission Rd	Signalized	AM	21.8	C	30.1	C	8.3	NO
		PM	21.0	C	29.4	C	8.4	NO
27. Fairmount Ave & San Diego Mission Rd/Twain Ave	Signalized	AM	19.8	B	44.6	D	24.8	NO
		PM	17.9	B	32.6	C	14.7	NO
28. Qualcomm Way & Camino del Rio N/Camino de la Reina	Signalized	AM	19.8	B	20.3	C	0.5	NO
		PM	68.3	E	71.1	E	2.8	NO****
29. Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio N	Signalized	AM	19.8	B	20.8	C	1.0	NO
		PM	74.4	E	77.9	E	3.5	NO****
30. Qualcomm Way/Texas St & I-8 EB Off-Ramp	Signalized	AM	1.1	A	1.1	A	0.0	NO
		PM	4.8	A	4.8	A	0.0	NO

Table 4.15-48. Horizon Year (2037) Plus Project Conditions with 4-Lane Fenton Bridge Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
31. Texas St & Camino del Rio S	Signalized	AM	113.0	F	125.4	F	12.4	YES
		PM	90.3	F	110.3	F	20.0	YES
32. Ward Rd & Rancho Mission Rd	SSSC	AM	19.6	C	49.5	E	29.9	YES
		PM	22.3	C	123.9	F	101.6	YES
33. Camino del Rio N & Ward Ave	Signalized	AM	13.3	B	17.8	B	4.5	NO
		PM	13.5	B	24.8	C	11.3	NO
34. Fairmount Ave & Mission Gorge Rd	Signalized	AM	22.2	C	26.9	C	4.7	NO
		PM	26.8	C	56.2	E	29.4	YES
35. Fairmount Ave & Camino del Rio N*	Signalized	AM	103.0	F	140.3	F	37.3	YES
		PM	119.0	F	196.7**	F	77.7	YES
36. I-8 EB Off-Ramp & Fairmount Ave	Signalized	AM	19.5	B	24.5	C	5.0	NO
		PM	45.8	D	54.0	D	8.2	NO
37. Montezuma Rd & Collwood Blvd	Signalized	AM	47.1	D	48.3	D	1.2	NO
		PM	49.9	D	53.1	D	3.2	NO
38. Mission Village Dr & Shawn Ave	Signalized	AM	6.2	A	6.4	A	0.2	NO
		PM	10.8	B	13.7	B	2.9	NO
39. Mission Village Dr & Fermi Ave	Signalized	AM	14.5	B	15.5	B	1.0	NO
		PM	11.3	B	13.8	B	2.5	NO
40. Gramercy Dr/Mission Village Dr & Ruffin Rd	Signalized	AM	20.5	C	32.6	C	12.1	NO
		PM	24.5	C	36.6	D	12.1	NO
41. Ruffin Rd & Aero Dr	Signalized	AM	35.7	D	36.8	D	1.1	NO
		PM	52.6	D	63.2	E	10.6	YES
42. Gramercy Dr & Mobley St	Signalized	AM	7.1	A	7.2	A	0.1	NO
		PM	6.0	A	6.1	A	0.1	NO
43. Gramercy Dr/Greyling Dr & Sandrock Rd	Signalized	AM	9.1	A	9.3	A	0.2	NO
		PM	11.7	B	11.9	B	0.2	NO
44. Fenton Pkwy/Mission City Pkwy & Camino del Rio N	Signalized	AM	92.3	F	171.7**	F	79.4	YES
		PM	65.0	E	117.9	F	52.9	YES
45. Mission City Pkwy & Camino del Rio S	Signalized	AM	9.6	A	14.0	B	4.4	NO
		PM	54.9	D	75.5	E	20.6	YES

Table 4.15-48. Horizon Year (2037) Plus Project Conditions with 4-Lane Fenton Bridge Intersection Level of Service

Intersection	Traffic Control	Peak Hour	Horizon Year with Bridge - No Project		Horizon Year with Bridge Plus Project		Delay Delta	Exceeds Operating Threshold?
			Delay (sec/veh) ¹	LOS ^{2,3}	Delay (sec/veh) ¹	LOS ^{2,3}		
46. I-15 SB Off-Ramp & Camino del Rio S	Signalized	AM	54.6	D	82.3	F	27.7	YES
		PM	38.4	D	53.2	D	14.8	NO
47. I-15 SB On-Ramp & Camino del Rio S	Signalized	AM	2.1	A	3.0	A	0.9	NO
		PM	10.2	B	15.3	B	5.1	NO
48. I-15 NB Ramps & Camino del Rio S	Signalized	AM	21.5	C	34.4	C	12.9	NO
		PM	32.0	C	48.1	D	16.1	NO
49. Fenton Pkwy & River Park Rd	Signalized	AM	DNE	N/A	5.8	A	N/A	NO
		PM		N/A	6.7	A	N/A	NO

Source: Appendix 4.15-1

Notes:

- ¹ Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections, the all-way-stop-controlled (AWSC) intersection, and the roundabout intersection. Worst movement delay reported for the side-street-stop-controlled (SSSC) intersection.
- ² LOS calculations performed using the *Highway Capacity Manual (HCM)* method.
- ³ Below-standard seconds of delay per vehicle and LOS highlighted in **bold**.
- ⁴ Under Horizon Year Conditions without the project, the Stadium Way & Friars Road intersection would only be used intermittently during stadium events (i.e., outside the typical AM and PM hours).
- * Existing or proposed signal phasing prevents the use of *HCM 6* at this intersection. The *HCM 2000* method was applied instead.
- ** Calculated delays above 150 seconds may not be accurate and should be used with caution.
- *** Ramp metering during the peak hours under existing conditions results in queues back to and through the adjacent arterial intersection causing additional delay for selected movements that is not reflected in the calculation and affects operations at the subject intersection.
- **** Intersection would exceed the City of San Diego impact threshold.
- ***** Because existing conditions are worse than calculated, it is conservatively assumed that the addition of project traffic would cause a significant impact.

As illustrated in Table 4.15-47, under the 2-lane bridge scenario, the addition of project traffic to the baseline roadway network with the 2-lane Fenton Parkway bridge would cause the CSU TISM intersection threshold to be exceeded at the following 15 locations (with projected LOS and applicable peak hour indicated in parentheses):

- 20. SR-163 Southbound Ramps/Ulric Street & Friars Road (LOS E in the PM peak hour)
- 8. River Run Drive & Friars Road (LOS F in the PM peak hour)
- 9. Fenton Parkway & Friars Road (LOS F in the PM peak hour)
- 17. I-15 SB Ramps & Friars Road (LOS F in both peak hours)
- 18. I-15 NB Ramps & Friars Road (LOS F in both peak hours)
- 19. Rancho Mission Road & Friars Road (LOS F in both peak hours)
- 24. Rio San Diego Drive & River Run Drive (LOS E in the PM peak hour)
- 31. Texas St & Camino del Rio S (LOS F in both peak hours)
- 32. Ward Road & Rancho Mission Road (LOS F in both peak hours)
- 34. Fairmount Avenue & Mission Gorge Road (LOS E in the PM peak hour)
- 35. Fairmount Avenue & Camino del Rio North (LOS F in both peak hours)
- 41. Ruffin Road & Aero Drive (LOS E in the PM peak hour)
- 44. Fenton Parkway/Mission City Parkway & Camino del Rio N (LOS F in the AM peak hour, LOS E in the PM peak hour)
- 45. Mission City Parkway & Camino del Rio S (LOS E in the PM peak hour)
- 46. I-15 Southbound Off-Ramp & Camino del Rio S (LOS E in the AM peak hour)

At the side-street stop-controlled Ward Road/Rancho Mission Road intersection (Intersection 32), the MUTCD peak hour signal warrant would be satisfied during the PM peak hour only. The signal warrant is part of the threshold evaluation for unsignalized intersections. The warrant evaluation is included in TIA Appendix X.

The locations that would exceed the City of San Diego threshold criteria include those noted above, as well as the following intersections:

- 10. Northside Drive & Friars Road (LOS E in the PM peak hour)
- 28. Qualcomm Way & Camino del Rio North/Camino de la Reina (LOS E in the PM peak hour)
- 29. Qualcomm Way & I-8 Westbound Off-ramp/Camino del Rio North (LOS E in the PM peak hour)

As indicated in Table 4.15-48, under the 4-lane bridge scenario, the addition of project traffic to the baseline roadway network with the 4-lane Fenton Parkway bridge would cause the intersection threshold to be exceeded at the following 15 locations (with projected LOS and applicable peak hour indicated in parentheses):

- 21. SR-163 Southbound Ramps/Ulric Street & Friars Road (LOS E in the PM peak hour)
- 10. River Run Dr & Friars Road (LOS F in the PM peak hour)
- 11. Fenton Parkway & Friars Road (LOS E in the PM peak hour)
- 20. I-15 SB Ramps & Friars Road (LOS F in both peak hours)
- 21. I-15 NB Ramps & Friars Road (LOS F in both peak hours)
- 22. Rancho Mission Road & Friars Road (LOS F in both peak hours)

- 25. Rio San Diego Drive & River Run Drive (LOS F in the PM peak hour)
- 33. Texas St & Camino del Rio S (LOS F in both peak hours)
- 34. Ward Road & Rancho Mission Road (LOS E in the AM peak hour and LOS F in the PM peak hour)
- 36. Fairmount Avenue & Mission Gorge Road (LOS E in the PM peak hour)
- 37. Fairmount Avenue & Camino del Rio North (LOS F in both peak hours)
- 42. Ruffin Road & Aero Drive (LOS E in the PM peak hour)
- 47. Fenton Parkway/Mission City Parkway & Camino del Rio N (LOS F in both peak hours)
- 48. Mission City Parkway & Camino del Rio S (LOS E in the PM peak hour)
- 49. I-15 Southbound Off-Ramp & Camino del Rio S (LOS F in the AM peak hour)

At the side-street stop-controlled Ward Road/Rancho Mission Road intersection (Intersection 32), the MUTCD peak hour signal warrant would be satisfied during the PM peak hour only. The signal warrant is part of the threshold evaluation for unsignalized intersections. The warrant evaluation is included in TIA Appendix X.

Those locations that would exceed the City of San Diego threshold criteria include those noted above, as well as the following two intersections:

- 28. Qualcomm Way & Camino del Rio North/Camino de la Reina (LOS E in the PM peak hour)
- 29. Qualcomm Way & I-8 Westbound Off-Ramp/Camino del Rio North (LOS E in the PM peak hour)

4.15.11.4 Roadway Segment Analysis

The roadway segment LOS analysis was conducted using the City of San Diego impact thresholds and is presented for information purposes only. Tables 4.15-49 and 4.15-50 display the results of the LOS analysis for the study area roadway segments under Horizon Year with 2-lane and 4-lane bridge conditions, respectively, both without and with the proposed project. As previously noted, in addition to the study area roadway segments reviewed under the without bridge scenario, additional segments along Camino del Rio N and Camino del Rio S were reviewed here due to the anticipated change in traffic on those facilities with the bridge in place.

Table 4.15-49. Horizon Year Plus Project Without and With 2-Lane Bridge Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year With Bridge No Project			Horizon Year With Bridge Plus Project			V/C Delta
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}	
Friars Rd											
1	Frazee Rd	Mission Center Rd	8P	80,000	52,600	0.66	C	56,839	0.71	C	0.05
2	Mission Center Rd	Qualcomm Way	6E	80,000	48,594	0.61	C	54,081	0.68	C	0.07
3	Qualcomm Way	River Run Dr	6E	80,000	43,651	0.55	C	50,777	0.63	C	0.08
4	River Run Dr	Fenton Pkwy	6P	60,000	44,001	0.73	C	51,434	0.86	D	0.13
5	Fenton Pkwy	Northside Dr	6P	60,000	40,681	0.68	C	48,200	0.80	C	0.12
6	Northside Dr	Stadium Way	6P	60,000	50,151	0.63	D	58,129	0.97	E	0.34
7	Stadium Way	Mission Village Dr	6E	80,000	50,151	0.63	C	60,918	0.76	D	0.13
8	Mission Village Dr	I-15 Ramps	6E	80,000	51,477	0.64	C	68,252	0.85	D	0.21
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	76,863	1.10	F	79,951	1.14	F	0.04
10	Rancho Mission Rd	Santo Rd	7P	70,000	61,340	0.88	D	63,700	0.91	D	0.03
11	Santo Rd	Riverdale St	6P	60,000	60,170	1.00	F	61,873	1.03	F	0.03
12	Riverdale St	Mission Gorge Rd	6P	60,000	54,675	0.91	D	56,252	0.94	E	0.03
Qualcomm Way											
13	Friars Rd	Rio San Diego Dr	6M	20,142	20,142	0.40	B	21,209	0.42	B	0.02
Rio San Diego Dr											
14	Qualcomm Way	River Run Dr	4M	40,000	16,797	0.42	B	17,528	0.44	B	0.02
15	River Run Dr	Fenton Pkwy	4C/M	30,000	14,574	0.49	C	15,292	0.51	C	0.02
Fenton Pkwy											
16	Rio San Diego Dr/ Fenton Marketplace Dwy	Northside Dr	4M	40,000	14,743	0.37	A	16,071	0.40	B	0.03
16a	Northside Dr	Camino del Rio N	2C w/CLTL	15,000	10,733	0.72	D	14,194	0.95	E	0.23
San Diego Mission Rd											
17	Mission Village Dr	Rancho Mission Rd	4C w/o CLTL	15,000	7,666	0.51	C	14,076	0.94	E	0.43
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	11,452	0.76	D	16,479	1.10	F	0.34
Rancho Mission Rd											
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	16,930	0.75	D	21,318	0.95	E	0.20
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	9,935	0.66	C	11,647	0.78	D	0.12
21	West of Ward Rd		2C	10,000	1,824	0.18	A	5,968	0.60	C	0.42

Table 4.15-49. Horizon Year Plus Project Without and With 2-Lane Bridge Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year With Bridge No Project			Horizon Year With Bridge Plus Project			V/C Delta
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}	
Ward Rd											
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	10,339	0.69	D	14,696	0.98	E	0.29
Fairmount Ave											
23	San Diego Mission Rd/ Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	8,709	0.29	A	12,164	0.41	B	0.12
Mission Village Dr											
24	Ruffin Rd	Shawn Ave	4C	30,000	18,344	0.61	C	22,623	0.75	D	0.14
25	Shawn Ave	Ronda Ave	4C	30,000	14,912	0.50	C	19,399	0.65	C	0.15
26	Ronda Ave	Friars Rd	4M	40,000	17,204	0.43	B	21,709	0.54	C	0.11
Ruffin Rd											
27	Aero Dr	Mission Village Dr	4C	30,000	16,451	0.55	C	19,086	0.64	C	0.09
Gramercy Dr											
28	Mobley St	Ruffin Rd	4M	40,000	9,456	0.24	A	10,812	0.27	A	0.03
Aero Dr											
29	Sandrock Rd	Ruffin Rd	4M	40,000	24,167	0.60	C	25,505	0.64	C	0.04
30	Ruffin Rd	Daley Center Dr	4M	40,000	31,494	0.79	D	32,625	0.82	D	0.03
Camino del Rio N											
31	Qualcomm Way	Mission City Pkwy	4C	30,000	9,885	0.33	A	10,538	0.35	B	0.02
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	11,204	0.75	D	12,943	0.86	D	0.11
33	Ward Rd	Fairmount Ave	4C	30,000	14,452	0.48	C	21,757	0.73	D	0.25
Camino del Rio S											
34	Texas St	Mission City Pkwy	2C	10,000	14,481	1.45	F	15,644	1.56	F	0.11
35	Mission City Pkwy	I-15 Ramps	3C w/CLTL	22,500	13,819	0.61	C	15,284	0.68	D	0.07
36	I-15 Ramps	Caminito Pintoresco	2C w/CLTL	15,000	8,372	0.56	C	8,372	0.56	C	0.00

Source: Appendix 4.15-1

Notes:

¹ 2C w/CLTL = 2-lane collector with center left-turn lane

3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane;

4C w/o CLTL = 4-lane collector without center left-turn lane

4C = 4-lane collector

4M = 4-lane major arterial

6M = 6-lane major arterial

6P = 6-lane primary arterial

7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add 5,000 ADT for LOS A, 7,500 ADT for LOS B, and 10,000 ADT for LOS C, D, and E per the Mission Valley Community Plan Update

8P = 8-lane primary arterial

6E = 6-lane expressway

² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)* and the *Mission Valley Community Plan Update (2019)*⁴ Unacceptable ADT volumes per segment and LOS highlighted in **bold**.**Table 4.15-50. Horizon Year Plus Project Without and With 4-Lane Bridge Conditions Roadway Segment Level of Service**

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year With Bridge No Project			Horizon Year With Bridge Plus Project			V/C Delta
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}	
Friars Rd											
1	Frazee Rd	Mission Center Rd	8P	80,000	52,600	0.66	C	56,839	0.71	C	0.05
2	Mission Center Rd	Qualcomm Way	6E	80,000	48,594	0.61	C	54,081	0.68	C	0.07
3	Qualcomm Way	River Run Dr	6E	80,000	44,150	0.55	C	51,169	0.64	C	0.09
4	River Run Dr	Fenton Pkwy	6P	60,000	44,415	0.74	C	51,751	0.86	D	0.12
5	Fenton Pkwy	Northside Dr	6P	60,000	38,317	0.64	C	45,791	0.76	C	0.12
6	Northside Dr	Stadium Way	6P	60,000	47,933	0.60	C	55,868	0.93	E	0.33
7	Stadium Way	Mission Village Dr	6E	80,000	47,933	0.60	C	58,093	0.73	C	0.13
8	Mission Village Dr	I-15 Ramps	6E	80,000	50,770	0.63	C	66,256	0.83	D	0.20
9	I-15 Ramps	Rancho Mission Rd	7P	70,000	78,869	1.13	F	80,746	1.15	F	0.02
10	Rancho Mission Rd	Santo Rd	7P	70,000	61,340	0.88	D	63,700	0.91	D	0.03
11	Santo Rd	Riverdale St	6P	60,000	60,170	1.00	F	61,873	1.03	F	0.03
12	Riverdale St	Mission Gorge Rd	6P	60,000	54,675	0.91	D	56,252	0.94	E	0.03
Qualcomm Way											
13	Friars Rd	Rio San Diego Dr	6M	50,000	18,766	0.38	A	19,747	0.39	A	0.01
Rio San Diego Dr											
14	Qualcomm Way	River Run Dr	4M	40,000	17,272	0.43	B	17,969	0.45	B	0.02
15	River Run Dr	Fenton Pkwy	4C/M	30,000	15,258	0.51	C	15,896	0.53	C	0.02

Table 4.15-50. Horizon Year Plus Project Without and With 4-Lane Bridge Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year With Bridge No Project			Horizon Year With Bridge Plus Project			V/C Delta
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}	
Fenton Pkwy											
16	Rio San Diego Dr/ Fenton Marketplace Dwy	Northside Dr	4M	40,000	19,763	0.49	B	21,506	0.54	C	0.04
16a	Northside Dr	Camino del Rio N	4C	30,000	16,263	0.54	C	21,506	0.72	D	0.18
San Diego Mission Rd											
17	Mission Village Dr	Rancho Mission Rd	4C w/o CLTL	15,000	6,848	0.46	B	13,123	0.87	E	0.41
18	Rancho Mission Rd	Fairmount Ave	2C w/CLTL	15,000	10,531	0.70	D	15,544	1.04	F	0.34
Rancho Mission Rd											
19	Friars Rd	San Diego Mission Rd	3C w/CLTL	22,500	16,028	0.71	D	20,461	0.91	E	0.20
20	San Diego Mission Rd	Ward Rd	4C w/o CLTL	15,000	9,089	0.61	C	10,795	0.72	D	0.11
21	West of Ward Rd		2C	10,000	1,824	0.18	A	5,809	0.58	C	0.40
Ward Rd											
22	Rancho Mission Rd	Camino del Rio N	4C w/o CLTL	15,000	9,459	0.63	C	13,642	0.91	E	0.28
Fairmount Ave											
23	San Diego Mission Rd/ Twain Ave	Mission Gorge Rd	4C w/o CLTL	15,000	8,704	0.29	A	12,158	0.41	B	0.12
Mission Village Dr											
24	Ruffin Rd	Shawn Ave	4C	30,000	18,344	0.61	C	22,623	0.75	D	0.14
25	Shawn Ave	Ronda Ave	4C	30,000	14,912	0.50	C	19,399	0.65	C	0.15
26	Ronda Ave	Friars Rd	4M	40,000	17,204	0.43	B	21,709	0.54	C	0.11
Ruffin Rd											
27	Aero Dr	Mission Village Dr	4C	30,000	16,451	0.55	C	19,086	0.64	C	0.09
Gramercy Dr											
28	Mobley St	Ruffin Rd	4M	40,000	9,456	0.24	A	10,812	0.27	A	0.03

Table 4.15-50. Horizon Year Plus Project Without and With 4-Lane Bridge Conditions Roadway Segment Level of Service

Roadway Segment			Roadway Classification (# of Lanes) ¹	Capacity	Horizon Year With Bridge No Project			Horizon Year With Bridge Plus Project			V/C Delta
ID	Extent (from/to)				ADT	V/C ²	LOS ^{3,4}	ADT	V/C ²	LOS ^{3,4}	
Aero Dr											
29	Sandrock Rd	Ruffin Rd	4M	40,000	24,167	0.60	C	25,505	0.64	C	0.04
30	Ruffin Rd	Daley Center Dr	4M	40,000	31,494	0.79	D	32,625	0.82	D	0.03
Camino del Rio N											
31	Qualcomm Way	Mission City Pkwy	4C	30,000	8,998	0.30	A	9,753	0.33	A	0.03
32	Mission City Pkwy	Ward Rd	2C w/CLTL	15,000	11,661	0.78	D	13,821	0.92	E	0.14
33	Ward Rd	Fairmount Ave	4C	30,000	14,321	0.48	C	23,209	0.77	D	0.29
Camino del Rio S											
34	Texas St	Mission City Pkwy	2C	10,000	14,787	1.48	F	16,315	1.63	F	0.15
35	Mission City Pkwy	I-15 Ramps	3C w/CLTL	22,500	14,581	0.65	C	16,800	0.75	D	0.10
36	I-15 Ramps	Caminito Pintoresco	2C w/CLTL	15,000	8,372	0.56	C	8,372	0.56	C	0.00

Source: Appendix 4.15-1

Notes:

- ¹ 2C w/CLTL = 2-lane collector with center left-turn lane
 3C w/CLTL = 3-lane collector (2 lanes in one direction and 1 in opposing direction) with center left-turn lane;
 4C w/o CLTL = 4-lane collector without center left-turn lane
 4C = 4-lane collector
 4M = 4-lane major arterial
 6M = 6-lane major arterial
 6P = 6-lane primary arterial
 7P = 7-lane primary arterial (4 lanes in one direction and 3 in opposing direction); the additional lane is assumed to add 5,000 ADT for LOS A, 7,500 ADT for LOS B, and 10,000 ADT for LOS C, D, and E per the Mission Valley Community Plan Update
 8P = 8-lane primary arterial
 6E = 6-lane expressway
- ² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications
- ³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)* and the *Mission Valley Community Plan Update (2019)*
- ⁴ Unacceptable ADT volumes per segment and LOS highlighted in bold.

As shown on Table 4.15-49, with the 2-lane bridge in place the proposed project would cause the City's segment threshold to be exceeded on the following study area roadway segments:

6. Friars Road: Northside Drive to Stadium Way (Street A) (LOS E)
9. Friars Road: I-15 NB Ramps to Rancho Mission Road (LOS F)
11. Friars Road: Santo Road to Riverdale St (LOS F)
12. Friars Road: Riverdale Street to Mission Gorge Road (LOS E)
- 16a. Fenton Pkwy: Northside Dr to Camino del Rio N (LOS E; this roadway segment includes the new bridge facility)
17. San Diego Mission Road: Mission Village Drive to Rancho Mission Road (LOS E)
18. San Diego Mission Road: Rancho Mission Road to Fairmount Avenue (LOS F)
19. Rancho Mission Road: Friars Road to San Diego Mission Road (LOS E)
22. Ward Road from Rancho Mission Road to Camino del Rio North (LOS E)
34. Camino del Rio S: Texas St to Mission City Parkway (LOS F)

As shown on Table 4.15-50, with the 4-lane bridge in place the proposed project would cause the City's segment threshold to be exceeded on the following study area roadway segments:

7. Friars Road: Northside Drive to Stadium Way (Street A) (LOS E)
10. Friars Road: I-15 NB Ramps to Rancho Mission Road (LOS F)
13. Friars Road: Santo Road to Riverdale St (LOS F)
14. Friars Road: Riverdale Street to Mission Gorge Road (LOS F)
20. San Diego Mission Road: Mission Village Drive to Rancho Mission Road (LOS E)
21. San Diego Mission Road: Rancho Mission Road to Fairmount Avenue (LOS F)
22. Rancho Mission Road: Friars Road to San Diego Mission Road (LOS E)
23. Ward Road from Rancho Mission Road to Camino del Rio North (LOS E)
32. Camino del Rio N: Mission City Pkwy to Ward Rd (LOS E)
35. Camino del Rio S: Texas St to Mission City Parkway (LOS F)

Additionally, the road segment including the new bridge facility, which is planned to include four lanes with a two-way left-turn lane per the MVCP update, would operate acceptably at LOS D under this scenario.

4.15.11.5 Freeway Segment Analysis

Tables 4.15-51 and 4.15-52, respectively, display the study area freeway operations under Horizon Year (2037) Plus Project Conditions with the 2-Lane and 4-Lane Fenton Parkway bridge in place. As noted above, the redistribution of traffic would result in some traffic otherwise projected to travel on I-8 east of I-15 under the without bridge analysis shifting to Montezuma Road with the new bridge connection. Similarly, some traffic projected to travel on I-15 south of Friars Road under the without bridge analysis would shift to the Camino del Rio S interchange under the with bridge scenarios.

Ultimately, under the 2-lane bridge scenario, with the addition of proposed project traffic, the following freeway segments would exceed the CSU TISM/Caltrans operating threshold:

15. I-15 from Adams Avenue to I-8 (NB, both peak hours; SB, PM peak hour)
16. I-15 from I-8 to Friars Road (NB auxiliary lanes, PM peak hour; SB auxiliary lanes to I-8, both peak hours; SB auxiliary lane to I-15 SB, PM peak hour)
17. I-15 from Friars Road to Aero Drive (NB, AM peak hour; SB, PM peak hour)
18. I-15 from Aero Drive to Balboa Avenue/Tierrasanta Boulevard (both directions, both peak hours)
19. I-8 from Morena Boulevard to Taylor Street (EB, PM peak hour)
- 17-20. I-8 from Taylor Street to SR-163 (EB, both peak hours; WB, PM peak hour)
27. I-8 from SR-163 to Mission Center Road (WB, PM peak hour)
28. I-8 from Mission Center Road to Texas Street (WB, PM peak hour)
20. I-8 from I-805 to I-15 (EB, PM peak hour; WB, both peak hours)
22. I-8 from Fairmount Avenue to Waring Road (EB, PM peak hour; WB, AM peak hour)
23. I-8 from Waring Road to College Avenue (EB, PM peak hour; WB, both peak hour)

The locations that would exceed the City of San Diego threshold criteria include those noted above, as well as the following segments:

2. SR-163 from Washington Street to I-8 (NB, PM peak hour; SB, PM peak hour)
- 15-17. I-8 from Taylor Street to Mission Center Road (WB, AM peak hour)
- 18-19. I-8 from Mission Center Road to I-805 (EB, PM peak hour; WB, AM peak hour)

Ultimately, under the 4-lane bridge scenario, with the addition of proposed project traffic, the following freeway segments would exceed the CSU TISM/Caltrans operating threshold:

10. I-15 from Adams Avenue to I-8 (NB, AM and PM peak hours; SB, PM peak hour)
11. I-15 from I-8 to Friars Road (NB auxiliary lanes, PM peak hour; SB auxiliary lanes to I-8, AM and PM peak hours; SB auxiliary lane to I-15 SB, PM peak hour)
12. I-15 from Friars Road to Aero Drive (NB, AM peak hour; SB, PM peak hour)
13. I-15 from Aero Drive to Balboa Avenue/Tierrasanta Boulevard (both directions, AM and PM peak hours)
14. I-8 from Morena Boulevard to Taylor Street (EB, PM peak hour)
- 15-16. I-8 from Taylor Street to SR-163 (EB, AM and PM peak hours; WB, PM peak hour)
17. I-8 from SR-163 to Mission Center Road (WB, PM peak hour)
18. I-8 from Mission Center Road to Texas Street (WB, PM peak hour)
20. I-8 from I-805 to I-15 (EB, PM peak hour; WB, AM and PM peak hours)
22. I-8 from Fairmount Avenue to Waring Road (EB, PM peak hour; WB, AM peak hour)
23. I-8 from Waring Road to College Avenue (EB, PM peak hour; WB, AM and PM peak hour)

The locations that would exceed the City of San Diego threshold criteria include those noted above, as well as the following segments:

1. SR-163 from Washington Street to I-8 (NB, PM peak hour; SB, PM peak hour)
- 15-17. I-8 from Taylor Street to Mission Center Road (WB, AM peak hour)
- 18-19. I-8 from Mission Center Road to I-805 (EB, PM peak hour; WB, AM peak hour)

4.15.11.6 Freeway Ramp Metering Analysis

Tables 4.15-53 and 4.15-54, respectively, display the results of the ramp metering analysis conducted at the metered freeway on-ramps in the study area under Horizon Year with the 2-lane and 4-lane Fenton Parkway Bridge both without and with the proposed project.

As shown on Table 4.15-53, under the 2-lane bridge scenario, the following ramps would exceed the operating threshold:

- I-15 NB On-ramp from Friars Road – The addition of project traffic would exacerbate already excessive delays by 9.6 minutes (to a total of 31.2 minutes) in the AM peak hour and by 30.1 minutes (to a total of 59.6 minutes) in the PM peak hour.
- I-15 SB/I-8 Loop On-ramp from Friars Road – The addition of project traffic would exacerbate already excessive delays by 22.9 minutes (to a total delay of 38.0 minutes) in the PM peak hour.
- I-15 SB Direct On-ramp from Friars Road – The addition of project traffic would result in an unacceptable delay of 15.2 minutes in the PM peak hour.
- I-8 EB On-ramp from SB Fairmount Avenue – The addition of project traffic would exacerbate already excessive delays and increase delay by 21.0 minutes (to a total delay of 49.7 minutes) in the PM peak hour.

The same locations would exceed the City of San Diego impact thresholds for metered on-ramps.

As shown on Table 4.15-54, under the 4-lane bridge scenario, the following ramps would exceed the operating threshold:

- I-15 NB On-ramp from Friars Road – The addition of project traffic would exacerbate already excessive delays by 9.6 minutes (to a total of 31.2 minutes) in the AM peak hour and by 30.1 minutes (to a total of 59.6 minutes) in the PM peak hour.
- I-15 SB/I-8 Loop On-ramp from Friars Road – The addition of project traffic would exacerbate already excessive delays by 14.0 minutes (to a total delay of 41.7 minutes) in the PM peak hour.
- I-8 EB On-ramp from SB Fairmount Avenue – The addition of project traffic would exacerbate already excessive delays and increase delay by 28.7 minutes (to a total delay of 49.7 minutes) in the PM peak hour.

The same locations would exceed the City of San Diego impact thresholds for metered on-ramps.

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Table 4.15-51. Horizon Year Plus Project Freeway Segment Level Of Service With 2-Lane Bridge

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year With Bridge - No Project						Horizon Year With Bridge Plus Project						V/C Delta		Exceeds Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
State Route 163																				
1	6 th Ave to I-8	NB	3M+1A	6,600	6,350	6,892	0.96	1.04	E	F(0)	6,407	6,942	0.97	1.05	E	F(0)	0.01	0.01	NO	NO*
		SB	3M+2A	7,800	10,832	9,690	1.39	1.24	F(2)	F(0)	10,868	9,757	1.39	1.25	F(2)	F(1)	0.00	0.01	NO	NO*
2	I-8 to Friars Rd	NB	2A	2,400	1,958	2,125	0.82	0.89	D	D	2,083	2,206	0.87	0.92	D	D	0.05	0.03	NO	NO
		SB	4M+2A	9,600	9,908	9,049	1.03	0.94	F(0)	E** (F)	9,944	9,122	1.04	0.95	F(0)	E (F)	0.00	0.01	NO	NO
3	Friars Rd to Mesa College Dr ⁵	NB	5M	9,000	11,141	8,973	1.24	1.00	F(0)	E	11,154	9,005	1.24	1.00	F(0)	F(0)	0.00	0.00	NO	NO
		SB	4M	7,200	7,446	7,713	1.03	1.07	F(0)	F(0)* *(F)	7,464	7,731	1.04	1.07	F(0)	F(0) (F)	0.00	0.00	NO	NO
4	Mesa College Dr to I-805	NB	4M+2A	9,600	9,392	8,718	0.98	0.91	E	D	9,403	8,747	0.98	0.91	E	D	0.00	0.00	NO	NO
		SB	4M+1A	8,400	8,551	7,471	1.02	0.89	F(0)	D** (F)	8,567	7,488	1.02	0.89	F(0)	D (F)	0.00	0.00	NO	NO
Interstate 805																				
5	Madison Ave to I-8	NB	4M+1A	8,400	10,241	5,976	1.22	0.71	F(0)	C	10,275	6,006	1.22	0.71	F(0)	C	0.00	0.00	NO	NO
		SB	6M	10,800	5,454	11,453	0.50	1.06	B	F(0)* *(F)	5,475	11,493	0.51	1.06	B	F(0) (F)	0.00	0.00	NO	NO
6	I-8 to Murray Ridge Rd/ Phyllis Pl	NB	5M	9,000	11,876	6,885	1.32	0.77	F(1)	C	11,886	6,907	1.32	0.77	F(1)	C	0.00	0.00	NO	NO
		SB	4M+2A	9,600	6,216	11,119	0.65	1.16	C	F(0)	6,232	11,131	0.65	1.16	C	F(0)	0.00	0.00	NO	NO
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/Kearny Villa Rd	NB	5M	9,000	11,865	6,854	1.32	0.76	F(1)	C	11,875	6,876	1.32	0.76	F(1)	C	0.00	0.00	NO	NO
		SB	5M	9,000	5,975	10,851	0.66	1.21	C	F(0)	5,992	10,862	0.67	1.21	C	F(0)	0.00	0.00	NO	NO
8	Mesa College Dr/Kearny Villa Rd to SR-163	NB	5M	9,000	9,896	5,830	1.10	0.65	F(0)**(F)	C	9,905	5,851	1.10	0.65	F(0) (F)	C	0.00	0.00	NO	NO
		SB	4M	7,200	4,290	6,701	0.60	0.93	B	E** (F)	4,305	6,712	0.60	0.93	B	E (F)	0.00	0.00	NO	NO
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	7,077	5,952	0.84	0.71	D** (F)	C	7,098	6,002	0.84	0.71	D (F)	C	0.00	0.01	NO	NO
		SB	4M+2A	9,600	6,693	9,068	0.70	0.94	C	E** (F)	6,724	9,095	0.70	0.95	C	E (F)	0.00	0.00	NO	NO
Interstate 15																				
10	Adams Ave to I-8	NB	3M+2A	7,800	7,624	8,470	0.98	1.09	E	F(0)	7,978	8,775	1.02	1.13	F(0)	F(0)	0.05	0.04	YES	YES
		SB	5M	9,000	6,077	10,152	0.68	1.13	C	F(0)	6,298	10,563	0.70	1.17	C	F(0)	0.02	0.05	NO	YES
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,282	2,008	0.53	0.84	B	D	1,639	2,364	0.68	0.99	C	E	0.15	0.15	NO	YES
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	4,357	5,778	1.21	1.61	F(0)	F(3)	4,454	5,944	1.24	1.65	F(0)	F(3)	0.03	0.05	YES	YES
	Friars Rd Direct Ramp to I-15 SB	SB	1A	1,200	718	954	0.60	0.79	B	C	855	1,248	0.71	1.04	C	F(0)	0.11	0.25	NO	YES
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	9,691	7,115	1.15	0.85	F(0)	D	9,964	7,620	1.19	0.91	F(0)	D	0.03	0.06	YES	NO
		SB	5M+1A	10,200	8,245	11,344	0.81	1.11	D	F(0)	8,680	11,718	0.85	1.15	D	F(0)	0.04	0.04	NO	YES
13	Aero Dr to Balboa Ave/ Tierrasanta Blvd	NB	4M+1A	8,400	10,881	8,205	1.30	0.98	F(1)	E	11,125	8,657	1.32	1.03	F(1)	F(0)	0.03	0.05	YES	YES
		SB	4M+1A	8,400	8,446	10,169	1.01	1.21	F(0)	F(0)	8,835	10,503	1.05	1.25	F(0)	F(1)	0.05	0.04	YES	YES
Interstate 8																				
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	7,276	9,089	0.87	1.08	D	F(0)	7,382	9,179	0.88	1.09	D	F(0)	0.01	0.01	NO	YES
		WB	5M	9,000	8,564	7,482	0.95	0.83	E	D	8,630	7,604	0.96	0.84	E	D	0.01	0.01	NO	NO
15	Taylor St to Hotel Cir	EB	4M	7,200	7,129	9,532	0.99	1.32	E	F(1)	7,243	9,629	1.01	1.34	F(0)	F(1)	0.02	0.01	YES	YES
		WB	4M+1A	8,400	9,871	8,430	1.18	1.00	F(0)	F(0)	9,942	8,562	1.18	1.02	F(0)	F(0)	0.01	0.02	NO*	YES

Table 4.15-51. Horizon Year Plus Project Freeway Segment Level Of Service With 2-Lane Bridge

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year With Bridge - No Project						Horizon Year With Bridge Plus Project						V/C Delta		Exceeds Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 8																				
16	Hotel Cir to SR-163	EB	4M+2A	9,600	8,841	10,972	0.92	1.14	E	F(0)	8,956	11,071	0.93	1.15	E	F(0)	0.01	0.01	YES	YES
		WB	5M	9,000	10,030	8,245	1.11	0.92	F(0)	D	10,101	8,378	1.12	0.93	F(0)	E	0.01	0.01	NO*	YES
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,770	7,084	0.52	0.98	B	E** (F)	3,834	7,155	0.53	0.99	B	E (F)	0.01	0.01	NO	NO
		WB	3M+2A	7,800	10,364	9,544	1.33	1.22	F(1)	F(0)	10,435	9,669	1.34	1.24	F(1)	F(0)	0.01	0.02	NO*	YES
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	6,280	11,826	0.75	1.41	C	F(2)	6,344	11,897	0.76	1.42	C	F(2)	0.01	0.01	NO	NO*
		WB	4M+1A	8,400	10,786	9,995	1.28	1.19	F(1)	F(0)	10,857	10,121	1.29	1.20	F(1)	F(0)	0.01	0.01	NO*	YES
19	Texas St to I-805	EB	4M	7,200	3,980	7,765	0.55	1.08	B	F(0)* *(F)	4,044	7,836	0.56	1.09	B	F(0) (F)	0.01	0.01	NO	NO
		WB	4M	7,200	7,554	5,996	1.05	0.83	F(0)**(F)	D	7,625	6,122	1.06	0.85	F(0) (F)	D	0.01	0.02	NO	NO
20	I-805 to I-15	EB	4M+2A	9,600	7,374	12,462	0.77	1.30	C	F(1)	7,489	12,574	0.78	1.31	C	F(1)	0.01	0.01	NO	YES
		WB	4M+2A	9,600	12,644	10,240	1.32	1.07	F(1)	F(0)	12,742	10,409	1.33	1.08	F(3)	F(3)	0.01	0.02	YES	YES
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	7,378	11,546	0.77	1.20	C	F(0)	7,356	11,554	0.77	1.20	C	F(0)	0.00	0.00	NO	NO
		WB	4M+2A	9,600	8,956	6,605	0.93	0.69	E** (F)	C	8,938	6,666	0.93	0.69	E (F)	C	0.00	0.01	NO	NO
22	Fairmount Ave to Waring Rd	EB	5M	9,000	8,018	12,782	0.89	1.42	D	F(2)	8,112	13,007	0.90	1.45	D	F(2)	0.01	0.02	NO	YES
		WB	6M	10,800	12,116	9,572	1.12	0.89	F(0)	D	12,265	9,738	1.14	0.90	F(0)	D	0.01	0.02	YES	NO
23	Waring Rd to College Ave	EB	5M	9,000	7,689	12,038	0.85	1.34	D	F(1)	7,814	12,277	0.87	1.36	D	F(2)	0.01	0.03	NO	YES
		WB	5M	9,000	11,254	9,039	1.25	1.00	F(1)	F(0)	11,454	9,216	1.27	1.02	F(1)	F(0)	0.02	0.02	YES	YES

Source: Appendix 4.15-1

Notes:

¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane

M = mainline lane

A = auxiliary lane

² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications

³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)*

⁴ Unacceptable V/C and LOS highlighted in **bold**.

⁵ No data available from Genesee Ave to Mesa College Dr - assumed equivalent to the segment from Friars Rd to Genesee Ave

* Freeway segment would exceed the City of San Diego impact threshold.

** Traffic data indicate existing operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

Table 4.15-52. Horizon Year Plus Project with 4-Lane Bridge Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year With Bridge - No Project						Horizon Year With Bridge Plus Project						V/C Delta		Exceeds Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
State Route 163																				
1	6 th Ave to I-8	NB	3M+1A	6,600	6,350	6,892	0.96	1.04	E	F(0)	6,407	6,942	0.97	1.05	E	F(0)	0.01	0.01	NO	NO*
		SB	3M+2A	7,800	10,832	9,690	1.39	1.24	F(2)	F(0)	10,868	9,757	1.39	1.25	F(2)	F(1)	0.00	0.01	NO	NO*
2	I-8 to Friars Rd	NB	2A	2,400	1,958	2,125	0.82	0.89	D	D	2,083	2,206	0.87	0.92	D	D	0.05	0.03	NO	NO
		SB	4M+2A	9,600	9,908	9,049	1.03	0.94	F(0)	E** (F)	9,944	9,122	1.04	0.95	F(0)	E (F)	0.00	0.01	NO	YES***
3	Friars Rd to Mesa College Dr ⁵	NB	5M	9,000	11,141	8,973	1.24	1.00	F(0)	E	11,154	9,005	1.24	1.00	F(0)	F(0)	0.00	0.00	NO	NO
		SB	4M	7,200	7,446	7,713	1.03	1.07	F(0)	F(0)**(F)	7,464	7,731	1.04	1.07	F(0)	F(0) (F)	0.00	0.00	NO	YES***
4	Mesa College Dr to I-805	NB	4M+2A	9,600	9,392	8,718	0.98	0.91	E	D	9,403	8,747	0.98	0.91	E	D	0.00	0.00	NO	NO
		SB	4M+1A	8,400	8,551	7,471	1.02	0.89	F(0)	D** (F)	8,567	7,488	1.02	0.89	F(0)	D (F)	0.00	0.00	NO	YES***

Table 4.15-52. Horizon Year Plus Project with 4-Lane Bridge Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year With Bridge - No Project						Horizon Year With Bridge Plus Project						V/C Delta		Exceeds Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 805																				
5	Madison Ave to I-8	NB	4M+1A	8,400	10,241	5,976	1.22	0.71	F(0)	C	10,275	6,006	1.22	0.71	F(0)	C	0.00	0.00	NO	NO
		SB	6M	10,800	5,454	11,453	0.50	1.06	B	F(0)**(F)	5,475	11,493	0.51	1.06	B	F(0) (F)	0.00	0.00	NO	YES***
6	I-8 to Murray Ridge Rd/ Phyllis Pl	NB	5M	9,000	11,876	6,885	1.32	0.77	F(1)	C	11,886	6,907	1.32	0.77	F(1)	C	0.00	0.00	NO	NO
		SB	4M+2A	9,600	6,216	11,119	0.65	1.16	C	F(0)	6,232	11,131	0.65	1.16	C	F(0)	0.00	0.00	NO	NO
7	Murray Ridge Rd/Phyllis Pl to Mesa College Dr/Kearny Villa Rd	NB	5M	9,000	11,865	6,854	1.32	0.76	F(1)	C	11,875	6,876	1.32	0.76	F(1)	C	0.00	0.00	NO	NO
		SB	5M	9,000	5,975	10,851	0.66	1.21	C	F(0)	5,992	10,862	0.67	1.21	C	F(0)	0.00	0.00	NO	NO
8	Mesa College Dr/Kearny Villa Rd to SR-163	NB	5M	9,000	9,896	5,830	1.10	0.65	F(0)**(F)	C	9,905	5,851	1.10	0.65	F(0) (F)	C	0.00	0.00	YES***	NO
		SB	4M	7,200	4,290	6,701	0.60	0.93	B	E** (F)	4,305	6,712	0.60	0.93	B	E (F)	0.00	0.00	NO	YES***
9	SR-163 to Balboa Ave	NB	4M+1A	8,400	7,077	5,952	0.84	0.71	D** (F)	C	7,098	6,002	0.84	0.71	D (F)	C	0.00	0.01	YES***	NO
		SB	4M+2A	9,600	6,693	9,068	0.70	0.94	C	E** (F)	6,724	9,095	0.70	0.95	C	E (F)	0.00	0.00	NO	YES***
Interstate 15																				
10	Adams Ave to I-8	NB	3M+2A	7,800	7,624	8,470	0.98	1.09	E	F(0)	7,978	8,775	1.02	1.13	F(0)	F(0)	0.05	0.04	YES	YES
		SB	5M	9,000	6,077	10,152	0.68	1.13	C	F(0)	6,298	10,563	0.70	1.17	C	F(0)	0.02	0.05	NO	YES
11	NB Off-Ramp to Friars Rd	NB	2A	2,400	1,231	1,940	0.51	0.81	B	D	1,515	2,248	0.63	0.94	C	E	0.12	0.13	NO	YES
	Friars Rd Auxiliary Lanes to I-8	SB	3A	3,600	4,340	5,769	1.21	1.60	F(0)	F(3)	4,429	5,923	1.23	1.65	F(0)	F(3)	0.02	0.04	YES	YES
	Friars Rd Direct Ramp to I-15 SB	SB	1A	1,200	701	876	0.58	0.73	B	C	804	1,122	0.67	0.93	C	E	0.09	0.20	NO	YES
12	Friars Rd to Aero Dr	NB	4M+1A	8,400	9,691	7,115	1.15	0.85	F(0)	D	9,964	7,620	1.19	0.91	F(0)	D	0.03	0.06	YES	NO
		SB	5M+1A	10,200	8,245	11,344	0.81	1.11	D	F(0)	8,680	11,718	0.85	1.15	D	F(0)	0.04	0.04	NO	YES
13	Aero Dr to Balboa Ave/ Tierrasanta Blvd	NB	4M+1A	8,400	10,881	8,205	1.30	0.98	F(1)	E	11,125	8,657	1.32	1.03	F(1)	F(0)	0.03	0.05	YES	YES
		SB	4M+1A	8,400	8,446	10,169	1.01	1.21	F(0)	F(0)	8,835	10,503	1.05	1.25	F(0)	F(1)	0.05	0.04	YES	YES
Interstate 8																				
14	Morena Blvd to Taylor St	EB	4M+1A	8,400	7,276	9,089	0.87	1.08	D	F(0)	7,382	9,179	0.88	1.09	D	F(0)	0.01	0.01	NO	YES
		WB	5M	9,000	8,564	7,482	0.95	0.83	E	D	8,630	7,604	0.96	0.84	E	D	0.01	0.01	NO	NO
15	Taylor St to Hotel Cir	EB	4M	7,200	7,129	9,532	0.99	1.32	E	F(1)	7,243	9,629	1.01	1.34	F(0)	F(1)	0.02	0.01	YES	YES
		WB	4M+1A	8,400	9,871	8,430	1.18	1.00	F(0)	F(0)	9,942	8,562	1.18	1.02	F(0)	F(0)	0.01	0.02	NO*	YES
Interstate 8																				
16	Hotel Cir to SR-163	EB	4M+2A	9,600	8,841	10,972	0.92	1.14	E	F(0)	8,956	11,071	0.93	1.15	E	F(0)	0.01	0.01	YES	YES
		WB	5M	9,000	10,030	8,245	1.11	0.92	F(0)	D	10,101	8,378	1.12	0.93	F(0)	E	0.01	0.01	NO*	YES
17	SR-163 to Mission Center Rd	EB	4M	7,200	3,770	7,084	0.52	0.98	B	E** (F)	3,834	7,155	0.53	0.99	B	E (F)	0.01	0.01	NO	YES***
		WB	3M+2A	7,800	10,364	9,544	1.33	1.22	F(1)	F(0)	10,435	9,669	1.34	1.24	F(1)	F(0)	0.01	0.02	NO*	YES
18	Mission Center Rd to Texas St	EB	4M+1A	8,400	6,280	11,826	0.75	1.41	C	F(2)	6,344	11,897	0.76	1.42	C	F(2)	0.01	0.01	NO	NO*
		WB	4M+1A	8,400	10,786	9,995	1.28	1.19	F(1)	F(0)	10,857	10,121	1.29	1.20	F(1)	F(0)	0.01	0.01	NO*	YES
19	Texas St to I-805	EB	4M	7,200	3,980	7,765	0.55	1.08	B	F(0)**(F)	4,044	7,836	0.56	1.09	B	F(0) (F)	0.01	0.01	NO	YES***
		WB	4M	7,200	7,554	5,996	1.05	0.83	F(0)**(F)	D	7,625	6,122	1.06	0.85	F(0) (F)	D	0.01	0.02	YES***	NO
20	I-805 to I-15	EB	4M+2A	9,600	7,374	12,462	0.77	1.30	C	F(1)	7,489	12,574	0.78	1.31	C	F(1)	0.01	0.01	NO	YES
		WB	4M+2A	9,600	12,644	10,240	1.32	1.07	F(1)	F(0)	12,742	10,409	1.33	1.08	F(3)	F(3)	0.01	0.02	YES	YES
21	I-15 to Fairmount Ave	EB	4M+2A	9,600	7,378	11,546	0.77	1.20	C	F(0)	7,331	11,533	0.76	1.20	C	F(0)	0.00	0.01	NO	NO
		WB	4M+2A	9,600	8,956	6,605	0.93	0.69	E** (F)	C	8,897	6,650	0.93	0.69	E (F)	C	0.01	0.01	YES***	NO

Table 4.15-52. Horizon Year Plus Project with 4-Lane Bridge Conditions Freeway Segment Level of Service

Freeway Segment		Direction	Number of Lanes	Capacity ¹	Horizon Year With Bridge - No Project						Horizon Year With Bridge Plus Project						V/C Delta		Exceeds Threshold?	
					Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}		Peak Hour Volume		V/ C Ratio ^{2,4}		LOS ^{3,4}					
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
22	Fairmount Ave to Waring Rd	EB	5M	9,000	8,018	12,782	0.89	1.42	D	F(2)	8,086	12,986	0.90	1.44	D	F(2)	0.02	0.03	NO	YES
		WB	6M	10,800	12,116	9,572	1.12	0.89	F(0)	D	12,225	9,723	1.13	0.90	F(0)	D	0.02	0.02	YES	NO
23	Waring Rd to College Ave	EB	5M	9,000	7,672	12,029	0.85	1.34	D	F(1)	7,789	12,256	0.87	1.36	D	F(2)	0.01	0.03	NO	YES
		WB	5M	9,000	11,227	9,032	1.25	1.00	F(0)	F(0)	11,413	9,200	1.27	1.02	F(1)	F(0)	0.02	0.02	YES	YES

Source: Appendix 4.15-1

Notes:

¹ Capacity calculated at 1,800 vehicles/hour per mainline lane and 1,200 vehicles/hour per auxiliary lane

M = mainline lane

A = auxiliary lane

² Volume-to-capacity ratio. Worst-case is shown on segments with multiple classifications

³ LOS calculations performed using *City of San Diego Traffic Impact Study Manual (1998)*

⁴ Unacceptable V/C and LOS highlighted in bold.

⁵ No data available from Genesee Ave to Mesa College Dr - assumed equivalent to the segment from Friars Rd to Genesee Ave

* Freeway segment would exceed the City of San Diego impact threshold.

** Traffic data indicate existing operations are worse than calculated. Peak hour volumes likely do not represent actual demand due to heavy congestion. Estimated operations are shown in parentheses.

LOS	V/C	LOS	V/C
A	<0.41	F(0)	1.25
B	0.62	F(1)	1.35
C	0.80	F(2)	1.45
D	0.92	F(3)	>1.46
E	1.00		

Table 4.15-53. Horizon Year (2037) Plus Project With 2-Lane Bridge Conditions - Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Horizon Year With Bridge No Project					Horizon Year With Bridge Plus Project					Delay Delta	Exceeds Threshold?
				Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)		
				Mixed Flow & HOV	Mixed Flow only				Mixed Flow & HOV	Mixed Flow only					
I-15 NB - Friars Rd On-Ramp	AM	2	1,450	2,345	1,983	533	22.0	7,725	2,617	2,213	763	31.6	11,050	9.6	YES
	PM	2	888	1,503	1,324	436	29.5	6,325	2,010	1,770	882	59.6	12,800	30.1	YES
I-15 SB / I-8 - Friars Rd Loop On-Ramp	AM	1	N/A	914	914	N/A	N/A	N/A	1,028	1,028	N/A	N/A	N/A	N/A	NO
	PM	1	660	911	911	251	22.9	7,300	1,077	1,077	417	38.0	12,100	15.1	YES
I-15 SB - Friars Rd Direct On-Ramp	AM	1	N/A	751	751	N/A	N/A	N/A	954	954	N/A	N/A	N/A	N/A	NO
	PM	1	996	954	954	0	0.0	0	1,248	1,248	252	15.2	7,300	15.2	YES
I-8 EB - SB Fairmount Ave	AM	1	N/A	302	302	N/A	N/A	N/A	432	432	N/A	N/A	N/A	N/A	NO
	PM	1	492	664	664	172	21.0	5,000*	900	900	408	49.7	11,825	28.7	YES

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed.

² Demand is the peak hour demand projected to use the on-ramp.

³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Undesirable delays in excess of 15 minutes are highlighted in **bold**.

⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.

* Field observations of existing conditions indicate that operations may be better than calculated.

Table 4.15-54. Horizon Year (2037) Plus Project With 4-lane Bridge Conditions - Ramp Metering Analysis

Location	Peak Hour	Total # of Mixed Flow Lanes	Meter Rate ¹ (veh/hr)	Horizon Year With Bridge No Project					Horizon Year With Bridge Plus Project					Delay Delta	Exceeds Threshold?
				Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)	Demand ² (veh/hr)		Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)		
				Mixed Flow & HOV	Mixed Flow only				Mixed Flow & HOV	Mixed Flow only					
I-15 NB - Friars Rd On-Ramp	AM	2	1,450	2,345	1,983	533	22.0	7,725	2,617	2,213	763	31.6	11,050	9.6	YES
	PM	2	888	1,503	1,324	436	29.5	6,325	2,010	1,770	882	59.6	12,800	30.1	YES
I-15 SB / I-8 - Friars Rd Loop On-Ramp	AM	1	N/A	914	914	N/A	N/A	N/A	1,028	1,028	N/A	N/A	N/A	N/A	NO
	PM	1	660	902	902	242	22.0	7,025	1,056	1,056	396	36.0	11,500	14.0	YES
I-15 SB - Friars Rd Direct On-Ramp	AM	1	N/A	751	751	N/A	N/A	N/A	954	954	N/A	N/A	N/A	N/A	NO
	PM	1	996	876	876	0	0.0	0	1,122	1,122	126	7.6	3,650	7.6	NO
I-8 EB - SB Fairmount Ave	AM	1	N/A	302	302	N/A	N/A	N/A	432	432	N/A	N/A	N/A	N/A	NO
	PM	1	492	664	664	172	21.0	5,000*	900	900	408	49.7	11,825	28.7	YES

Source: Appendix 4.15-1. Analysis based on Caltrans District 11 Ramp Meter methodology

¹ Meter Rate is the peak hour capacity for the ramp meter. This value was obtained from Caltrans. The most restrictive meter rate was assumed.

² Demand is the peak hour demand projected to use the on-ramp.

³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴ Delay = (Excess Demand / Meter Rate) x 60 min/hr. Undesirable delays in excess of 15 minutes are highlighted in **bold**.

⁵ Queue = (Excess Demand / # of Lanes) x 29 ft/veh, rounded to the nearest multiple of 25 ft.

* Field observations of existing conditions indicate that operations may be better than calculated.

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4.15.11.7 Freeway Off-Ramp Queuing Analysis

Tables 4.15-55 and 4.15-56, respectively, display the results of the off-ramp queueing analysis conducted at the SR-163 and I-15 off-ramps at Friars Road, and the I-8 off-ramps at Qualcomm Way/Texas Street and Fairmount Avenue. In addition to the study area off-ramps reviewed under the scenario without the bridge, the off-ramp from Northbound I-15 to Camino del Rio S was also evaluated under the with bridge scenarios due to the anticipated increase in traffic on those facilities with the bridge in place. As shown on the tables, under the two with bridge scenarios, all projected off-ramp queues in 2037 would be accommodated by the existing storage capacity with the addition of the proposed project traffic.

Table 4.15-55. Horizon Year Plus Project With 2-Lane Bridge Conditions - Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95 th Percentile Queue (ft)		Capacity Exceeded?
				Horizon Year No Project Conditions With Bridge	Horizon Year Plus Project Conditions With Bridge	
1. SR-163 SB off-ramp at Friars Rd/ Ulric St	AM	NBL	1,200	211	211	NO
		NBT		104	104	NO
		NBR		487	502	NO
	PM	NBL	1,200	263	263	NO
		NBT		62	62	NO
		NBR		485	523	NO
2. SR-163 NB off-ramp at Friars Rd	AM	SBL	700	444	505	NO
		SBT		0	0	NO
		SBR		305	318	NO
	PM	SBL	700	418	456	NO
		SBT		0	0	NO
		SBR		447	456	NO
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	460	482	NO
		SBT		449	470	NO
		SBR		257	500	NO
	PM	SBL	1,200	842	911	NO
		SBT		845	911	NO
		SBR		80	168	NO
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0	0	NO
		SBR	1,300	0	0	NO
	PM	NBR	1,500	0	0	NO
		SBR	1,300	0	0	NO
29. I-8 WB off-ramp at Qualcomm Way/Camino del Rio N	AM	WBL	3,200	0	0	NO
		WBT		217	236	NO
		WBR		725	797	NO
	PM	WBL	3,200	0	0	NO
		WBT		394	411	NO
		WBR		518	556	NO
30. I-8 EB off-ramp at Qualcomm Way/ Texas St	AM	EBR	900	168	167	NO
	PM	EBR	900	274	269	NO

Table 4.15-55. Horizon Year Plus Project With 2-Lane Bridge Conditions - Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95 th Percentile Queue (ft)		Capacity Exceeded?
				Horizon Year No Project Conditions With Bridge	Horizon Year Plus Project Conditions With Bridge	
35. I-8 WB off-ramp at Fairmount Ave/Alvarado Canyon Rd/ Camino del Rio N	AM	WBL	1,000	627	713	NO
		WBT		607	680	NO
		WBR		269	394	NO
	PM	WBL	1,000	714	714	NO
		WBT		464	601	NO
		WBR		308	468	NO
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	496	505	NO
		EBR		505	508	NO
	PM	EBL	4,100	1,099	1,113	NO
		EBR		1,659	1,665	NO
46. I-15 SB off-ramp at Camino del Rio S	AM	SBL	900	95	0	NO
		SBT		0	126	NO
		SBR		708	798	NO
	PM	SBL	900	376	0	NO
		SBT		0	438	NO
		SBR		59	59	NO
48. I-15 NB off-ramp at Camino del Rio S	AM	NBL	1,300	510	676	NO
		NBT		29	27	NO
		NBR		0	0	NO
	PM	NBL	1,300	239	343	NO
		NBT		75	75	NO
		NBR		0	0	NO

Source: Appendix 4.15-1.

Table 4.15-56. Horizon Year Plus Project With 4-lane Bridge Conditions - Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95 th Percentile Queue (ft)		Capacity Exceeded?
				Horizon Year No Project Conditions With Bridge	Horizon Year Plus Project Conditions With Bridge	
1. SR-163 SB off-ramp at Friars Rd/ Ulric St	AM	NBL	1,200	211	211	NO
		NBT		104	104	NO
		NBR		487	502	NO
	PM	NBL	1,200	263	263	NO
		NBT		62	62	NO
		NBR		485	523	NO

Table 4.15-56. Horizon Year Plus Project With 4-lane Bridge Conditions - Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95 th Percentile Queue (ft)		Capacity Exceeded?
				Horizon Year No Project Conditions With Bridge	Horizon Year Plus Project Conditions With Bridge	
2. SR-163 NB off-ramp at Friars Rd	AM	SBL	700	444	505	NO
		SBT		0	0	NO
		SBR		305	318	NO
	PM	SBL	700	418	456	NO
		SBT		0	0	NO
		SBR		447	456	NO
17. I-15 SB off-ramp at Friars Rd	AM	SBL	1,200	460	482	NO
		SBT		449	470	NO
		SBR		257	500	NO
	PM	SBL	1,200	842	911	NO
		SBT		845	911	NO
		SBR		80	168	NO
18. I-15 NB off-ramp at Friars Rd	AM	NBR	1,500	0	0	NO
		SBR	1,300	0	0	NO
	PM	NBR	1,500	0	0	NO
		SBR	1,300	0	0	NO
29. I-8 WB off-ramp at Qualcomm Way/Camino del Rio N	AM	WBL	3,200	0	0	NO
		WBT		215	232	NO
		WBR		718	786	NO
	PM	WBL	3,200	0	0	NO
		WBT		394	411	NO
		WBR		503	538	NO
30. I-8 EB off-ramp at Qualcomm Way/Texas St	AM	EBR	900	167	166	NO
	PM	EBR	900	274	616	NO
35. I-8 WB off-ramp at Fairmount Ave/Alvarado Canyon Rd/Camino del Rio N	AM	WBL	1,000	627	713	NO
		WBT		607	680	NO
		WBR		269	394	NO
	PM	WBL	1,000	714	714	NO
		WBT		464	601	NO
		WBR		308	468	NO
36. I-8 EB off-ramp at Fairmount Ave	AM	EBL	4,100	496	505	NO
		EBR		505	508	NO
	PM	EBL	4,100	1,099	1,113	NO
		EBR		1,659	1,665	NO
46. I-15 SB off-ramp at Camino del Rio S	AM	SBL	900	0	0	NO
		SBT		716	129	NO
		SBR		376	835	NO
	PM	SBL	900	0	0	NO
		SBT		59	469	NO
		SBR		542	60	NO

Table 4.15-56. Horizon Year Plus Project With 4-lane Bridge Conditions - Off-Ramp Queueing Analysis

Intersection	Peak Hour	Movement	Capacity (ft)	95 th Percentile Queue (ft)		Capacity Exceeded?
				Horizon Year No Project Conditions With Bridge	Horizon Year Plus Project Conditions With Bridge	
48. I-15 NB off-ramp at Camino del Rio S	AM	NBL	1,300	29	773	NO
		NBT		0	26	NO
		NBR		324	0	NO
	PM	NBL	1,300	75	502	NO
		NBT		0	88	NO
		NBR		211	0	NO

Source: Appendix 4.15-1.

4.15.11.8 Improvements Needed for Horizon Year Plus Project Without Event Conditions with Fenton Parkway Extension

This section identifies the improvements that would be necessary to reduce or eliminate the exceedances of the impact thresholds under the Horizon Year Plus Project Conditions with the 2-lane and 4-lane Fenton Parkway bridge in place.

Intersections

2-Lane Bridge Scenario

Under Horizon Year Conditions with the 2-lane bridge in place, the proposed project would contribute to exceedances of the CSU TISM and/or City of San Diego thresholds at the following intersections requiring the corresponding improvements as appropriate; the agency with jurisdiction over the improvements is noted in parentheses:

1. SR-163 Southbound Ramps/Ulric Street & Friars Road (Caltrans) – Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 5.4 seconds.
 - *Improvements:* The required improvement would be to re-optimize the coordinated signal offset. This improvement would result in a less than significant impact per the CSU TISM but would not reduce the impact below the City of San Diego impact thresholds. To avoid exceeding the City threshold, additional signal timing re-optimization would need to be implemented. Signal timing modifications would normally be implemented periodically at an intersection to optimize operations and address changing traffic volumes regardless of the addition of project traffic. Regarding the proposed signal offset optimization, CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible, and the impact is significant and unavoidable.
 - *Threshold Level After Improvements:* Exceeds threshold

8. River Run Drive & Friars Road (City of San Diego) – Project traffic would degrade LOS E operations to LOS F in the PM peak hour and would increase delay by 34.5 seconds.
 - *Improvement:* To increase intersection capacity to eliminate the project impact, Friars Road would need to be widened to add a fourth eastbound through lane. Note, however, that widening this segment of Friars Road is not consistent with the currently adopted (1985) Mission Valley Community Plan or the Final Draft of the Mission Valley Community Plan Update (July 2019); therefore, this improvement is not recommended. An alternative improvement is the optimization of traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic; signal timing modifications would normally be implemented periodically at an intersection to optimize operations and address changing traffic volumes, especially with the new bridge, regardless of the addition of project traffic. This option would improve operations in the PM peak hour to 32.3 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended traffic signal optimization.
 - *Threshold Level After Improvement:* Less than threshold if City authorization is provided to implement signal optimization.
9. Fenton Parkway & Friars Road (City of San Diego) – Project traffic would degrade LOS E operations to LOS F in the PM peak hour by increasing delay 28.6 seconds.
 - *Improvement:* Optimize the traffic signals along the Friars Road corridor extending from Fenton Parkway to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic; signal timing modifications would normally be implemented periodically at an intersection to optimize operations and address changing traffic volumes, especially with the new bridge, regardless of the addition of project traffic. This option would improve operations to 67.6 seconds of delay in the PM peak hour. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended traffic signal optimization.
 - *Threshold Level After Improvement:* Less than threshold if City authorization is provided to implement signal optimization.
10. Northside Drive & Friars Road (City of San Diego) – *No Impact:* Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 4.5 seconds. While this does not result in a significant impact per the CSU TISM, it does exceed the City of San Diego impact threshold. To avoid exceeding the City threshold, optimize the traffic signals along the Friars Road corridor extending from Fenton Parkway to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic; signal timing modifications would normally be implemented periodically at an intersection to optimize operations and address changing traffic volumes, especially with the new bridge, regardless of the addition of project traffic.
17. I-15 Southbound Ramps & Friars Road (Caltrans) – Project traffic would degrade LOS D operations to LOS F operations in the AM peak hour, would exacerbate LOS F operations in the PM peak hour, and would increase delay by 53.3 and 27.7 seconds, respectively.
 - *Improvement:* The needed improvement would be to reconstruct the intersection to add a second eastbound left-turn lane, a second eastbound right-turn lane, and a second westbound right-turn lane. This improvement would require widening both on-ramps to allow for two receiving lanes. If this

improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of pedestrian and bicycle enhancements. Accordingly, the westbound right-turn lane would be squared off to improve pedestrian safety, and the westbound right-turn would be provided with an overlap phase. It should be noted that the Civita (Quarry Falls) development is also required to implement a portion of these improvements, including the addition of the second eastbound left-turn lane and squaring up the westbound right-turn movement; the SDSU Mission Valley Campus project improvements, beyond the Civita improvements, would provide substantially more vehicle queueing approaching the ramp intersections, including on the bridge. Caltrans and/or the City of San Diego is expected to additionally require that sidewalks and buffered bike lanes are provided as part of this improvement, and that a blank-out No Right Turn sign be installed at the dual eastbound and westbound right turn lanes. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian calls will be very rare and were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. Once implemented, these improvements would result in operations in the AM and PM peak hours of 54.5 and 58.4 seconds of delay, respectively. Please note that these calculated operations are based on stand-alone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queueing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.

- *Threshold Level After Improvement:* Exceeds threshold

18. I-15 Northbound Ramps & Friars Road (Caltrans) – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 52.9 and over 100.0 seconds, respectively.

- *Improvement:* The needed improvement would be to reconstruct the intersection to add a second eastbound left-turn lane. Note that the Civita (Quarry Falls) development is also required to implement this improvement but it does not include any widening of the Friars Road bridge; the SDSU Mission Valley Campus improvements, beyond the Civita improvements, would provide substantially more space for vehicle queueing approaching the ramp intersections, including on the bridge. If this improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of sidewalks and buffered bike lanes be provided as part of this improvement, which would require widening the Friars Road overpass to I-15. Caltrans is expected to additionally require that the southbound approach be squared off and converted to two right-turn lanes provided with an overlap phase, and that a blank-out No Right Turn sign be installed for the westbound approach to improve pedestrian safety. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian calls will be very rare and were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. In the PM peak hour, re-optimization would include coordinating the signal with the adjacent I-15 Southbound Ramps & Friars Road intersection and the adjacent Rancho Mission Road & Friars Road intersection, where coordination is already in place in the AM peak hour. These improvements would result in operations in the AM and PM peak hours of 65.0 and 55.3 seconds of delay, respectively. Please note that these calculated operations are based on stand-alone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queueing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding

for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.

- *Threshold Level After Improvement:* Exceeds threshold

19. Rancho Mission Road & Friars Road (Caltrans) – Project traffic would degrade LOS E operations to LOS F in the AM and PM peak hours and would increase delay by 4.2 and 11.6 seconds, respectively.

- *Improvement:* Implement coordination of this signal with the adjacent improvements to Intersection No. 18, I-15 Northbound Ramps & Friars Road intersection (where coordination is already in place in the AM peak hour) and optimize both of the interchange traffic signals with this location. This improvement would result in reduced delay to 60.7 seconds in the PM peak hour. Please note that these calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queueing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.

- *Threshold Level After Improvement:* Exceeds threshold

24. River Run Drive & Rio San Diego Drive (City of San Diego) – Project traffic would degrade LOS E operations to LOS F in the PM peak hour and would increase delay by 8.3 seconds.

- *Improvement:* Reconstruct the intersection as a single-lane roundabout as proposed in the MVCPU FEIR. This improvement would improve operations in the PM peak hour to 22.3 seconds of delay. However, CSU does not have jurisdiction over these City of San Diego roadways and, therefore, cannot guarantee implementation of this improvement. In addition, there is no established funding program for this specific improvement in place that would enable CSU to make a fair-share payment towards the improvement. Accordingly, the improvement is considered infeasible.

- *Threshold Level After Improvement:* Exceeds threshold

28. Qualcomm Way & Camino del Rio N/Camino de la Reina (City of San Diego) – *No Impact:* Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 2.1 seconds. While this does not result in a significant impact per the CSU TISM, it does exceed the City of San Diego impact threshold. To avoid exceeding the City threshold, signal re-optimization would need to be implemented to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic.

29. Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio N (Caltrans) – *No Impact:* Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 3.6 seconds. While this does not result in a significant impact per the CSU TISM, it does exceed the City of San Diego impact threshold. To avoid exceeding the City threshold, signal re-optimization would need to be implemented to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic.

33. Texas Street & Camino del Rio S (City of San Diego) – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 11.2 and 19.4 seconds, respectively.

- *Improvement:* The needed improvement is the restriping of both the eastbound and westbound through lanes to be shared left-turn and through lanes. This improvement would improve operations in the AM and PM peak hours to 109.3 and 89.6 seconds of delay, respectively. CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement.

- *Threshold Level After Improvement:* Less than the threshold if City authorization is provided.
32. Ward Road & Rancho Mission Road (City of San Diego) – Project traffic would degrade LOS C to LOS F operations in the AM and PM peak hours and would increase delay by 43.6 seconds and over 100.0 seconds, respectively. The addition of project traffic would satisfy the California MUTCD peak hour signal warrant in both peak hours.
- *Improvement:* Install a traffic signal at this intersection. This improvement would improve operations in the AM and PM peak hours to 4.1 and 6.4 seconds of delay, respectively. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement.
 - *Threshold Level After Improvement:* If City authorization is provided, less than threshold
34. Fairmount Avenue & Mission Gorge Road (City of San Diego) – Project traffic would degrade LOS C to LOS E operations in the PM peak hour and increase delay by 31.0 seconds.
- *Improvement:* Optimize the signal timing to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This improvement would improve operations in the PM peak hour to 50.7 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement.
 - *Threshold Level After Improvement:* If City authorization is provided, less than threshold
35. Fairmount Avenue & Camino del Rio North (Caltrans) – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and increase delay by 33.5 and 75.1 seconds, respectively.
- *Improvement:* The needed improvement would be to restripe the eastbound approach to provide a second eastbound right-turn lane as an approximately 150-foot pocket lane and increase the traffic signal cycle length from 130 to 150 seconds. Signal re-optimization is standard practice with intersection reconfiguration. Note that this signal is coordinated with the signal at Fairmount Avenue & Mission Gorge Road, Intersection No. 34. Separately, northbound and southbound through volumes are high enough to warrant additional capacity at this intersection, and a road widening to add lanes is recommended in the current Navajo Community Plan (adopted 2015). However, this improvement is currently considered infeasible due to physical limitations beneath the adjacent bridges serving the I-8 mainline, I-8 ramp, and trolley. Additionally, the MVCPU FEIR (May 2019) identified mitigation at this intersection but also determined that roadway widening was infeasible due to limited right-of-way. The improvement to add a second eastbound right-turn lane would improve operations to 113.4 and 122.0 seconds of delay in the AM and PM peak hours, respectively. This improvement does not fully mitigate the PM peak hour impact. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.
 - *Threshold Level After Improvement:* Exceeds threshold
41. Ruffin Road & Aero Drive (City of San Diego) – Project traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 10.6 seconds.
- *Improvement:* Optimize the signal timing to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This improvement would improve operations in the PM peak hour to 49.8 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego

facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less-than-significant.

- *Threshold Level After Improvement:* If City authorization is provided, less than threshold.

44. Fenton Parkway/Mission City Parkway & Camino del Rio N (City of San Diego) – Project traffic would degrade LOS E operations to LOS F in the AM peak hour, degrade LOS D operations to LOS E in the PM peak hour, and increase delay by 28.3 and 20.5 seconds, respectively.

- *Improvement:* Reconstruct the intersection to add a separate westbound right-turn pocket with an overlap phase, restripe the south leg to provide a separate northbound right-turn pocket, and re-optimize the signal to account for the change in configuration. This improvement would require widening the east leg to provide two receiving lanes, which could merge after an allowable taper distance. This improvement would improve operations to 38.8 and 47.5 seconds of delay, respectively. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less-than-significant.

- *Threshold Level After Improvement:* If City authorization is provided, less than threshold

45. Mission City Parkway & Camino del Rio S (City of San Diego) – Project traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 13.3 seconds.

- *Improvement:* Optimize the signal timing to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This improvement would improve operations in the PM peak hour to 54.8 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less-than-significant.

- *Threshold Level After Improvement:* If City authorization is provided, less than threshold

46. I-15 Southbound Off-Ramp & Camino del Rio S (Caltrans) – Project traffic would degrade LOS D operations to LOS F in the AM peak hour and increase delay by 18.0 seconds.

- *Improvement:* Restripe the westbound left-turn lane to a shared through/left lane, restripe the west leg to convert the median into a second receiving lane, and re-optimize the signal to account for the change in configuration. A westbound permitted left-turn is assumed given the low demand. This improvement would improve operations in the PM peak hour to 21.2 seconds of delay. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.

- *Threshold Level After Improvement:* Exceeds threshold

4-Lane Bridge Scenario

Under Horizon Year Conditions with the 4-lane bridge in place, the proposed project would contribute to exceedances of the CSU TISM and/or City of San Diego thresholds at the following intersections requiring the corresponding improvements; the agency with jurisdiction over the improvements is noted in parentheses:

2. SR-163 Southbound Ramps/Ulric Street & Friars Road (Caltrans) – Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 5.4 seconds.

Mitigation: The required improvement would be to re-optimize the coordinated signal offset. This mitigation would result in a less than significant impact per the CSU TISM but would not reduce the impact below the City of San Diego impact thresholds. To avoid exceeding the City threshold, additional signal timing re-optimization would need to be implemented. Signal timing modifications would normally be implemented periodically at an intersection to optimize operations and address changing traffic volumes regardless of the addition of project traffic. This additional improvement is provided for information purposes only. Regarding the proposed signal offset optimization, CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible, and the impact is significant and unavoidable.

- *Threshold Level After Improvement:* Exceeds threshold

9. River Run Drive & Friars Road (City of San Diego) – Project traffic would degrade LOS E operations to LOS F in the PM peak hour and would increase delay by 34.1 seconds.

- *Improvement:* To increase intersection capacity to eliminate the project impact, Friars Road would need to be widened to add a fourth eastbound through lane. Note, however, that widening this segment of Friars Road is not consistent with the currently adopted (1985) Mission Valley Community Plan or the Final Draft of the Mission Valley Community Plan Update (July 2019); therefore, this improvement is not recommended. An alternative improvement is the optimization of traffic signals along the Friars Road corridor extending from River Run Drive to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic; signal timing modifications would normally be implemented periodically at an intersection to optimize operations and address changing traffic volumes, especially with the new bridge, regardless of the addition of project traffic.. This option would improve operations in the PM peak hour to 32.6 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended traffic signal optimization.

- *Threshold Level After Improvement:* Less than threshold if City authorization is provided to implement signal optimization.

10. Fenton Parkway & Friars Road (City of San Diego) – Project traffic would degrade LOS D operations to LOS E in the PM peak hour by increasing delay 31.9 seconds.

- *Improvement:* Optimize the traffic signals along the Friars Road corridor extending from Fenton Parkway to Stadium Way (Street A) to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic; signal timing modifications would normally be implemented periodically at an intersection to optimize operations and address changing traffic volumes, especially with the new bridge, regardless of the addition of project traffic. This option would improve operations to 53.4 seconds of delay in the PM peak hour. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the

improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended traffic signal optimization.

- *Threshold Level After Improvement:* Less than threshold if City authorization is provided to implement signal optimization.

20. I-15 Southbound Ramps & Friars Road (Caltrans) – Project traffic would degrade LOS D operations to LOS F operations in the AM peak hour, would exacerbate LOS F operations in the PM peak hour, and would increase delay by 35.1 and 22.7 seconds, respectively.

- *Improvement:* The needed improvement would be to reconstruct the intersection to add a second eastbound left-turn lane, a second eastbound right-turn lane, and a second westbound right-turn lane. This improvement would require widening both on-ramps to allow for two receiving lanes. If this improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of pedestrian and bicycle enhancements. Accordingly, the westbound right-turn lane would be squared off to improve pedestrian safety, and the westbound right-turn would be provided with an overlap phase. It should be noted that the Civita (Quarry Falls) development is also required to implement a portion of these improvements, including the addition of the second eastbound left-turn lane and squaring up the westbound right-turn movement; the SDSU Mission Valley Campus project improvements would provide substantially more vehicle queueing approaching the ramp intersections, including on the bridge. Caltrans and/or the City of San Diego is expected to additionally require that sidewalks and buffered bike lanes are provided as part of this improvement, and that a blank-out No Right Turn sign be installed at the dual eastbound and westbound right turn lanes. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian calls will be very rare and were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. Once implemented, these improvements would result in operations in the AM and PM peak hours of 50.2 and 57.5 seconds of delay, respectively. Please note that these calculated operations are based on stand-alone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queueing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.
- *Threshold Level After Improvement:* Exceeds threshold

21. I-15 Northbound Ramps & Friars Road (Caltrans) – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 54.1 and over 100.0 seconds, respectively.

- *Improvement:* The needed improvement would be to reconstruct the intersection to add a second eastbound left-turn lane. Note that the Civita (Quarry Falls) development is also required to implement this improvement but it does not include any widening of the Friars Road bridge; the SDSU Mission Valley Campus improvements would provide substantially more space for vehicle queueing approaching the ramp intersections, including on the bridge. If this improvement were implemented, to be consistent with current design practice, it is expected that Caltrans would require the inclusion of sidewalks and buffered bike lanes be provided as part of this improvement, which would require widening the Friars Road overpass to I-15. Caltrans is expected to additionally require that the southbound approach be squared off and converted to two right-turn lanes provided with an overlap phase, and that a blank-out No Right Turn sign be installed for the westbound approach to improve pedestrian safety. It is expected that pedestrian activity will be very low given the limited surrounding uses and, therefore, pedestrian

calls will be very rare and were not included in the operations analysis. Signal re-optimization is assumed, which is standard practice with intersection reconfiguration. In the PM peak hour, re-optimization would include coordinating the signal with the adjacent I-15 Southbound Ramps & Friars Road intersection and the adjacent Rancho Mission Road & Friars Road intersection, where coordination is already in place in the AM peak hour. These improvements would result in operations in the AM and PM peak hours of 66.2 and 37.6 seconds of delay, respectively. Please note that these calculated operations are based on stand-alone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queueing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.

- *Threshold Level After Improvement:* Exceeds threshold

22. Rancho Mission Road & Friars Road (Caltrans) – Project traffic would degrade LOS E operations to LOS F in the AM and PM peak hours and would increase delay by 5.0 and 12.6 seconds, respectively.

- *Improvement:* Implement coordination of this signal with the adjacent improvements to Intersection No. 18, I-15 Northbound Ramps & Friars Road intersection (where coordination is already in place in the AM peak hour) and optimize both of the interchange traffic signals with this location. This improvement would result in reduced delay to 57.1 seconds in the PM peak hour. Please note that these calculated operations are based on standalone intersection analysis; however, under existing conditions, the adjacent ramp meter causes queueing through this intersection, and without improving ramp meter operations, the operations will remain above the threshold. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.
- *Threshold Level After Improvement:* Exceeds threshold

25. River Run Drive & Rio San Diego Drive (City of San Diego) – Project traffic would degrade LOS E operations to LOS F in the PM peak hour and would increase delay by 9.1 seconds.

- *Improvement:* Reconstruct the intersection as a single-lane roundabout as proposed in the MVCPU FEIR. This improvement would improve operations in the PM peak hour to 29.1 seconds of delay. However, CSU does not have jurisdiction over these City of San Diego roadways and, therefore, cannot guarantee implementation of this improvement. In addition, there is no established funding program for this specific improvement in place that would enable CSU to make a fair-share payment towards the improvement. Accordingly, the improvement is considered infeasible.
- *Threshold Level After Improvement:* Exceeds threshold

28. Qualcomm Way & Camino del Rio N/Camino de la Reina (City of San Diego) – *No Impact:* Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 2.1 seconds. While this does not result in a significant impact per the CSU TISM, it does exceed the City of San Diego impact threshold. To avoid exceeding the City threshold, signal re-optimization would need to be implemented to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This information is provided for information purposes only.

29. Qualcomm Way & I-8 WB Off-Ramp/Camino del Rio N (Caltrans) – *No Impact:* Project traffic would exacerbate LOS E operations in the PM peak hour and increase delay by 3.6 seconds. While this does not result in a significant impact per the CSU TISM, it does exceed the City of San Diego impact threshold. To

avoid exceeding the City threshold, signal re-optimization would need to be implemented to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This information is provided for information purposes only.

34. Texas Street & Camino del Rio S (City of San Diego) – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and would increase delay by 25.5 and 20.0 seconds, respectively.
 - *Improvement:* The needed improvement is the restriping of both the eastbound and westbound through lanes to be shared left-turn and through lanes. This improvement would improve operations in the AM and PM peak hours to 113.0 and 89.3 seconds of delay, respectively. CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement.
 - *Threshold Level After Improvement:* Less than the threshold if City authorization is provided.
36. Fairmount Avenue & Camino del Rio North (Caltrans) – Project traffic would exacerbate LOS F operations in the AM and PM peak hours and increase delay by 37.3 and 77.7 seconds, respectively.
 - *Improvement:* The needed improvement would be to restripe the eastbound approach to provide a second eastbound right-turn lane as an approximately 150-foot pocket lane and increase the traffic signal cycle length from 130 to 150 seconds. Signal re-optimization is standard practice with intersection reconfiguration. Note that this signal is coordinated with the signal at Fairmount Avenue & Mission Gorge Road, Intersection No. 34. Separately, northbound and southbound through volumes are high enough to warrant additional capacity at this intersection, and a road widening to add lanes is recommended in the current Navajo Community Plan (adopted 2015). However, this improvement is currently considered infeasible due to physical limitations beneath the adjacent bridges serving the I-8 mainline, I-8 ramp, and trolley. Additionally, the MVCPU FEIR (May 2019) identified mitigation at this intersection but also determined that roadway widening was infeasible due to limited right-of-way. The improvement to add a second eastbound right-turn lane would improve operations to 106.7 and 131.2 seconds of delay in the AM and PM peak hours, respectively. This improvement does not fully mitigate the PM peak hour impact. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.
 - *Threshold Level After Improvement:* Exceeds threshold
42. Ruffin Road & Aero Drive (City of San Diego) – Project traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 10.6 seconds.
 - *Improvement:* Optimize the signal timing to accommodate the change in traffic demand over the next 19 years plus the addition of project traffic. This improvement would improve operations in the PM peak hour to 49.8 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less-than-significant.
 - *Threshold Level After Improvement:* If City authorization is provided, less than threshold.
47. Fenton Parkway/Mission City Parkway & Camino del Rio N (City of San Diego) – Project traffic would degrade LOS E operations to LOS F in the AM peak hour, degrade LOS F operations in the PM peak hour, and increase delay by 79.4 and 52.9 seconds, respectively.

- *Improvement:* Reconstruct the intersection to add a separate westbound right-turn pocket with an overlap phase, convert the leftmost southbound through lane to be a southbound left-turn lane, and re-optimize the signal to account for the change in configuration. This improvement would require widening the east leg to provide two receiving lanes, which could merge after an allowable taper distance. This improvement would improve operations to 52.9 and 64.3 seconds of delay, respectively. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less-than-significant.
 - *Threshold Level After Improvement:* If City authorization is provided, less than threshold
48. Mission City Parkway & Camino del Rio S (City of San Diego) – Project traffic would degrade LOS D operations to LOS E in the PM peak hour and increase delay by 20.6 seconds.
- *Improvement:* Reconstruct the intersection to provide a second southbound left-turn lane, restripe the median on the east leg to be a second receiving lane, and re-optimize the signal to account for the change in configuration. This improvement would improve operations in the PM peak hour to 18.5 seconds of delay. However, CSU does not have jurisdiction over this City of San Diego facility and, therefore, cannot guarantee implementation of this improvement. Accordingly, the improvement is considered infeasible. However, if the City grants authorization, CSU will implement the recommended improvement, thereby reducing the project's impact to less-than-significant.
 - *Threshold Level After Improvement:* If City authorization is provided, less than threshold
49. I-15 Southbound Off-Ramp & Camino del Rio S (Caltrans) – Project traffic would degrade LOS D operations to LOS F in the AM peak hour and increase delay by 27.7 seconds.
- *Improvement:* Restripe the westbound left-turn lane to a shared through/left lane, restripe the west leg to convert the median into a second receiving lane, and re-optimize the signal to account for the change in configuration. A westbound permitted left-turn is assumed given the low demand. This improvement would improve operations in the PM peak hour to 23.5 seconds of delay. CSU will support Caltrans in its effort to obtain the project's proportionate share of funding for the recommended improvements from the Legislature or other available funding sources. However, because CSU cannot guarantee that Caltrans will be able to obtain such funds, the recommended improvements are considered infeasible.
 - *Threshold Level After Improvement:* Exceeds threshold

Roadway Segments

2-Lane Bridge Scenario

With the 2-lane bridge in place, one new threshold exceedance for roadway segments was identified as compared to “without bridge” conditions. Specifically, the addition of project traffic on Segment #16a: Fenton Parkway from Northside Drive to Camino del Rio North (including the new bridge facility) would degrade LOS D operations to LOS E, thereby resulting in an exceedance of the City's threshold. The projected ADT volume of 14,194 vehicles would exceed the City's daily LOS D threshold of 13,000 by less than 1,200 vehicles per day or roughly 120 vehicles during the peak hour. Typically, the improvement that would be implemented to return to LOS D or better operations would be to provide additional vehicle capacity on the bridge. However, in this instance, the actual capacity of the two-lane roadway with a center-left-turn-lane, as would be in place under this scenario, would be higher, or better, than the City's stated capacity because there would be no fronting uses and/or driveways on the bridge (i.e., there would be no conflicting vehicle movements thereby resulting in a higher overall capacity). Based on the traffic

engineer's judgment and experience, the lack of conflicts is estimated to result in a daily segment capacity that is at least 10% higher than designated, resulting in an actual LOS D threshold of 14,300, which would accommodate the projected daily volume of 14,194 vehicles noted above. In addition, the intersections at each end of the bridge are the operating constraints for traffic on the bridge and not the number of through lanes on the bridge itself. As such, the intersections could be designed to operate within the City's LOS standard based on the improvements noted in the previous section. It also is important to note that the provision of a 2-lane bridge (relative to a 4-lane bridge) would still enhance area multimodal connectivity, accessibility to adjacent land uses, and public safety in the form of another river crossing that may be used by emergency response vehicles and general traffic in the event of evacuations or high-attendance stadium events. Moreover, providing additional capacity would be inconsistent with the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals as limiting roadway segment expansion and providing a 2-lane bridge with a volume that is close to the LOS D/E threshold would be preferable in that it would encourage active transportation alternatives and minimize excess vehicle capacity. However, by maintaining a 2-lane bridge and without making an adjustment to account for a higher actual roadway capacity, the threshold exceedance would remain.

4-Lane Bridge Scenario

With the bridge in place, one new threshold exceedance for roadway segments was identified as compared to "without bridge" conditions. On Segment #32: Camino del Rio North from Mission City Parkway to Ward Road, the addition of project traffic would degrade LOS D operations to LOS E. The required improvement would be to widen the roadway to provide an additional travel lane in each direction. However, while this widening is consistent with the currently adopted (1985) Mission Valley Community Plan Update, it is not consistent with the Final Draft of the Mission Valley Community Plan Update (July 2019). Therefore, the improvement is not considered feasible and the threshold exceedance will remain. This analysis is provided for information purposes only.

Freeway Segments

With either the 2-lane or 4-lane bridge in place, no new freeway segment threshold exceedances were identified as compared to "without bridge" conditions.

Freeway Ramp Meters

With either the 2-lane or 4-lane bridge in place, no additional freeway ramp meter threshold exceedances were identified as compared to "without bridge" conditions.

Freeway Off-Ramps

Since no vehicle queues are projected to exceed the available storage capacity of any off-ramp under either the 2-lane or 4-lane bridge scenario, no improvements for these facilities are needed.

Effect of a Stadium Event

As with the Horizon Year (2037) "No Bridge" analysis, the addition of stadium event trips during the weekday PM peak would exacerbate traffic operations under either the 2-lane or 4-lane bridge scenario. Although operations under this scenario likely would remain over the applicable thresholds as physical, capacity-enhancing improvements are not feasible as mitigation to address short-term impacts as these, high-attendance stadium events are expected to happen infrequently. However, as would be the case under the "no bridge" scenario,

strategies to assist in the reduction of weekday stadium event traffic and to minimize related impacts would be implemented under both a 2-lane and 4-lane bridge scenario as well through the TDM and TPMP Programs.

4.15.11.9 Comparison of Horizon Year Plus Project Without Event Operations Without Fenton Parkway Bridge with Bridge Scenarios

This section presents a comparative summary of the change in operations and impacts between the Horizon Year (2037) “No Bridge” analysis with the results of the Horizon Year “With Bridge” analyses presented above. A summary by facility type for each of the 2-lane and 4-lane bridge scenarios is presented below.

Intersection Analysis Comparison

2-Lane Scenario

The inclusion of the 2-lane bridge with the addition of project traffic under Horizon Year conditions will notably change operations in one of two ways: 1) a change in threshold exceedance (i.e., either add or eliminate a significant impact), or 2) change the delay by ± 10 seconds. These changes would occur at the following 15 study area intersections as follows:

9. Fenton Parkway & Friars Road (degrade operations in the AM peak hour; improve operations in the PM peak hour)
10. Northside Drive & Friars Road (improve operations in the PM peak hour, which would *eliminate the previously identified project impact* per CSU thresholds; the City threshold exceedance would remain)
14. Mission Village Drive/Aztec Way & Street 1 (degrade but still acceptable operations in the PM peak hour)
17. I-15 SB Ramps & Friars Road (improve operations in the AM peak hour)
24. Rio San Diego Drive & River Run Drive (degrade operations in the PM peak hour, which would result in a *new impact* per both CSU and City thresholds)
25. Fenton Parkway & Rio San Diego Drive/Fenton Marketplace Driveway (degrade but still acceptable operations in the PM peak hour)
26. Rancho Mission Road & San Diego Mission Road (improve operations in the AM and PM peak hours)
27. Fairmount Avenue & San Diego Mission Road/Twain Avenue (improve but still unacceptable operations in the AM peak hour, improve operations in the PM peak hour)
28. Qualcomm Way & Camino del Rio North/Camino de la Reina (slightly degrade operations in the PM peak hour, resulting in a *new City threshold exceedance*, but not a significant impact per CSU thresholds)
32. Ward Road & Rancho Mission Road (improve operations in the AM and PM peak hours)
35. Fairmount Avenue & Camino del Rio North (degrade operations in the AM and PM peak hours)
44. Fenton Parkway/Mission City Parkway & Camino del Rio N (degrade operations in the AM and PM peak hours, which would result in a *new impact*)
45. Mission City Parkway & Camino del Rio S (degrade operations in the PM peak hour, which would result in a *new impact*)
46. I-15 Southbound Off-Ramp & Camino del Rio S (degrade operations in the AM and PM peak hours, which would result in a *new impact*)

48. I-15 Northbound Ramps & Camino del Rio S (degrade but still acceptable operations in the AM and PM peak hours)

In summary, the addition of the 2-lane bridge as compared to the no bridge scenario would cause a total of four (4) new significant impact locations and one (1) new City threshold exceedance location, and would eliminate one (1) significant impact locations based on CSU thresholds, though this location would still exceed the City threshold.

4-Lane Scenario

The inclusion of the bridge with the addition of project traffic under Horizon Year conditions will notably change operations in one of two ways: (1) a change in threshold exceedance (i.e., either add or eliminate a significant impact); or (2) change the delay by +/- 10 seconds. These changes would occur at the following study area intersections:

9. Fenton Parkway & Friars Road (degrade operations in the AM peak hour; improve operations in the PM peak hour)
10. Northside Drive & Friars Road (improve operations in the PM peak hour, which would *eliminate the previously identified project impact per both CSU and City thresholds*)
11. Stadium Way (Street A) and Friars Road (degrade but still acceptable operations in the PM peak hour)
17. I-15 SB Ramps & Friars Road (improve operations in the AM and PM peak hours)
19. Rancho Mission Road & Friars Road (improve but still unacceptable operations in the PM peak hour)
24. Rio San Diego Drive & River Run Drive (degrade operations in the PM peak hour, which would result in a *new impact per both CSU and City thresholds*)
25. Fenton Parkway & Rio San Diego Drive/Fenton Marketplace Driveway (degrade but still acceptable operations in the PM peak hour)
26. Rancho Mission Road & San Diego Mission Road (improve operations in the AM and PM peak hours)
27. Fairmount Avenue & San Diego Mission Road/Twain Avenue (improve operations in the AM and PM peak hours, which would *eliminate the previously identified project impact per CSU and City thresholds*)
28. Qualcomm Way & Camino del Rio North/Camino de la Reina (slightly degrade operations in the PM peak hour resulting in a new City threshold exceedance but not a significant impact per CSU thresholds)
31. Texas Street & Camino del Rio S (degrade operations in the AM peak hour)
32. Ward Road & Rancho Mission Road (improve operations in the AM and PM peak hours)
35. Fairmount Avenue & Camino del Rio North (degrade operations in the AM & PM peak hours)
44. Fenton Parkway/Mission City Parkway & Camino del Rio N (degrade operations in the AM and PM peak hours, which would result in a *new impact*)
45. Mission City Parkway & Camino del Rio S (degrade operations in the PM peak hour, which would result in a *new impact*)
46. I-15 Southbound Off-Ramp & Camino del Rio S (degrade operations in the AM and PM peak hours, which would result in a *new impact*)
48. I-15 Northbound Ramps & Camino del Rio S (degrade but still acceptable operations in the AM and PM peak hours)

In summary, the addition of the 4-lane bridge as compared to the no bridge scenario would result in a total of four new significant impact locations under the CSU thresholds and one new City threshold exceedance location, and would eliminate two (2) significant impact locations based on both CSU and City thresholds.

Roadway Segment Analysis Comparison

2-Lane Scenario

Similar to intersections, the inclusion of the 2-lane bridge with the addition of project traffic under Horizon Year conditions will notably change operations in one of two ways: 1) a change in threshold exceedance, or 2) change the delay by $\pm 10\%$ of the capacity (i.e., a change of 0.10 to V/C). These changes would occur at the following 11 study area roadway segments as follows:

8. Friars Road from Mission Village Drive to the I-15 Ramps (slightly improve operations, which would *eliminate the previously identified threshold exceedance*)
- 16-16a. Fenton Parkway south of Rio San Diego Drive/Fenton Marketplace Driveway (degrade operations due to conversion from a dead-end street to a new cross-river connection, which would result in a *new threshold exceedance*)
17. San Diego Mission Road from Mission Village Drive to Rancho Mission Road (improve operations)
18. San Diego Mission Road from Rancho Mission Road to Fairmount Avenue (improve operations)
20. Rancho Mission Road from San Diego Mission Road to Ward Road (improve operations, which would *eliminate the previously identified threshold exceedance*)
22. Ward Road from Rancho Mission Road to Camino del Rio North (improve operations)
32. Camino del Rio North from Mission City Parkway to Ward Road (degrade operations)
33. Camino del Rio North from Ward Road to Fairmount Avenue (degrade operations)
34. Camino del Rio South from Texas St to Mission City Parkway (degrade operations)
35. Camino del Rio South from Mission City Parkway to I-15 Ramps (degrade operations)

In summary, the addition of the 2-lane bridge as compared to the no bridge scenario would cause one (1) new threshold exceedance and would eliminate two (2) threshold exceedances based on City thresholds.

4-Lane Scenario

Similar to intersections, the inclusion of the 4-lane bridge with the addition of project traffic under Horizon Year conditions will notably change operations in one of two ways: (1) a change in threshold exceedance; or (2) change the delay by $\pm 10\%$ of the capacity (i.e., a change of 0.10 to V/C). These changes would occur at the following study area roadway segments:

5. Friars Road from Fenton Parkway to Northside Drive (improve operations)
6. Friars Road from Northside Drive to Stadium Way (Street A) (improve but still unacceptable operations)
8. Friars Road from Mission Village Drive to the I-15 Ramps (improve operations, which would *eliminate the previously identified threshold exceedance*)
- 16-16a. Fenton Parkway south of Rio San Diego Drive/Fenton Marketplace Driveway (degrade operations, though they remain acceptable, due to conversion from a dead-end street to a new cross-river connection)

17. San Diego Mission Road from Mission Village Drive to Rancho Mission Road (improve operations)
18. San Diego Mission Road from Rancho Mission Road to Fairmount Avenue (improve operations)
19. Rancho Mission Road from Friars Road to San Diego Mission Road (improve operations)
20. Rancho Mission Road from San Diego Mission Road to Ward Road (improve operations, which would *eliminate the previously identified threshold exceedance*)
22. Ward Road from Rancho Mission Road to Camino del Rio North (improve operations)
32. Camino del Rio North from Mission City Parkway to Ward Road (degrade operations, which would result in a *new threshold exceedance*)
33. Camino del Rio North from Ward Road to Fairmount Avenue (degrade operations)
34. Camino del Rio South from Texas St to Mission City Parkway (degrade operations)
35. Camino del Rio South from Mission City Parkway to I-15 Ramps (degrade operations)

In summary, the addition of the 4-lane bridge as compared to the no bridge scenario would cause one new threshold exceedance and would eliminate two (2) threshold exceedances based on City thresholds.

Freeway Segment Analysis Comparison

Provision of either a 2-lane or 4-lane bridge would change the way some vehicles circulate around the project site and which interchanges would be used to access origins and destinations in the area extending from west of Qualcomm Way to east of Fairmount Avenue and accessed by Camino del Rio N and S, as well as Friars Road. More specifically, the redistribution of traffic under either the 2-lane or 4-lane bridge scenario would result in some traffic otherwise projected to travel on I-8 east of I-15 shifting to Montezuma Road with either new bridge connection. Similarly, some traffic projected to travel on I-15 south of Friars Road would shift to the Camino del Rio S interchange. Therefore, on the I-8 freeway segments from I-15 to College Avenue and the I-15 auxiliary lanes at Friars Road, operations would improve with the bridge in place. However, the addition of the bridge would still result in the same number of impacted freeway segments.

Freeway Ramp Metering Analysis Comparison

Related to the freeway segment comparison, the addition of either a 2-lane or 4-lane bridge would change travel patterns related to freeway access and affect the traffic volume and projected delay on metered on-ramps at selected interchanges. Specifically, with the traffic redistribution, the metered direct on-ramp to I-15 Southbound at Friars Road would serve less traffic and would experience improved operations with the bridge in place. The primary shift in traffic volume would occur between this ramp and the on-ramp from Camino del Rio S to southbound I-15. Under the 4-lane bridge scenario, the volume on the direct on-ramp from Friars Road would be reduced enough to eliminate the previously identified project impact on that facility; all other impacts would be similar to conditions without the bridge. Therefore, the addition of the 4-lane bridge would result in the elimination of one (1) significant impact. In comparison, under the 2-lane scenario, none of the impacts would be eliminated and, therefore, the addition of the bridge would result in the same number of impacted metered freeway on-ramps.

Freeway Off-Ramp Queuing Analysis

2-Lane Scenario

The addition of the 2-lane bridge and resulting redistribution of vehicle trips would change the length of vehicle queues at the following three freeway off-ramps:

- 29. Qualcomm Wy & Camino del Rio N/I-8 WB Off-ramp (negligibly decrease queues on one turning movement during both the AM and PM peak hour)
- 46. Camino del Rio S & I-15 SB Off-ramp (increase the AM peak hour queues and negligibly change the PM peak hour queue)
- 48. I-15 NSB Off-ramp & Camino del Rio S (increase both the AM and PM peak hour queues)

In all cases, however, the projected off-ramp queues in 2037 would be accommodated by the existing storage capacity with the 2-lane bridge. This is the same finding reached for conditions without the bridge.

4-Lane Scenario

The addition of the 4-lane bridge and resulting redistribution of vehicle trips will change the length of vehicle queues at the following four freeway off-ramps:

- 29. Qualcomm Wy & Camino del Rio N/I-8 WB Off-ramp (decrease queues on one turning movement during both the AM and PM peak hour)
- 30. Texas St/Qualcomm Wy & I-8 EB Off-ramp (slightly decrease the AM peak hour queue and more than double the PM peak hour queue)
- 46. Camino del Rio S & I-15 SB Off-ramp (increase the AM peak hour queues and negligibly change the PM peak hour queue)
- 48. I-15 NSB Off-ramp & Camino del Rio S (increase both the AM and PM peak hour queues)

In all cases, however, the projected off-ramp queues in 2037 would be accommodated by the existing storage capacity with the 4-lane bridge. This is the same finding reached for conditions without the bridge.

4.15.11.10 Effect of Fenton Parkway Extension and Bridge on Project VMT Assessment

Similar to the process described in section 4.15.7.9 above, a SANDAG model run with both a 2-lane and a 4-lane Fenton Parkway bridge was run both without and with the proposed project in place. The resulting VMT for each scenario is presented in Tables 4.15-57 and 4.15-58.

Under the 2-lane scenario, as shown on Table 4.15-57, the proposed project's VMT/service population with the 2-lane bridge in place would be 25.7% less than the regional baseline. Based on a threshold of 15% less than the regional baseline, the addition of the 2-lane bridge to the project buildout scenario would not result in a project level impact.

As to cumulative impacts, also as shown on Table 4.15-57, implementation of the proposed project would result in a VMT/service population of 32.88 under the long-range scenario, which is lower than the VMT without the proposed project would be at that time. As such, the proposed project would not result in a cumulative VMT impact with a 2-lane bridge in place. Thus, the conclusion of the analysis with the 2-lane bridge in place is the same conclusion as that reached without the Fenton Parkway extension and bridge in place.

Table 4.15-57. VMT Analysis With 2-Lane Bridge

Metric	Project-Level Assessment		Cumulative Level Assessment	
	2012 Baseline	Project Buildout	2035 No Project	2035 With Project
Vehicle Miles Traveled	157,783,545	358,667	185,526,143	185,442,098
Service Population	4,594,395	14,058	5,623,920	5,637,978
VTM Per Service Population	34.34	25.51	32.99	32.88
% Decrease from 2012 Baseline		25.7%		

Source: SANDAG 2035 Regional Activity-Based Travel Demand Model (Series 13) and Appendix 4.15-1.

Under the 4-lane scenario, as shown on Table 4.15-58, the proposed project's VMT/service population with the bridge in place would be 25.8% less than the regional baseline. Based on a threshold of 15% less than the regional baseline, the addition of the 4-lane bridge would not result in a project level impact.

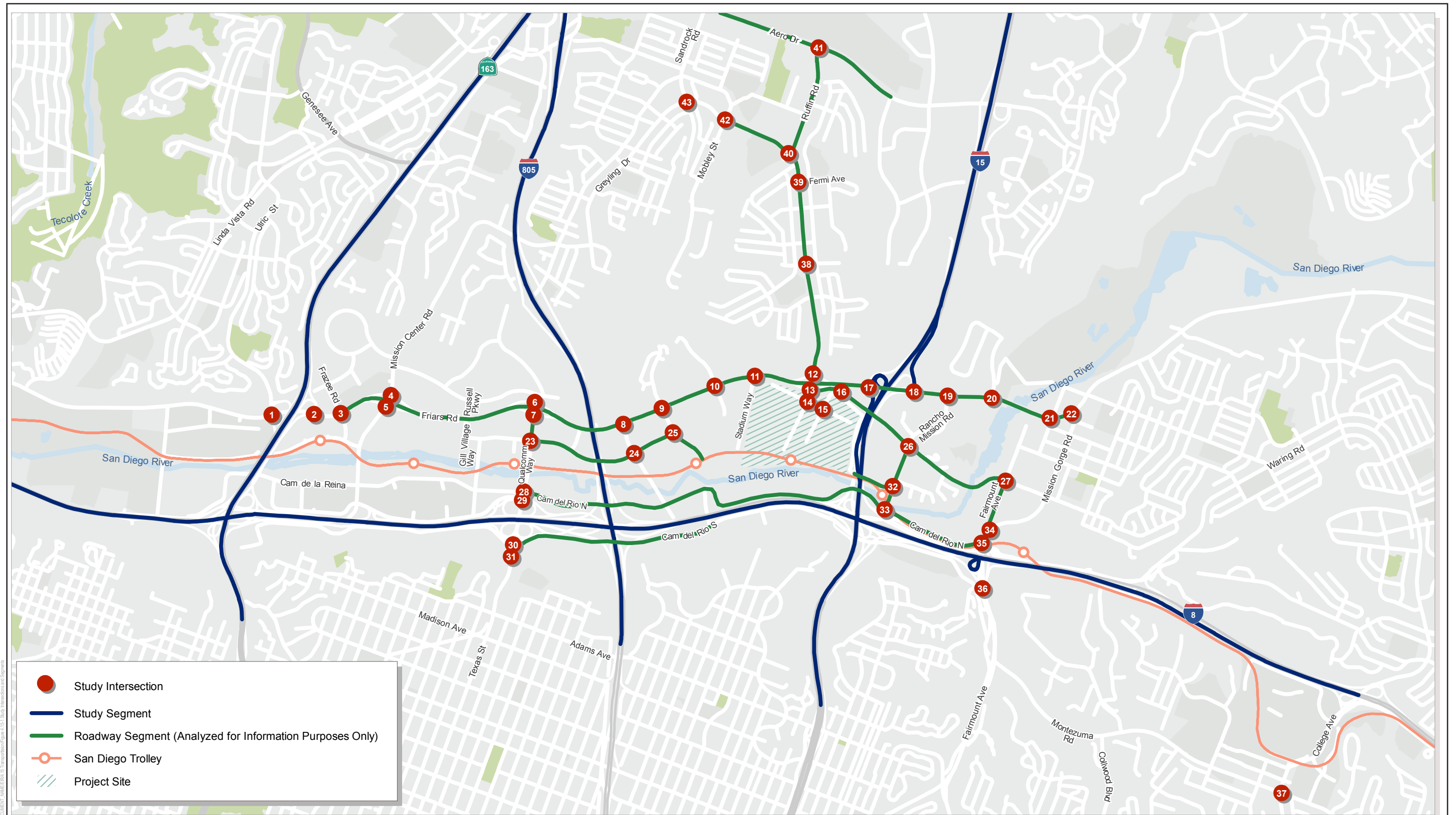
As to cumulative impacts, as shown on Table 4.15-58, under the 4-lane bridge scenario, implementation of the proposed project would result in a VMT/service population of 32.88 under the long-range scenario, which is lower than the VMT without the proposed project would be at that time. As such, the proposed project would not result in a cumulative VMT impact with a 4-lane bridge in place. Thus, the conclusion of the analysis with the bridge in place is the same conclusion as that reached without the Fenton Parkway extension and 4-lane bridge in place.

Table 4.15-58. VMT Analysis with 4-Lane Bridge

Metric	Project-Level Assessment		Cumulative Level Assessment	
	2012 Baseline	Project Buildout	2035 No Project	2035 With Project
Vehicle Miles Traveled	157,783,545	358,434	185,462,877	185,379,029
Service Population	4,594,395	14,058	5,623,920	5,637,978
VTM Per Service Population	34.34	25.50	32.98	32.88
% Decrease from 2012 Baseline		25.8%		

Source: SANDAG 2035 Regional Activity-Based Travel Demand Model (Series 13) and Fehr & Peers, 2019.

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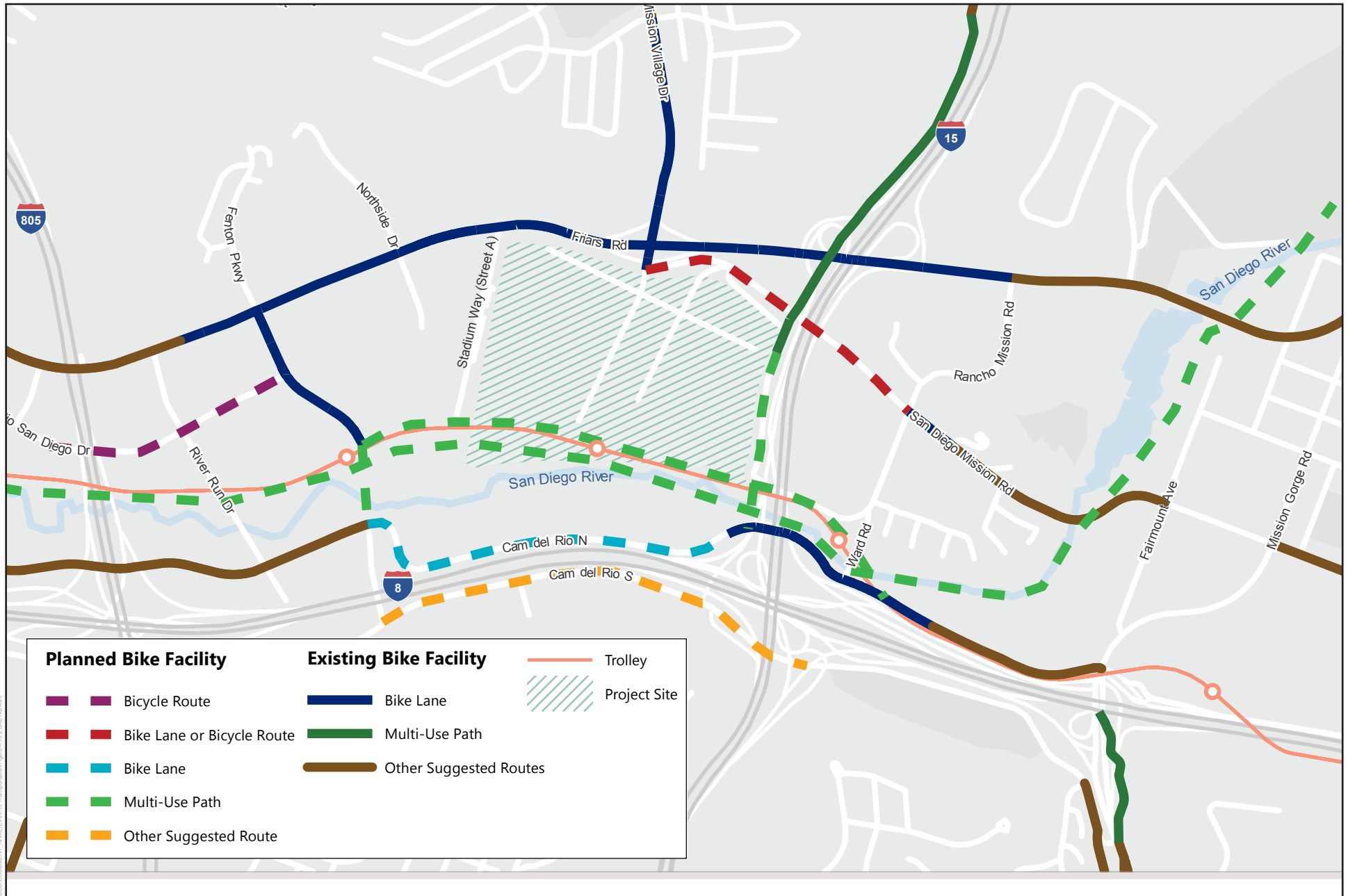
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-1
Study Intersections and Segments

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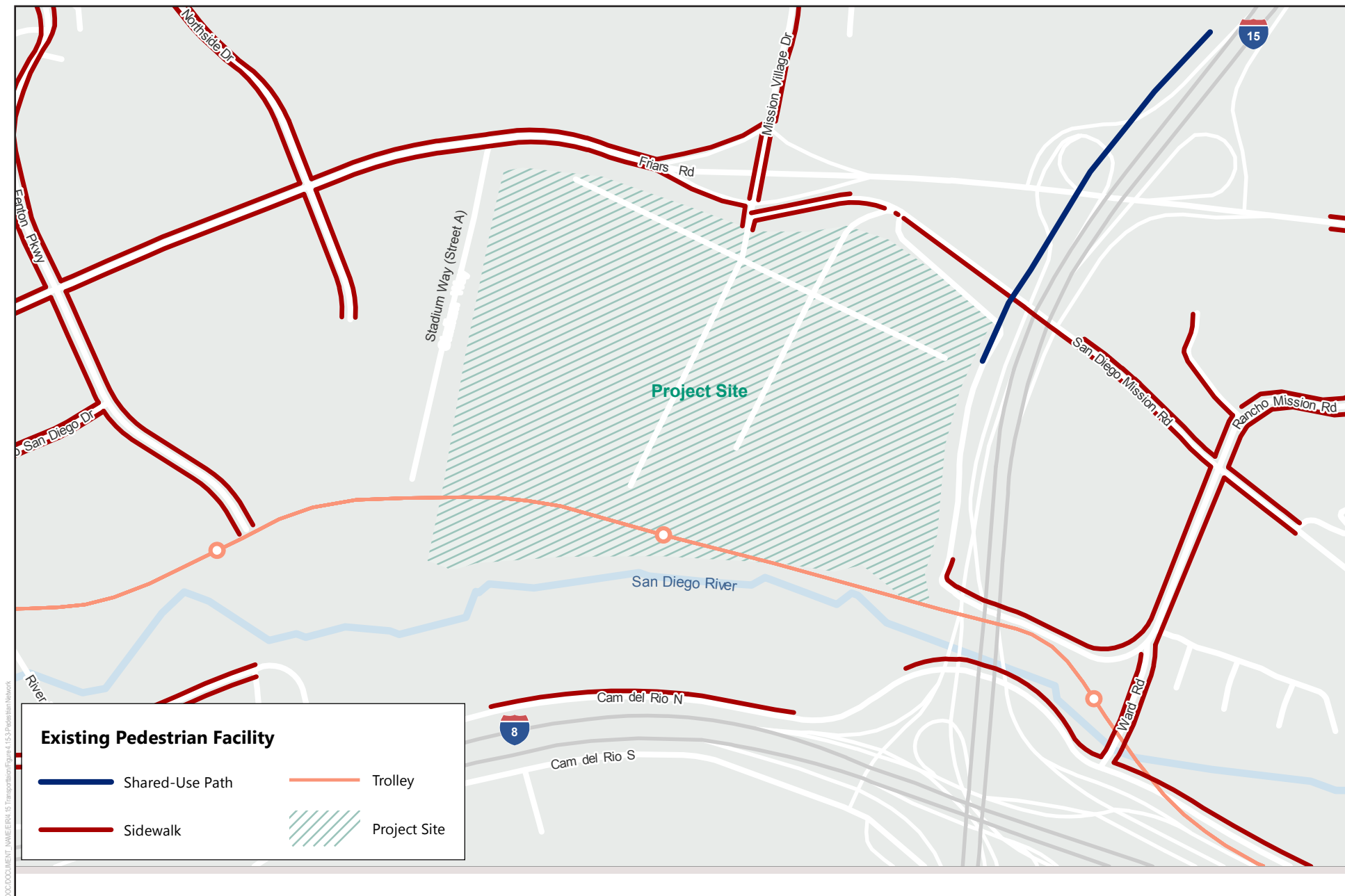
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-2
Bike Network

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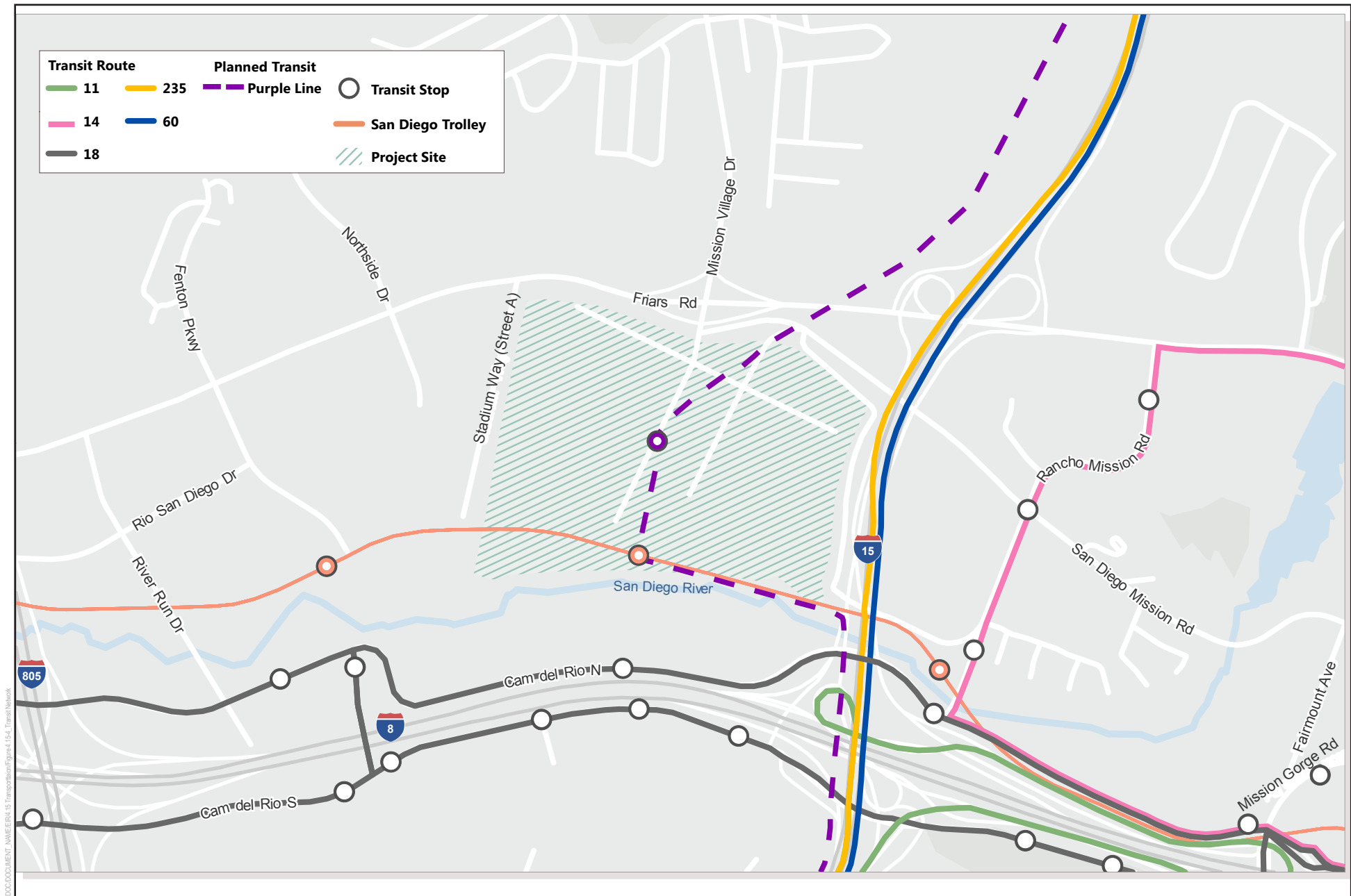
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-3
Pedestrian Network

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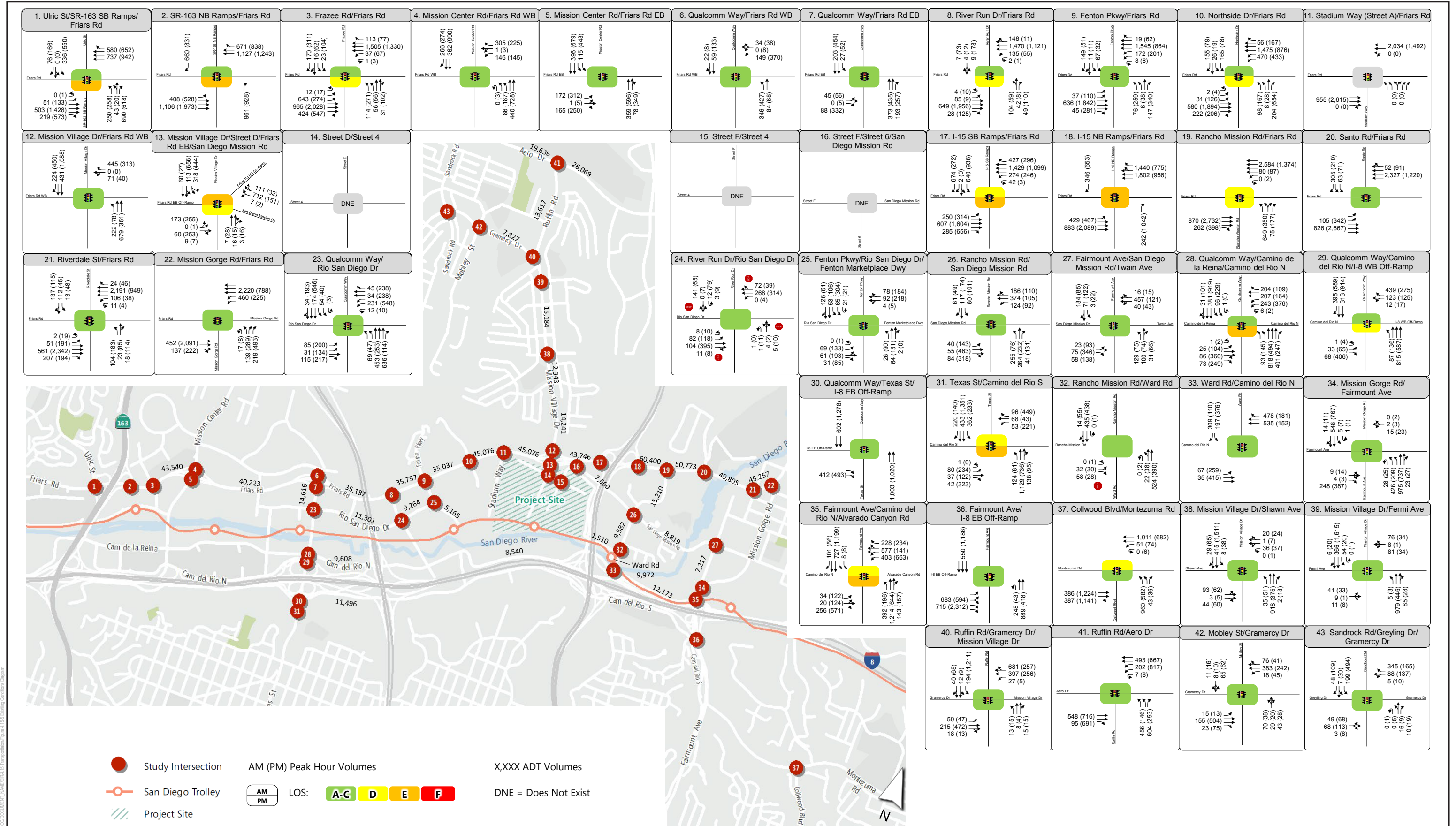
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-4
Transit Network

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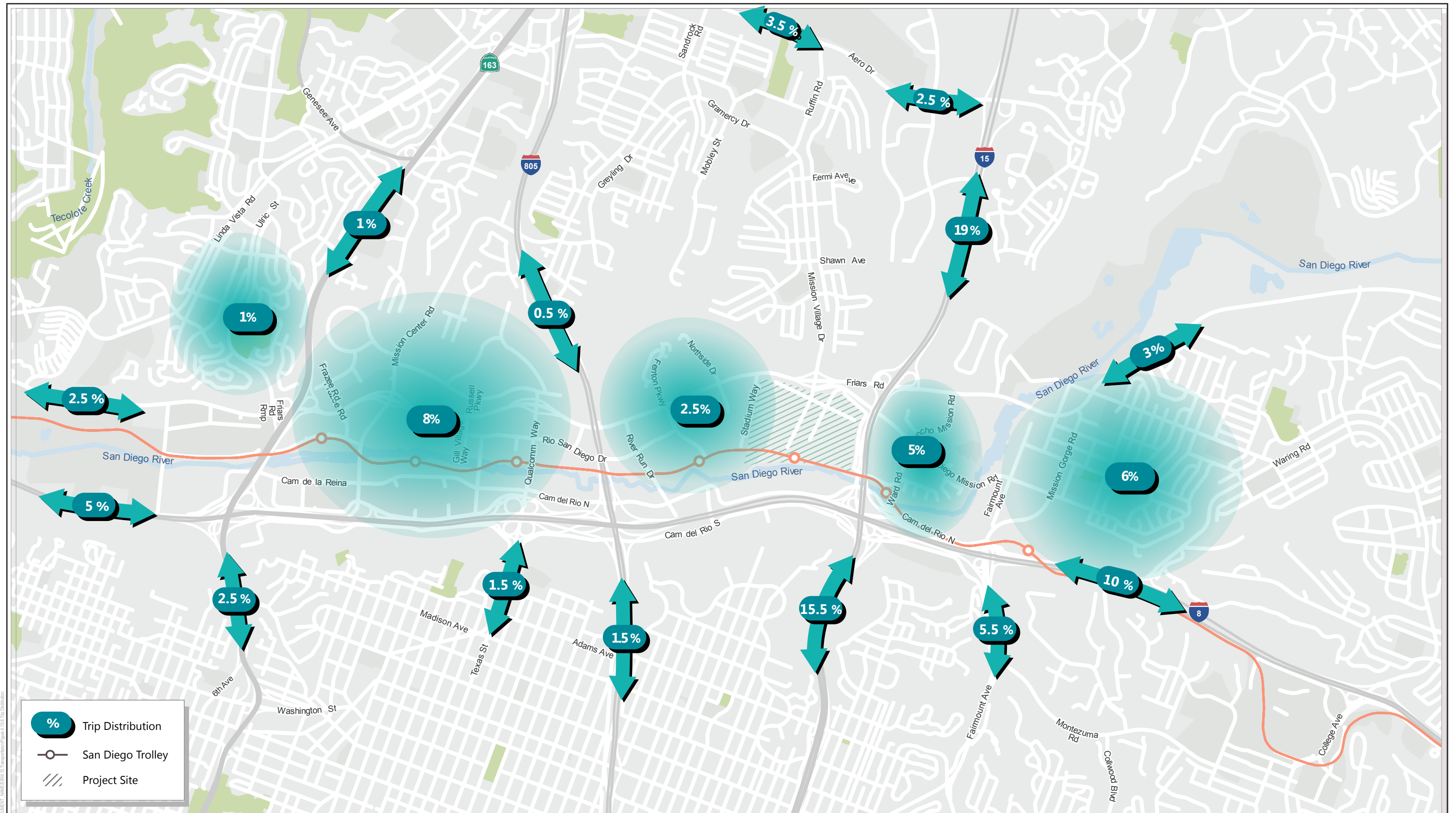
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-5
Existing Conditions Diagram

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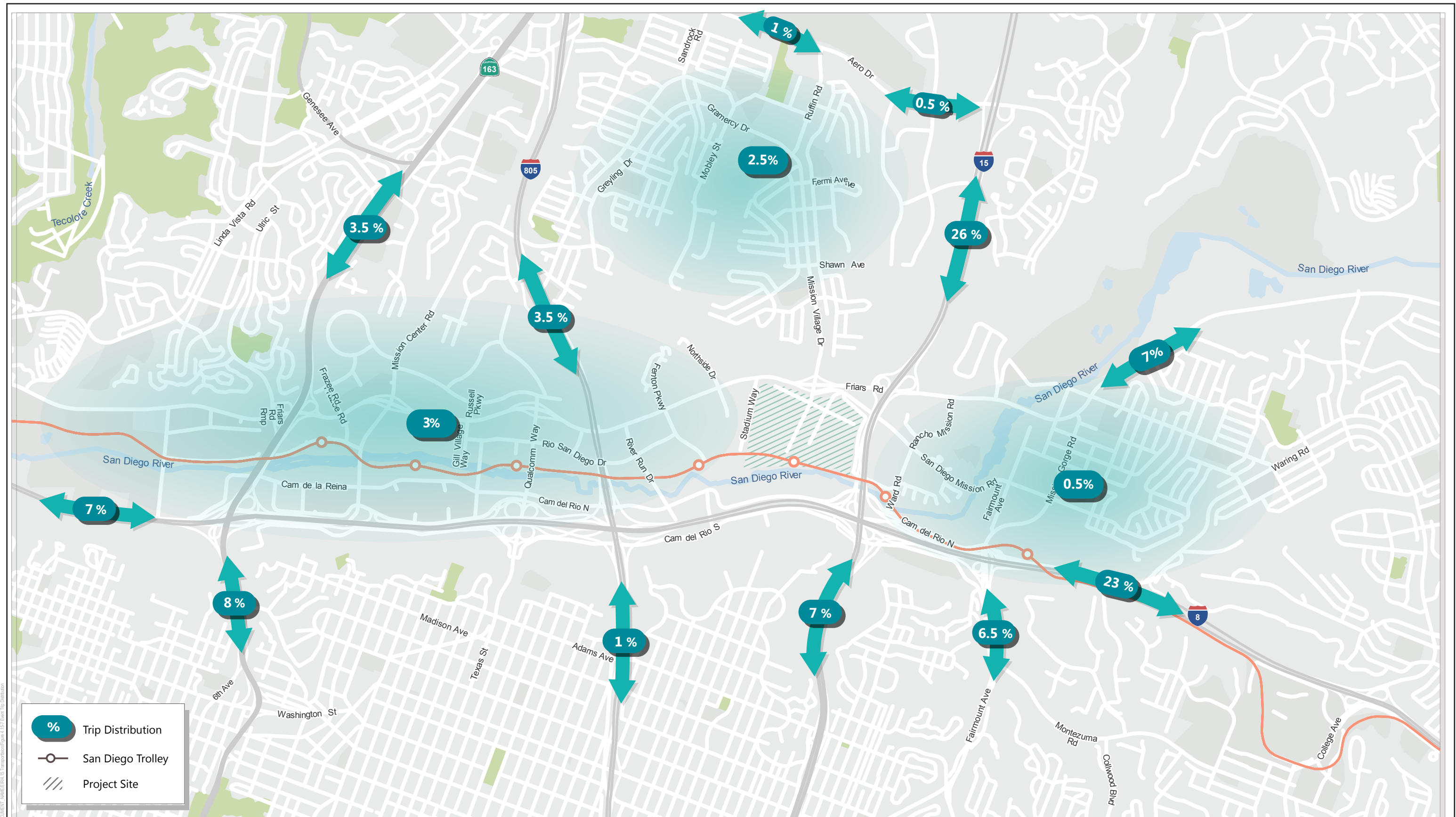
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-6
Trip Distribution

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SOURCE: FEHR PEERS / JULY 2019

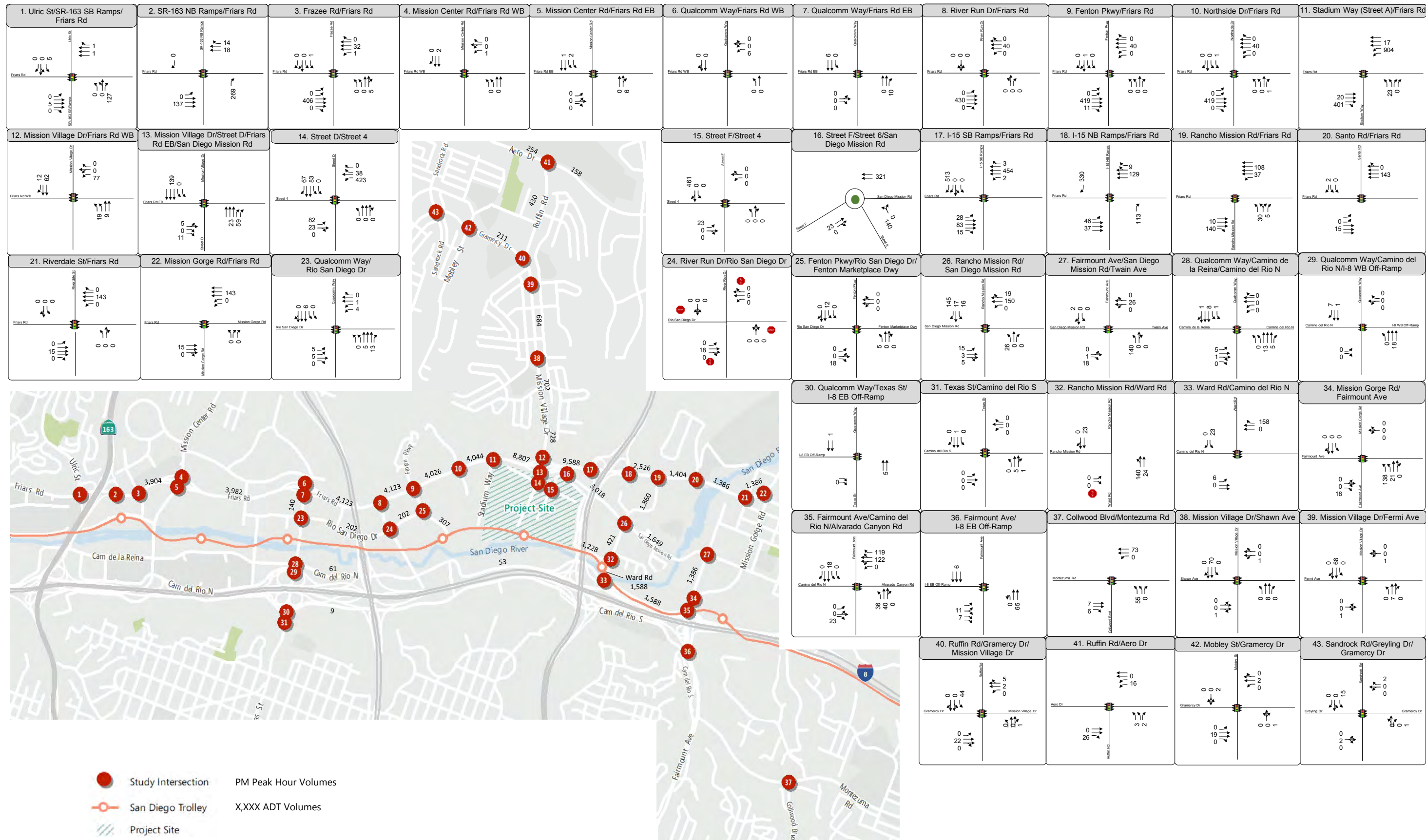
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Figure 4.15-7
Event Trip Distribution

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SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-9
Event Trip Assignment

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Fenton Parkway Connection

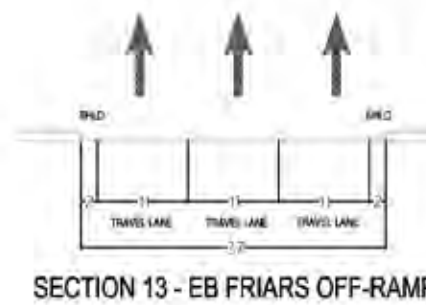
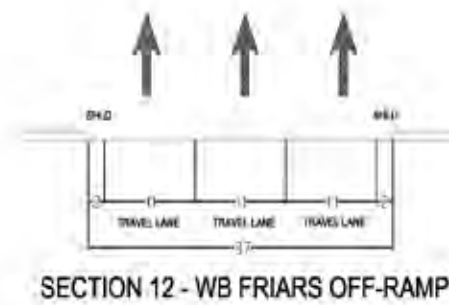
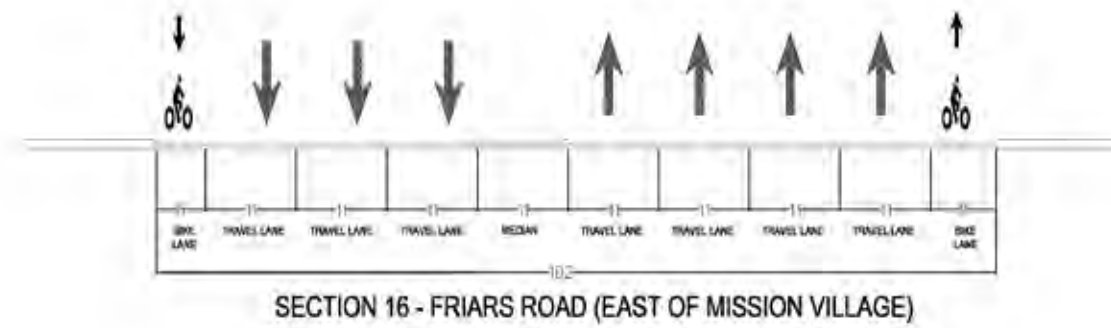
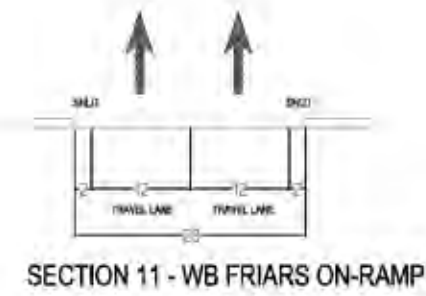
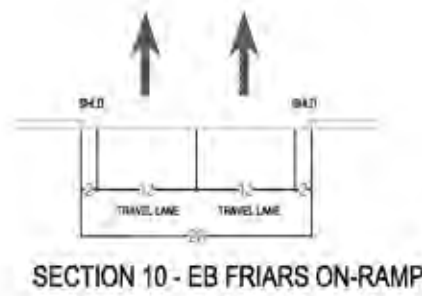
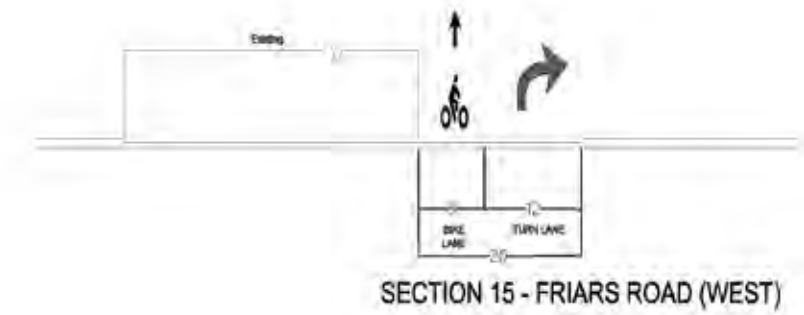
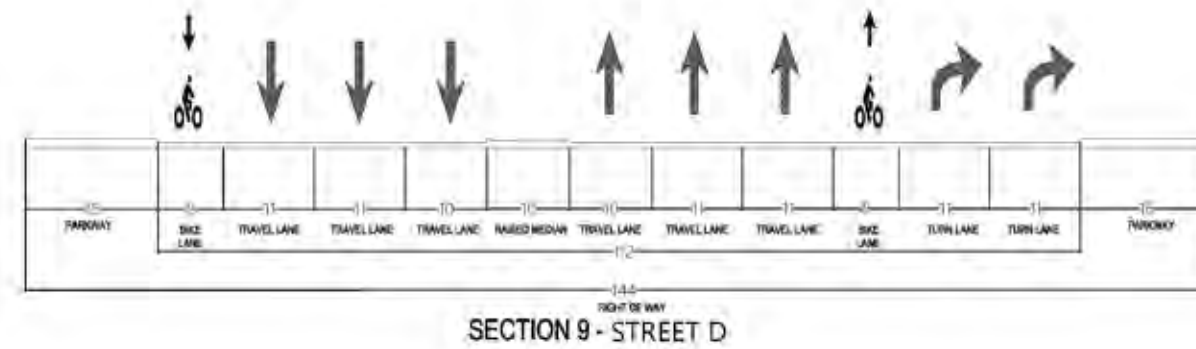
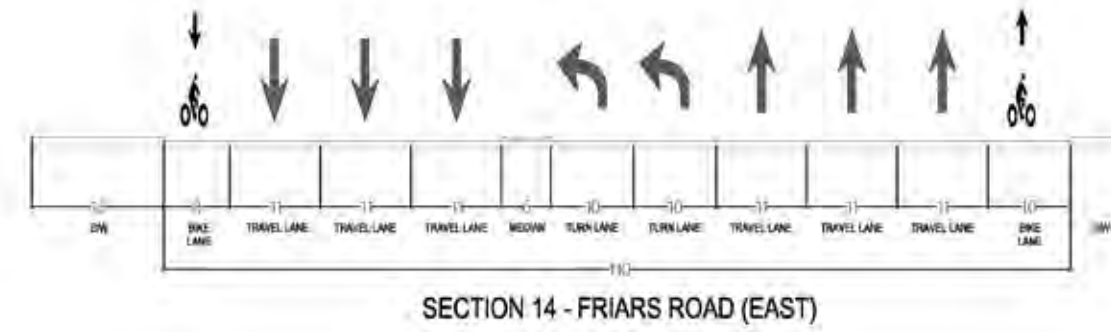
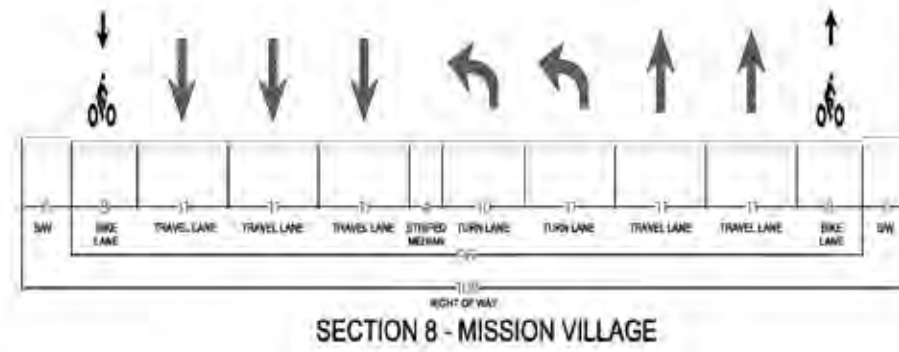
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-10A
Project Road Improvements

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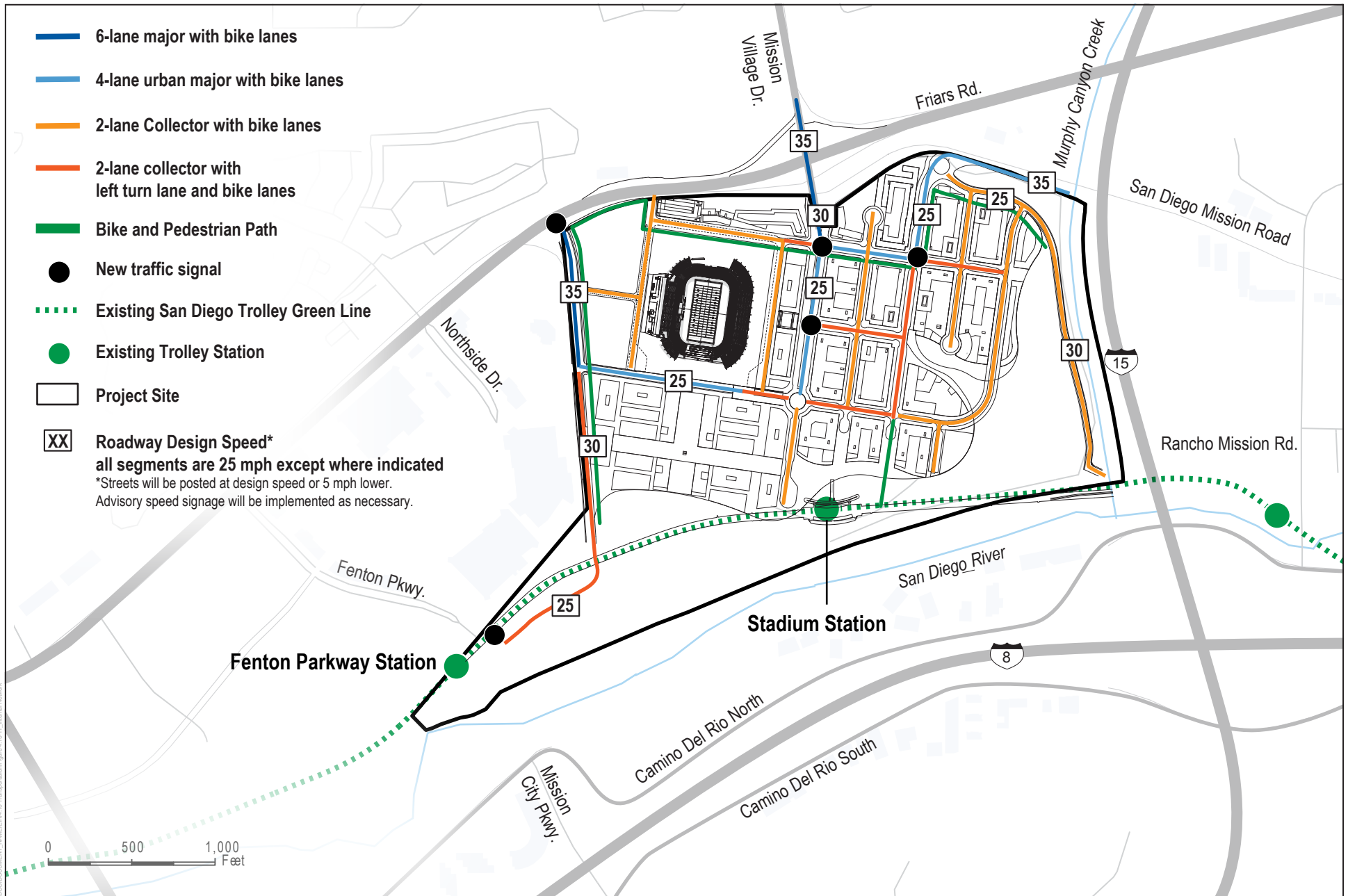
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-10B
Project Road Improvements

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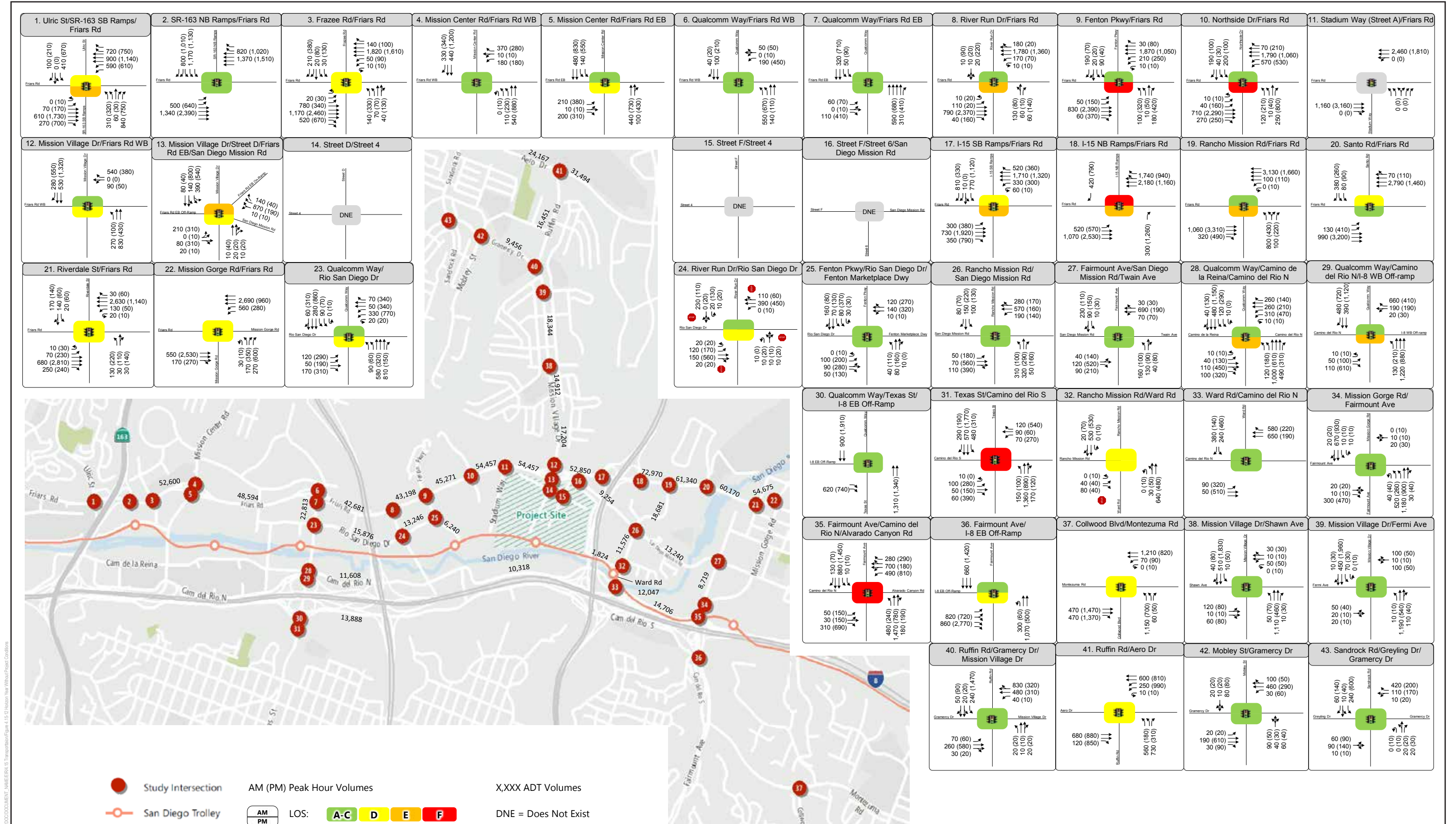
SOURCES: CARRIER JOHNSON / 2018, FEHR PEERS / JULY 2019

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Figure 4.15-11
Internal Network

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SOURCE: FEHR PEERS / JULY 2019

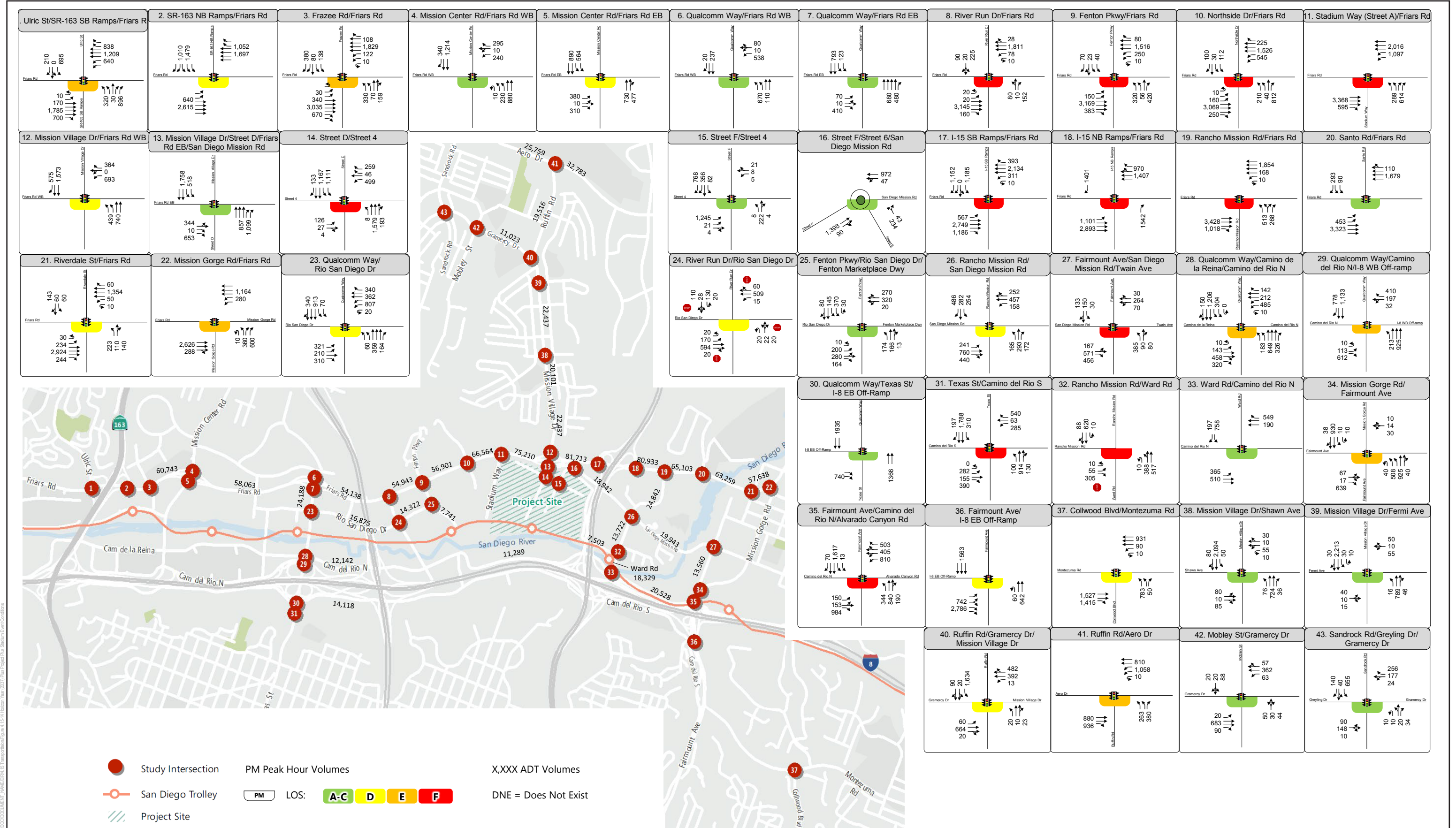
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Figure 4.15-12
Horizon Year Without Project Conditions

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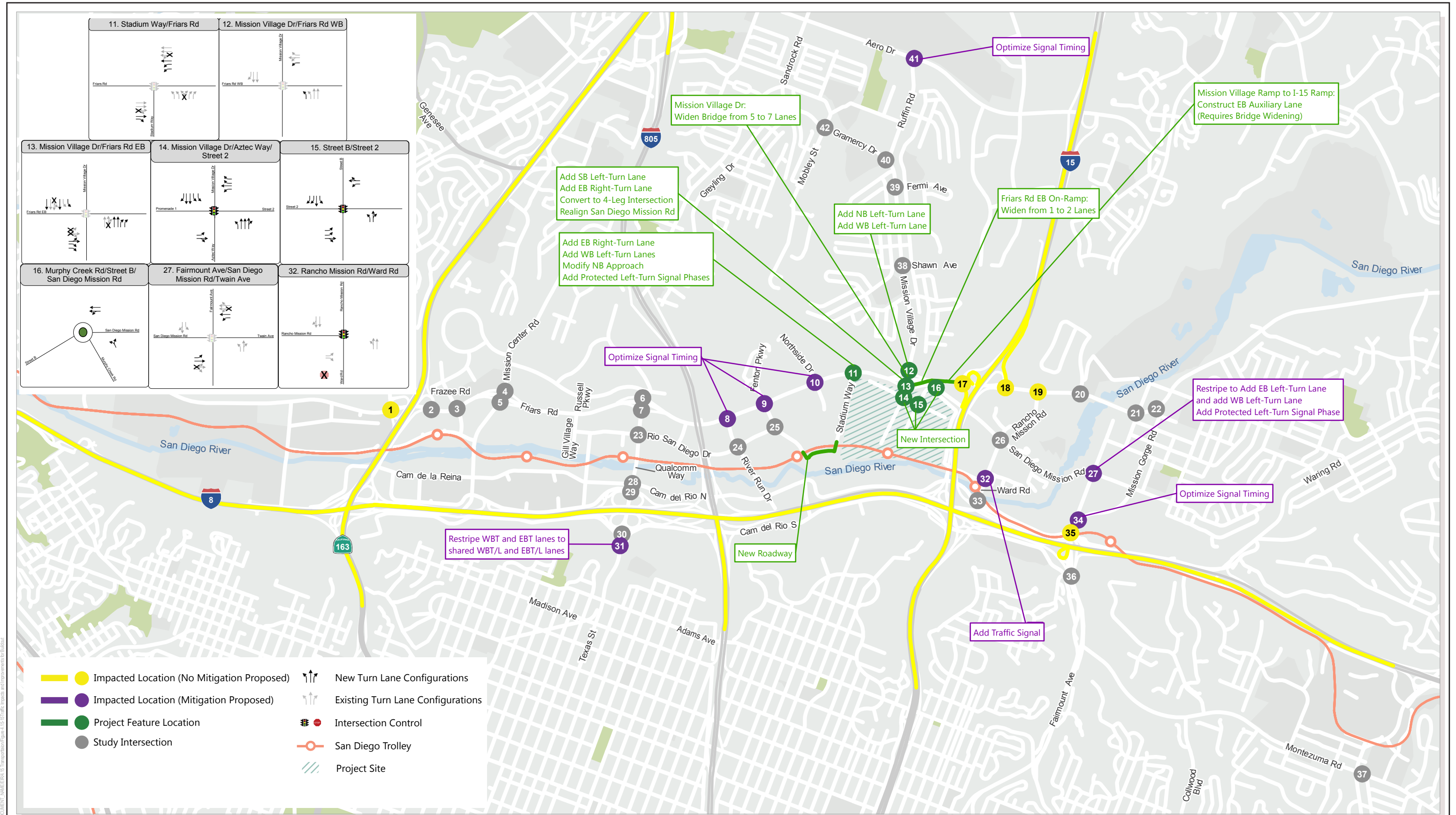
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-14
Horizon Year (2037) Plus Project Plus Stadium Event Conditions

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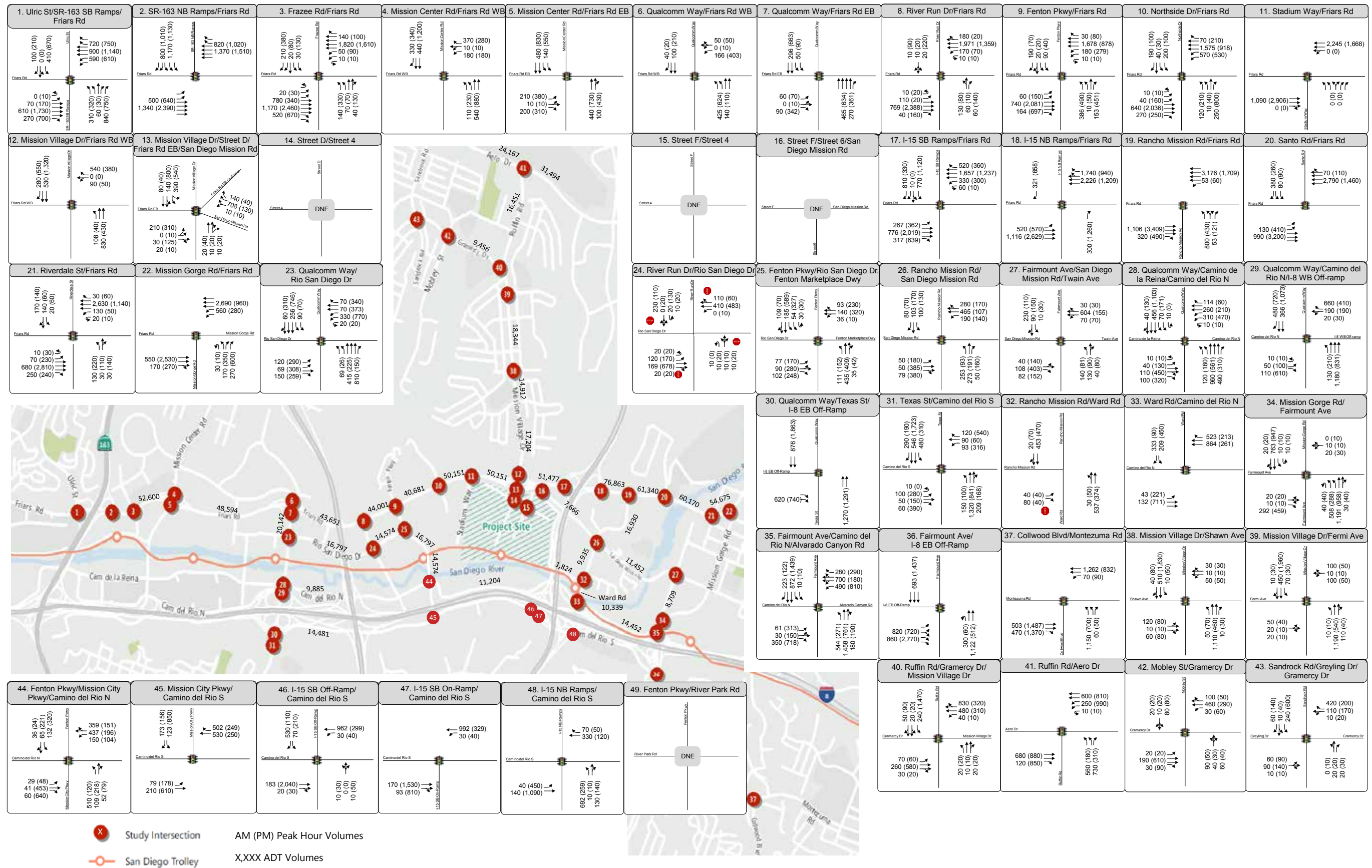
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-15
Traffic Impacts and Improvements for Buildout

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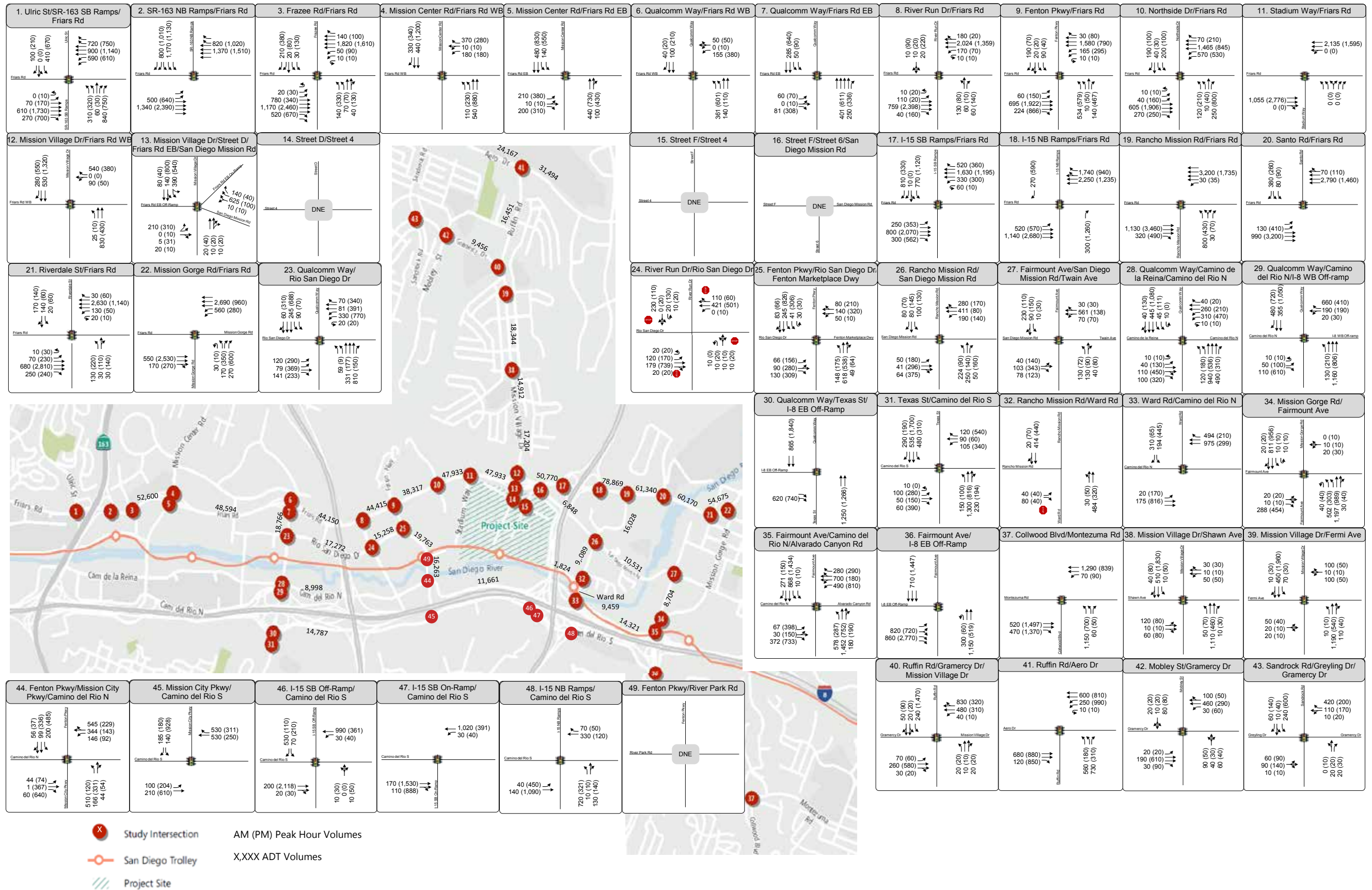
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-16
Horizon Year No Project W/O with 2-Lane Fenton Parkway Bridge –Volumes and Lane Configurations

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SOURCE: FEHR PEERS / JULY 2019

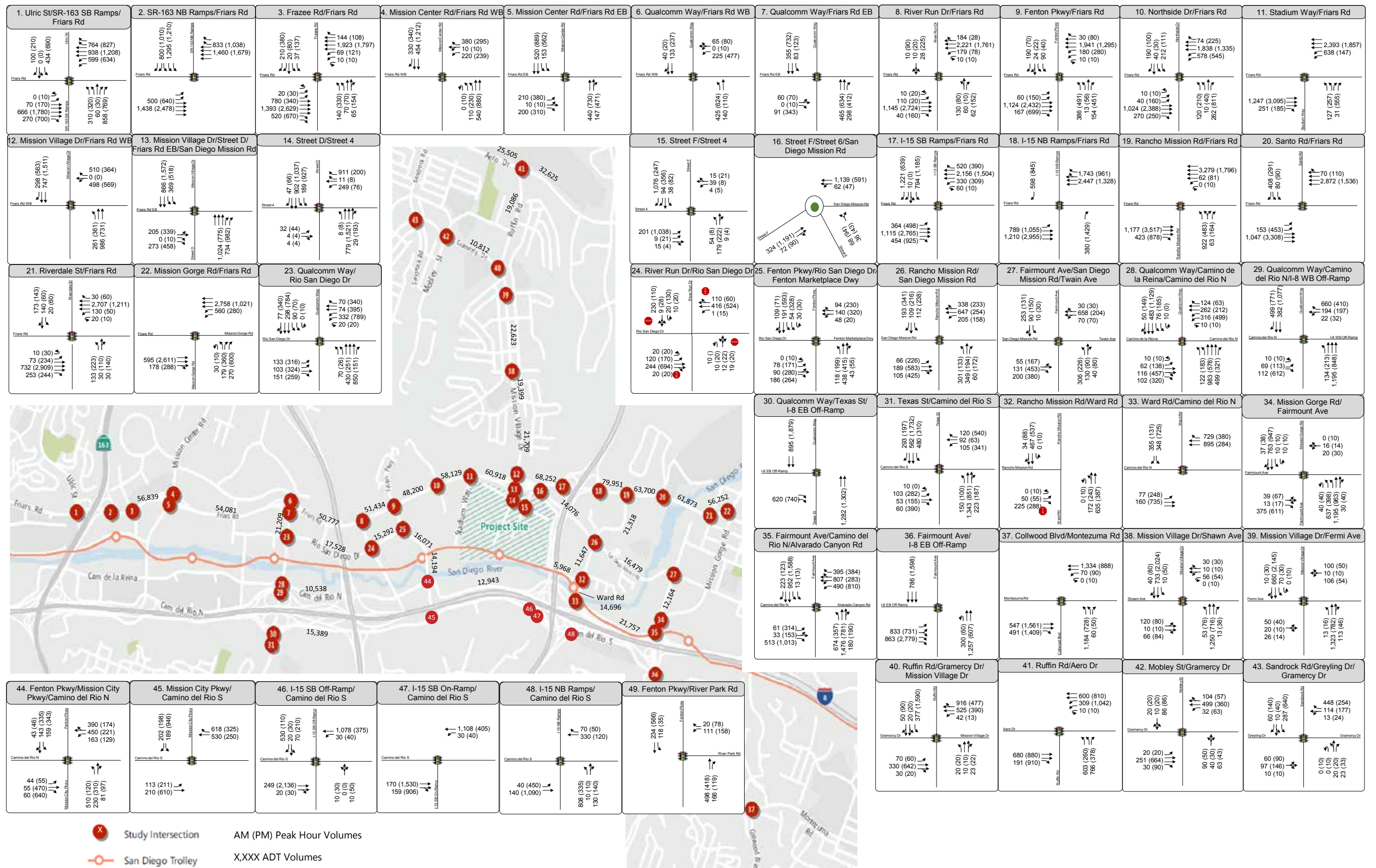
SDSU Mission Valley Campus Master Plan EIR



Horizon Year No Project W/O Event with 4-Lane Fenton Parkway Bridge –Volumes and Lane Configurations

Figure 4.15-17

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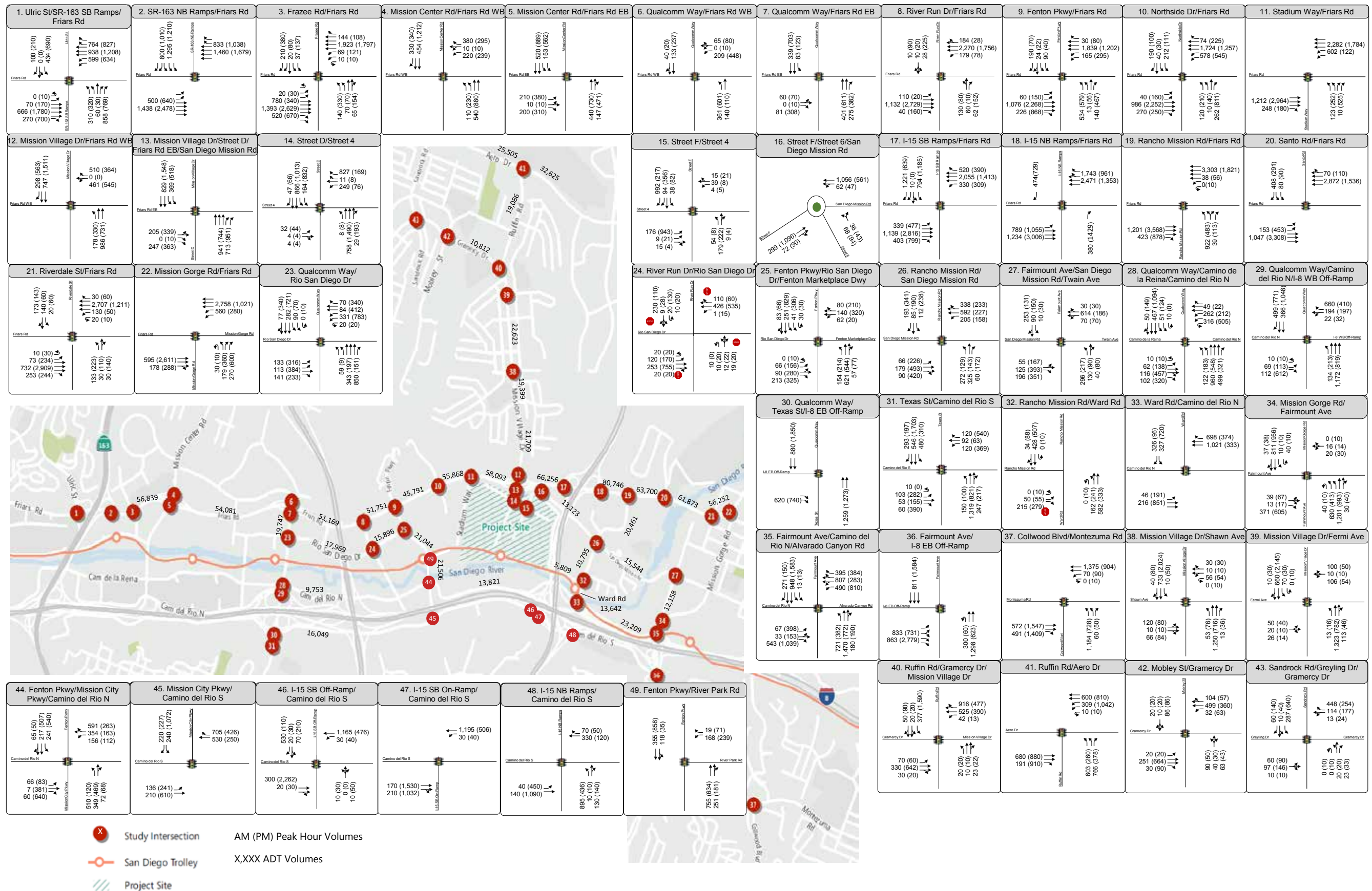
SOURCE: FEHR PEERS / JULY 2019

SDSU Mission Valley Campus Master Plan EIR

Horizon Year Plus Project W/O Event with 2-Lane Fenton Parkway Bridge –Volumes and Lane Configurations

Figure 4.15-18

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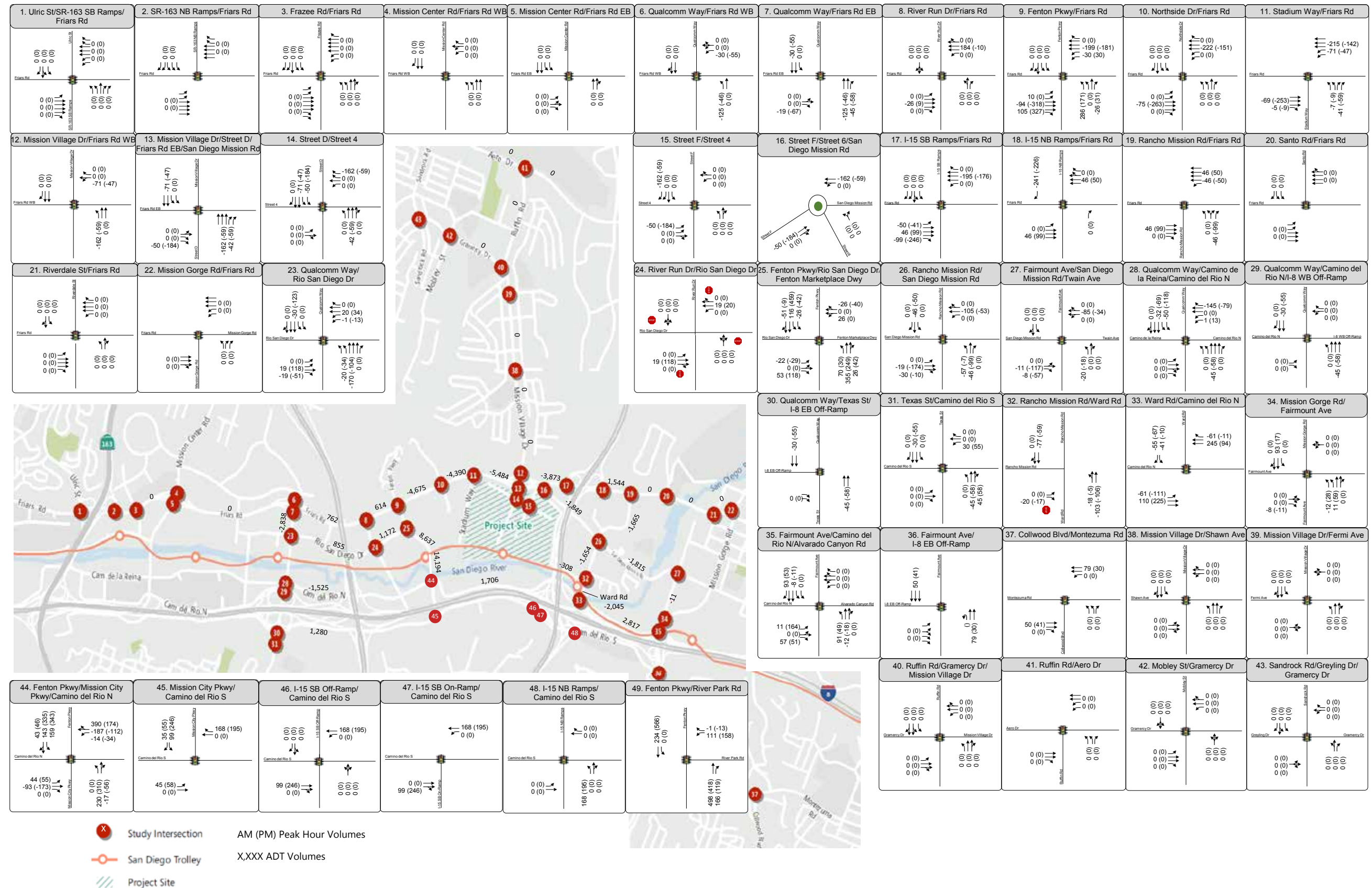
SOURCE: FEHR PEERS / JULY 2019

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Figure 4.15-19

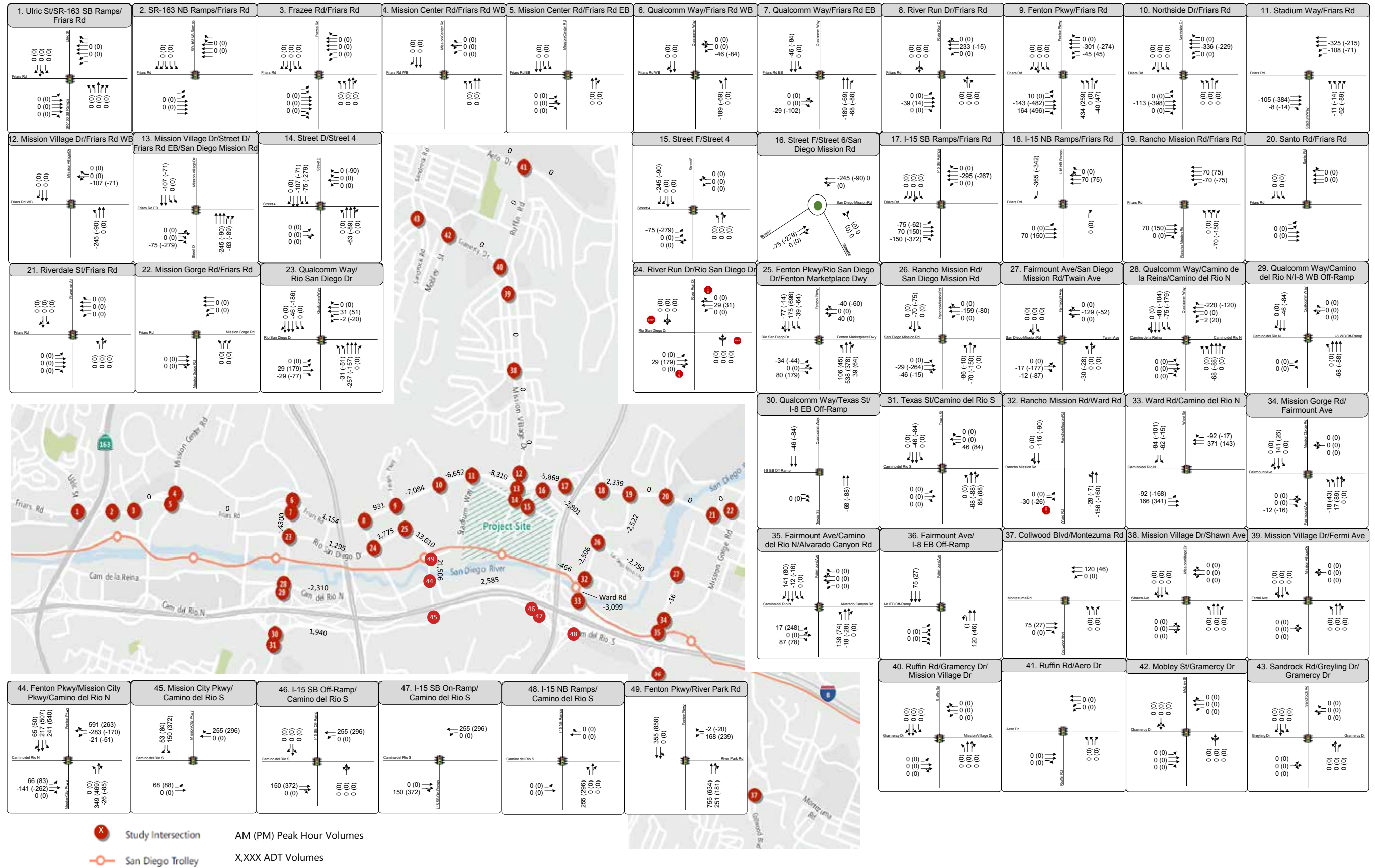
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SOURCE: FEHR PEERS / JULY 2019

Effect of 2-Lane Fenton Parkway Extension on Horizon Year Plus Project W/O Event – Traffic Redistribution

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SOURCE: FEHR PEERS / JULY 2019

SDSU Mission Valley Campus Master Plan EIR



Effect of 4-Lane Fenton Parkway Extension on Horizon Year Plus Project W/O Event – Traffic Distribution

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4.16 Tribal Cultural Resources

This section describes the existing tribal cultural resources conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

Methods for Analysis

In *EPIC v. Johnson* (1985) 170 Cal.App.3rd 604, the Court of Appeal held that the Native American Heritage Commission (NAHC), as a state agency with special expertise on tribal history, has jurisdiction over affected Native American resources that may be affected by proposed projects, including Native American burial sites and archaeological places of religious significance to Native Americans. On behalf of San Diego State University (SDSU), Dudek requested a search of the NAHC Sacred Lands File on December 19, 2018, to determine if any tribal cultural resources (TCRs) are present within 1 mile of the project area. Steven Quinn, NAHC associate government program analyst, facilitated this search and returned the results on January 3, 2019. The results of the Sacred Lands File search are summarized herein and discussed in detail in the Cultural Resources Technical Report prepared for the proposed project, which is included as Appendix 4.4-1 to this EIR. As part of the consultation process, the NAHC provided a list of tribal governments and individuals that should be consulted. Dudek sent outreach letters via certified mail to all representatives listed on the NAHC list on February 4, 2019.

Under the California Environmental Quality Act (CEQA), the lead agency must consult with Native American Tribes regarding a project's potential impacts on tribal resources (California PRC Section 21080.3.1). As lead agency, SDSU and its representatives have sent letters via certified mail to the Native American representatives included on the consultation list provided by the NAHC on December 21, 2018. SDSU tracked the certified mail return receipts and tried to establish contact via email or telephone with anyone from whom they did not receive a signed return receipt. The resulting consultations between SDSU and the Native American recipients are discussed below in Section 4.16.4, Impacts Analysis.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. A total of 150 letters were received during this comment period. Comments on the NOP related to TCRs focused on the impacts which could occur to buried human remains, buried village context, traditional cultural property, and tribal monitoring. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP. During the NOP period, SDSU also met with the Kumeyaay Diegueno Land Conservancy and Kumeyaay Heritage Preservation Committee at an in-person meeting where the university gave an overview of the project and received feedback from members of the organizations, which include representatives from a number of Kumeyaay tribes in the region.

4.16.1 Existing Conditions

The proposed project area of potential effect is dominated by the San Diego County Credit Union (SDCCU) Stadium, its associated paved parking lot, and the existing San Diego Trolley station. Land uses adjacent to the project site consist of the San Diego River, commercial development, and Interstate (I) 8 to the south; Friars Road, steep hillsides, and residential development to the north; retail/commercial development within Fenton Marketplace to the west; and Murphy Canyon Creek, I-15, and retail/residential development to the east. The elevation ranges from

approximately 35 feet above mean sea level to 300 feet above mean sea level. The majority of the project site is relatively flat within the existing large parking area surrounding the Stadium structure. Along the southern boundary of the project site there is a small berm beyond the parking lot, which descends into the lower floodplain of the San Diego River. Though ground surface is visible, there is evidence of earthmoving within the floodplain. In the western portion of the project site, there is a flat training field, and beyond that a storm drain outlet channel that conveys water down into the San Diego River floodplain.

Native American Consultation

The results of the NAHC search of the Sacred Lands File were positive, indicating that Native American resources have been reported within 1 mile of the area of potential effect. The NAHC advised Dudek to contact the Lipay Nation of Santa Ysabel and the Viejas Band of Kumeyaay Indians, and included a list of other tribal representatives who may possess tribal knowledge of the area of potential effect (Appendix 4.4-1). Dudek sent outreach letters via certified mail to all representatives listed on the NAHC list on February 4, 2019. All representatives listed on the NAHC contact list received letters except Lisa Haws of the Sycuan Band of the Kumeyaay Nation. Dudek spoke with Ms. Haws, and she indicated that she no longer represents Sycuan Band of the Kumeyaay Nation. Chairperson Cody J. Martinez of the Sycuan Band of the Kumeyaay Nation did receive an outreach letter, so the band has been properly notified.

To date, Dudek has received only one response from the NAHC outreach letters. Ray Teran, resource manager of the Viejas Band of Kumeyaay Indians, wrote a response letter to Dudek indicating that the “project site has cultural significance or ties to Viejas.” Mr. Teran requested that a Kumeyaay Cultural Monitor be on site during ground-disturbing activities and that the monitor inform Viejas of any inadvertent cultural discoveries. Mr. Teran did not indicate the presence of any known TCRs.

Under CEQA, the lead agency must consult with Native American Tribes (California PRC Section 21080.3.1.). SDSU attempted to notify all Native American representatives included on the consultation list provided by the NAHC via certified mail, email, or telephone (Appendix 4.4-1). SDSU’s efforts resulted in responses from six tribal representatives requesting consultation.

Cody Martinez with Sycuan Band of Kumeyaay Nation requested consultation with SDSU on the proposed project on February 26, 2019. SDSU responded with a letter on April 10, 2019 suggesting dates and times for possible meetings but never received a response from Sycuan Band. SDSU also sent an email to the email address provided on the NAHC contact list. Having not received a response to these outreach efforts, Dudek archaeologist, Matthew DeCarlo, sent a follow-up email and left a voice message with Sycuan’s office inquiring whether Sycuan Band still wanted to pursue consultation on June 20, 2019. Sycuan did not respond. On July 17, 2019, SDSU Director of Planning Laura Shinn emailed a letter to Sycuan Band informing them that SDSU understands that Sycuan Band is no longer seeking consultation with SDSU concerning the project. As such, SDSU considers AB 52 consultation closed with Sycuan Band.

Additionally, Lisa Cumper, the tribal historic preservation officer for the Jamul Indian Village, requested consultation with SDSU on April 11, 2019. SDSU Director of Planning Laura Shinn met with Chairwoman Erica Pinto, Secretary Carlene Chamberlain, and Ms. Cumper of Jamul Indian Village on the SDSU campus on May 27, 2019. Also in attendance were Dudek Deputy Project Manager Sean Kilkenny and project Archaeologist Matthew DeCarlo. The meeting opened with a discussion of the proposed project and the future development of the area. Mr. DeCarlo then described this cultural study, including its methods and the results of the records search, Native American outreach, and pedestrian survey. Jamul’s representatives expressed their concerns about the project area. Jamul’s

representatives described the cultural sensitivity of Mission Valley, stating that the valley was a major thoroughfare of prehistoric activity and noting the trail system that connected the ocean and the desert. Jamul’s representatives also mentioned funerary practices that further attributed to the cultural sensitivity of Mission Valley. They further requested that any Native American materials identified during construction be treated with respect, specifically mentioning human remains and cremation urns. The group then discussed the proposed mitigation measures and how SDSU plans to manage unanticipated finds (See Section 4.16-6). The meeting concluded with SDSU including Jamul representatives on its distribution list for the project cultural report and the environmental impact report (EIR), which will give Jamul representatives the opportunity to comment on the documents. On June 5, 2019, Ms. Cumper emailed Ms. Shinn and notified her that the Jamul Indian Village wished to close consultation at this time but asked to be updated of any changes to the project

Ralph Goff, chairman of the Campo Band of Mission Indians, requested consultation with SDSU on January 3, 2019. SDSU emailed Campo Band contact person Marcus Cuero on January 28, 2019, with dates for consultation. Upon not receiving a response, SDSU left a voicemail for the Campo representatives on January 31, 2019. Having not received a response from the Campo Band, SDSU sent a follow up email to Mr. Goff and Mr. Cuero on April 11, 2019, asking for an in-person meeting. The email also stated that if there was no response by April 26, 2019, SDSU would assume the Campo representatives no longer wished to consult on the proposed project. No further response was received.

Clint Linton, director of cultural resources for the Lipay Nation of Santa Ysabel and representative of the Kumeyaay Cultural Repatriation Committee (KCRC) sent an Assembly Bill 52 letter to SDSU via email. Mr. Linton’s email stated that he “remove(d) opposition from me, Santa Ysabel, and KCRC.” He then stated that the proposed project likely overlays the Kumeyaay trail system, a Kumeyaay traditional cultural property. He requested that Dudek, to the extent possible, document the resource. In response to this, Dudek conducted extra research on the Kumeyaay trail system and included it in the Cultural Resources Technical Report (Appendix 4.4-1). Mr. Linton also stated that the vital route needs to be commemorated. Mr. Linton stated that Kumeyaay villages were often established where trails met waterways. Due to the proposed project’s geographic placement, there is a heightened potential that buried village context may be encountered, and because human remains are “always” identified at village sites, that there is a higher probability of encountering buried human remains. Mr. Linton recommended that Campo, Viejas, Sycuan, and Jamul participate in the proposed project as tribal monitors, on a rotating basis. Mr. Linton offered Red Tail Environmental’s services to coordinate tribal monitoring. Lastly, Mr. Linton advised SDSU of the kindness of Jack Murphy towards the Kumeyaay and recommended that the final proposed project plan commemorate him.

Consultation was closed on July 17, 2019.

4.16.2 Relevant Plans, Policies, and Ordinances

Federal

The National Historic Preservation Act

The National Historic Preservation Act (NHPA) established the National Register of Historic Places (NRHP) and the President’s Advisory Council on Historic Preservation, and provided that states may establish State Historic Preservation Officers to carry out some of the functions of the NHPA. NHPA Section 106 directs that “[t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to

license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP.” NHPA Section 106 also affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking (16 USC 470f).

36 Code of Federal Regulations, Part 800 (36 CFR 800) implements NHPA Section 106. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources with important cultural values, to determine whether or not they may be adversely affected by a proposed undertaking and the process for eliminating, reducing, or mitigating the adverse effects. The content of 36 CFR 60.4 defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historic significance in consultation with the Advisory Council on Historic Preservation and the California State Historic Preservation Officer to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association.

The Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) became effective November 16, 1990. NAGPRA addresses the rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to human remains and certain cultural items with which they are affiliated. NAGPRA directs federal agencies and museums to identify, in consultation with Native Americans, the cultural affiliation of Native American human remains and associated funerary objects, unassociated funerary objects, sacred objects, or objects of cultural patrimony, in holdings or collections under their possession (i.e., physical custody) or control (i.e., having sufficient legal interest). Ultimately, the intent is to repatriate the human remains and other cultural items to the appropriate lineal descendants or tribe. NAGPRA authorizes provisions for federal grants supporting activities of repatriation, and outlines penalties for non-compliance and illegal trafficking of funerary or sacred items. Such civil penalties are to be assessed by the Secretary of the Interior, and generally correspond with those defined in the Archaeological Resources Protection Act (ARPA).

Archaeological Resources Protection Act

ARPA requires landholding federal agencies to notify federally recognized Indian tribes before a permit is issued for archaeological excavation on sites of religious or cultural importance to them in national parks, wildlife refuges, or forests, or on Indian lands. ARPA raised the penalty for looting objects older than 100 years to \$20,000 dollars for a first-time felony infraction. For a repeat infringement the fine was raised to \$100,000 and up to 5 years in prison.

Federally recognized tribes must be notified 30 days before issuing a permit for excavations on public land; upon request, the federal land manager must meet with them in those 30 days to discuss their concerns. On Indian lands, Indian Tribe or individual consent must be obtained before the permit is granted. Uniform rules and regulations were published by the Departments of the Interior (43 CFR Section 7), Agriculture (36 CFR Section 296), and Defense (32 CFR Section 229), and the Tennessee Valley Authority (18 CFR Section 1313) in the January 6, 1984, Federal Register. Similar regulations were published for implementing ARPA on Indian lands (25 CFR Section 262) in the December 13, 1993, Federal Register.

The regulations also state that the federal agency also may notify any other Native American group known by the agency to consider the sites to be of cultural or religious importance. The intentional excavation of human remains, funerary objects, sacred objects, or objects of cultural patrimony from federal lands and tribal lands must follow both the requirements of ARPA and NAGPRA. The Bureau of Indian Affairs will issue any ARPA permits needed for excavation on private lands within the exterior boundaries of Indian reservations.

State

California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated for their potential to cause environmental impacts. In 2014, CEQA was amended to apply to “tribal culture resources” as well. Specifically, California Public Resources Code Section 21074 provides guidance for defining TCRs as either of the following:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: (a) Included or determined to be eligible for inclusion in the California Register of Historical Resources. (b) Included in a local register of historical resources as defined in subdivision (k) of [Section] 5020.1.
- (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [Section] 5024.1. In applying the criteria set forth in subdivision (c) of [Section] 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe. (b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

Additionally, CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. If Native American human remains or related cultural material are encountered, Section 15064.5(e) of the CEQA Guidelines (as incorporated from California PRC Section 5097.98) and Health and Safety Code Section 7050.5 define the subsequent protocol. In the event of the accidental discovery or recognition of any human remains, excavation or other disturbances shall be suspended of the site or any nearby area reasonably suspected to overlie adjacent human remains or related material. Protocol requires that a county-approved coroner be contacted in order to determine if the remains are of Native American origin. Should the coroner determine the remains to be Native American, the coroner must contact the NAHC within 24 hours. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in California Public Resources Code Section 5097.98 (14 CCR 15064.5(e)).

Local

Because SDSU is a component of the California State University, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, SDSU has considered the following planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to federal and state agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The City of San Diego's (City's) cultural resources regulations build on federal and state cultural resources laws and guidelines in an attempt to streamline the process of considering impacts to cultural resources within the City's jurisdiction, while maintaining that some resources not significant under federal or state law may be considered historical under the City's guidelines. In order to apply the criteria and determine the significance of potential project impacts to a cultural resource, the project's area of potential effect must be defined for both direct impacts and indirect impacts. Indirect impacts can include increased public access to an archaeological site, or visual impairment of a historically significant viewshed related to a historic building or structure.

4.16.3 Significance Criteria

The significance criteria used to evaluate the project impacts to TCRs are based on CEQA Guidelines Appendix G. According to Appendix G, a significant impact related to TCRs would occur if the project would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
 - b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.16.4 Impacts Analysis

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a. ***Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?***

Construction Impacts

No California Register of Historical Resources (CRHR) listed or eligible cultural resources were identified through the South Coast Information System records search or through intensive pedestrian survey of the area. The area has been substantially disturbed, and is unlikely to contain intact archaeological deposits. However, due to the immediate proximity of the proposed project to the San Diego River, the Kumeyaay trail system, and the prehistoric village of Nipawai, there is an increase potential that buried cultural deposits are located within the proposed project area. Likewise, through NAHC outreach letters and Assembly Bill 52 consultation, Kumeyaay tribal representatives expressed concern for the sensitivity of the proposed project area. Construction related to the proposed project may have a direct impact to previously

unidentified CRHR eligible cultural resources. Dudek recommends archaeological and Native American monitoring during initial ground-disturbing activities. Should construction or other personnel encounter any CRHR eligible cultural resources within the proposed project area, the proposed project would result in **potentially significant impacts (Impact TCR-1)**.

Operational Impacts

As previously stated, no CRHR listed or eligible cultural resources were identified through the South Coast Information System records search or through the intensive pedestrian survey of the area. Although there is an increased probability that buried cultural deposits are located within the proposed project area as described above, operational/permanent activities related to the proposed project would not have a direct impact to previously identified CRHR eligible cultural resources since they would have been handled during initial discovery (during construction). After construction is finished, operational/permanent activities would result in **less-than-significant impacts** to CRHR eligible cultural resources.

- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

Construction Impacts

Through NAHC outreach letters and Assembly Bill 52 consultation, Kumeyaay tribal representatives expressed concern for the sensitivity of the proposed project area. Due to the immediate proximity of the proposed project to the San Diego River, the Kumeyaay trail system, and the prehistoric village of Nipawai, there is an increased potential that buried TCRs are located within the proposed project area. Clint Linton with the Lipay Nation of Santa Ysabel and KCRC identified Mission Valley as the location of Kumeyaay trail system and expressed concern that the proposed project area likely overlays the trail system. Construction related to the proposed project may have a direct impact to previously unidentified TCRs. As such, Dudek recommends archaeological and Native American monitoring during initial ground-disturbing activities. Should construction or other personnel encounter any historical, archaeological, or TCR material within the proposed project area, the proposed project would result in **potentially significant impacts (Impact TCR-2)**.

Operational Impacts

As previously stated, through NAHC outreach and the Assembly Bill 52 consultation process, Kumeyaay tribal representatives expressed concern for the sensitivity of the proposed project area. Although there is an increased probability that buried TCRs are located within the proposed project area due to the immediate proximity of the project site to the Kumeyaay trail system, and the prehistoric village of Nipawai; operational/permanent activities related to the proposed project are not expected to have a direct impact to previously identified TCRs since they would have been handled during initial discovery (during construction). After construction is finished, operational/permanent activities would result in **less-than-significant impacts** to TCRs.

*Would the project result in a cumulative impact to tribal cultural resources?***Construction Impacts**

Future probable proposed projects within the City may potentially contribute to cumulative impacts on cultural and TCRs. In many cases, site redesign or use of fill could minimize these adverse impacts. The increased human activity near potential unidentified TCRs would lead to greater exposure and potential for illicit artifact collection and inadvertent impacts during construction. The City and County of San Diego both maintain guidelines and protocols for addressing project impacts to cultural resources. These include both systematic surveys in areas of high site location potential to identify resources and monitoring programs to ensure that construction work is halted if significant resources are discovered. Although no known archaeological resources have been identified through the records searches, NAHC and tribal correspondence, or the intensive pedestrian survey of the area; there is still the potential for unanticipated archaeological finds during construction of the proposed project. Therefore, the proposed project's contribution to cumulative impacts on archaeological resources is considered to be **potentially cumulatively considerable**.

Operational Impacts

As previously described in the operational analysis under Thresholds 1a) and 1b), operational/permanent activities related to the proposed project are not expected to result in impacts to tribal cultural resources, as findings of any previously unidentified TCRs would have been handled during initial discovery (during construction). Therefore, after construction is finished, operational/permanent activities would result in **less than cumulatively considerable** impacts to TCRs.

4.16.5 Summary of Impacts Prior to Mitigation

Impact TCR-1 A significant impact to previously unidentified CRHR-eligible cultural resources could occur as a result of proposed project construction. Should construction or other personnel encounter any CRHR-eligible cultural resources within the proposed project area, the proposed project would result in potentially significant impacts. Therefore, mitigation is provided. (Please refer to mitigation measure **MM-CUL-4** outlined in Section 4.4, Cultural Resources, of this EIR.)

Impact TCR-2 A significant impact to previously unidentified TCRs, or previously undocumented human remains, could occur as a result of proposed project construction. Should construction or other personnel encounter any historical, archaeological, or TCR material within the proposed project area, the proposed project would result in potentially significant impacts. Therefore, mitigation is provided. (Please refer to mitigation measures **MM-CUL-4** and **MM-CUL-5** outlined in Section 4.4, Cultural Resources, of this EIR.)

4.16.6 Mitigation Measures

Mitigation measures **MM-CUL-4** and **MM-CUL-5** outlined in Section 4.4, Cultural Resources, of this EIR would reduce the potential for impacts on cultural resources. No additional mitigation is proposed.

4.16.7 Level of Significance After Mitigation

Construction of the proposed project could result in potentially significant impacts to previously unidentified CRHR-eligible cultural resources (**Impact TCR-1**). Should construction or other personnel encounter any CRHR-eligible cultural resources within the proposed project area, the proposed project would result in potentially significant impacts. Therefore, mitigation measure **MM-CUL-4**, outlined in Section 4.4 of this EIR, is proposed in order to mitigate impacts to cultural resources. **MM-CUL-4** outlines procedures for proper treatment of unanticipated archaeological finds that comply with the CEQA Guidelines. Adherence to these requirements during initial earth-disturbing activities would ensure the proper treatment of unanticipated archaeological or Native American cultural material. With implementation of **MM-CUL-4**, impacts to CRHR-eligible cultural resources during construction of the proposed project would be reduced to a level of less than significant. Therefore, construction impacts are determined to be **less than significant with mitigation incorporated**. After construction is finished, operational/permanent activities would **not result in significant impacts** to CRHR eligible cultural resources.

Construction of the proposed project could result in potentially significant impacts to previously unidentified TCRs (**Impact TCR-2**). Should construction or other personnel encounter any historical, archaeological, or TCR material within the proposed project area, the proposed project would result in potentially significant impacts. Therefore, mitigation measures **MM-CUL-4** and **MM-CUL-5**, outlined in Section 4.4 of this EIR, are proposed in order to mitigate impacts to TCRs. **MM-CUL-4** outlines procedures for proper treatment of unanticipated archaeological finds that comply with the CEQA Guidelines. **MM-CUL-5** outlines procedures to ensure proper treatment of unanticipated human remains finds during construction activities, and compliance with applicable regulations. Adherence to these requirements during initial earth-disturbing activities would assure the proper treatment of unanticipated archaeological or Native American cultural material. With implementation of **MM-CUL-4** and **MM-CUL-5**, impacts to TCRs during construction of the proposed project would be reduced to a level of less than significant. Therefore, construction impacts are determined to be **less than significant with mitigation incorporated**. After construction is finished, operational/permanent activities would **not result in significant impacts** to TCRs.

As discussed above, future probable proposed projects within the City may potentially contribute to cumulative impacts on cultural resources and TCRs. Although the project site has been previously developed, and no known archaeological resources have been identified through the records searches, NAHC and tribal correspondence, or the intensive pedestrian survey of the area, there is still the potential for unanticipated archaeological finds during construction of the proposed project. However, mitigation measures **MM-CUL-4** and **MM-CUL-5** described above, and outlined in Section 4.4 of this EIR, would reduce the potential for cumulative impacts to **less than cumulatively considerable**.

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4.17 Utilities and Service Systems

This section describes the existing utilities conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

Methods for Analysis

The analysis is based on the following technical reports prepared for the proposed project:

- Sewer Study for San Diego State University Mission Valley Project prepared by Rick Engineering Company (Appendix 4.17-1).
- Water System Analysis for the San Diego State University Mission Valley Project, prepared by Dexter Wilson Engineering Inc. (Appendix 4.17-2).
- On Site Drainage Study for SDSU Mission Valley Campus prepared by Rick Engineering Company (Appendix 4.17-3).
- Off Site Drainage Study for SDSU Mission Valley Campus prepared by Rick Engineering Company (Appendix 4.17-4).
- Water Use Estimation for the SDSU Mission Valley Campus Master Plan Project prepared by Dexter Wilson Engineering, Inc. (Appendix 4.17-5).
- In addition, the following plans and reports were reviewed and included in the following analysis: 2015 Urban Water Management Plan (UWMP), prepared by the San Diego County Water Authority (SDCWA 2016).
- 2015 UWMP, prepared by Metropolitan Water District of Southern California (MWD) (Metropolitan 2016; incorporated by reference).
- 2015 UWMP, prepared by City of San Diego Public Utilities Department (City of San Diego 2016a).
- Water Supply Assessment Report for the Mission Valley Community Plan Update Project, prepared by City of San Diego Public Utilities Department (City of San Diego 2018).

The above plans and reports incorporated by reference are available for public inspection and review at SDSU upon request. They are also available online at agency websites.

Summary of Notice of Preparation Comments

A Notice of Preparation was circulated from January 19, 2019 to February 19, 2019. A total of 150 letters were received during this comment period. Comments received related to utilities addressed existing water and sewer lines, water supplies and assessments, water treatment, water conservation, rainwater runoff reuse, changes in impervious surfaces, stormwater drainage facilities, and demolition waste.

4.17.1 Existing Conditions

Wastewater

Wastewater collection and treatment services are provided by the Wastewater Branch of the City of San Diego (City) Public Utilities Department. The City wastewater system consists of two components:

- The Metropolitan Sewerage Sub-System treats the wastewater from the City and 15 other cities and districts from a 450-square-mile area. An average of 160 million gallons per day (mgd) of wastewater is treated. Planned improvements will increase wastewater treatment capacity to serve an estimated population of 2.8 million through the year 2050.
- The Municipal Wastewater Collection Sub-System is responsible for the collection and conveyance of wastewater from residences and businesses in the City, serving a 330-square-mile area.

The City's wastewater facilities include the Point Loma Wastewater Treatment Plant (Point Loma WWTP), the North City Water Reclamation Plant, the South Bay Water Reclamation Plant, and the Metro Biosolids Center. The Point Loma WWTP would serve the proposed project and treats approximately 150 mgd of wastewater and has a treatment capacity of 240 mgd. The existing wastewater system exits the existing SDCCU Stadium at seven separate locations through 8-inch- and 6-inch-diameter pipelines. An 8-inch-diameter vitrified clay pipe that was constructed in 1966 circles the outside of the Stadium, collecting wastewater from these seven locations. This pipe feeds into an 18-inch-diameter PVC lateral that was rebuilt in 1990 and flows westerly from the 8-inch-diameter collector pipe to another 18-inch-diameter PVC pipe located on the western side of the project site that flows to the south. An existing 8-inch-diameter sewer main enters the property from the north and connects at the same manhole where the two 18-inch pipes connect. The 18-inch-diameter pipeline has a capacity of 4.3 mgd. The 18-inch pipe continues south along the western side of the site until it joins with existing City infrastructure, the North Mission Valley Interceptor Sewer. This infrastructure is a 78-inch- to 84-inch-diameter plastic-lined reinforced-concrete pipe that runs east to west near the southern property boundary. It then discharges to the 108-inch-diameter North Metro Interceptor, which conveys wastewater to Pump Station Number 2, where it is then pumped to the Point Loma WWTP for treatment (City of San Diego 2015). See Figure 4.17-1, Existing Sewer System.

Water Supply

The following existing conditions discussion is taken from the City's Final Program Environmental Impact Report (EIR) for the Mission Valley Community Plan Update (SCH No. 2017071066) (City of San Diego 2019a). The proposed project is geographically situated within the Mission Valley Community Plan area.

Metropolitan Water District

The MWD is Southern California's wholesale water provider. The MWD service area is approximately 5,200 square miles and includes the counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura. There are 26 member agencies of the MWD, including 14 cities and 11 municipal water districts. MWD owns and operates the Colorado River Aqueduct, and the Colorado River is one of MWD's two main water sources. Under the priority system that governs the distribution of Colorado River water made available to California, MWD holds the fourth priority right of 550,000 acre-feet per year (afy) (Metropolitan 2016).

MWD's second major water source is the State Water Project, owned by the State of California and operated by the DWR. The State Water Project's supply originates in Northern California with water captured from the Feather River

Watershed behind Lake Oroville Dam. MWD is the largest, in terms of population served, of the 29 agencies that have long-term contracts for water service from DWR. MWD's contract with DWR provides for the ultimate delivery of 1,911,400 afy, which is 46% of the total State Water Project entitlement (Metropolitan 2016).

MWD's existing water supplies have been historically sufficient to meet demands within its service area during years of normal precipitation, and while it manages reserve supplies to account for normal drought conditions, regulatory actions have placed limitations on its ability to provide water to its member agencies. Future population growth, regulatory restrictions, increased competition for low-cost water supplies, and other factors such as climate change could impact MWD's ability to supply its member agencies even in normal years.

San Diego County Water Authority

The San Diego County Water Authority (SDCWA) is one of the member agencies of MWD. SDCWA is the countywide wholesaler and is made up of 24 public member agencies stretching from the United States/Mexico border to the Orange County and Riverside County borders. SDCWA owns and operates five large-diameter pipelines to deliver imported water to its member agencies. SDCWA has embarked on a multi-year emergency storage plan to provide up to 6 months of emergency water supplies in the event of a system failure or other issue with receiving imported water from MWD (SDCWA 2016).

In November 2012, SDCWA's Board of Directors approved a 30-year water purchase agreement with Poseidon Resources, a private investor-owned company, to purchase water from the proposed Carlsbad Desalination Plant. The plant and conveyance pipeline were completed in 2015 and, as of 2018, meet approximately 10% of the region's water demand (SDCWA 2016).

The SDCWA has encouraged the development of local water supply projects, such as water recycling and groundwater projects, through the award of Local Water Supply Development incentives. The Local Water Supply Development Program sets a maximum contribution rate of \$200 per acre-foot yielded by each local project. This rate can be revisited and adjusted periodically by the Board of Directors (SDCWA 2016).

City of San Diego Public Utilities Department

The City's Public Utilities Department (PUD) is one of the public member agencies of the SDCWA and serves a population of 1.33 million, which is expected to increase about 1% annually over the next 25 years. The PUD's water system extends over 404 square miles and includes both potable and recycled water facilities. The City's water system has nine reservoirs, two water reclamation plants, three water treatment plants, and 29 treated water storage facilities. The City's water system is split into three major service areas: Miramar, Alvarado, and Otay.

The Mission Valley Community Plan area lies within the PUD's Alvarado service area. The Alvarado Water Treatment Plant (WTP) was originally constructed in 1951 and has a current capacity of 224,028 afy. Of the City's nine reservoirs, the El Capitan, San Vicente, Sutherland, and Lake Murray Reservoirs (236,311 acre-feet [af] total capacity) serve the Alvarado WTP in central San Diego. Lake Hodges Reservoir, with a total capacity of 30,251 af, is connected to Olivenhain Reservoir, which is owned by the SDCWA; water from the Lake Hodges Reservoir can be delivered to any City treatment plant. The Alvarado WTP generally serves the geographical area from National City to the San Diego River (City of San Diego 2018).

Surface Water

The PUD maintains and operates nine reservoirs that capture surface water runoff from rainfall within local watersheds. These nine reservoirs provide approximately 19% of the City's total water supply. In the San Diego region, approximately 13% of local precipitation produces surface runoff to streams that contribute to these reservoirs. Approximately half of this runoff evaporates during reservoir storage, while the other half is used for the municipal water supply. Most of the runoff to reservoirs is produced in years with much greater than average rainfall. As with the local climate, average rainfall is about the minimum required to saturate the soils sufficiently for significant surface runoff (City of San Diego 2018) .

In addition to availability, the use of local surface water is affected by water resource management policies. The PUD's policy is to use local water first to reduce imported water purchases. The PUD also operates emergency and seasonal storage programs in conjunction with its policy. The purpose of emergency storage is to maintain an accessible amount of stored water that could provide an uninterrupted supply of water to the City's water treatment facilities, should an interruption to the supply of imported water occur. The purpose of seasonal storage is to store surplus imported water in the wet winter season for use during the dry summer season. The PUD may also increase use of imported water, in lieu of local water, in the winter so local water may be saved in reservoirs or groundwater basins for summer use (City of San Diego 2018).

Recycled Water

While the PUD has historically imported nearly all of its water from the SDCWA, it also strives to use more local surface water, recycled water, and conservation efforts to meet or offset potable demands. Recycled water is wastewater that has undergone additional treatment to make it suitable for a range of beneficial uses. Recycled water has been used in the City for almost 20 years and is produced by two water reclamation plants: the North City Water Reclamation Plant and the South Bay Water Reclamation Plant. The total wastewater treatment capacity of the two plants is 50,406 afy. Landscape irrigation continues to be the leading use of recycled water, but the customer base has become more varied over the years with an increase in the number of industrial and dual plumbed meter connections (City of San Diego 2018).

The City's Pure Water San Diego Program (Pure Water), approved by City Council in 2014, is intended to provide a reliable drinking water supply that is locally controlled and drought proof. The program will use advanced water treatment processes to turn recycled water into water of equal or greater quality than the imported sources. The Morena Pump Station and Influent Sewers of the Pure Water project are planned for the westernmost edge of the Mission Valley Community Plan area and will undergo a separate environmental review process from the proposed Mission Valley Community Plan Update. Pure Water will be implemented in phases and is expected to be completed by 2035 (City of San Diego 2018).

Conservation

Established by the City Council in 1985, the Water Conservation Program has accounted for more than 31,240 af of potable water savings. These savings have been achieved by adopting programs, policies, and ordinances designed to promote water conservation practices, and by implementing comprehensive public information and education campaigns. The City offers a broad range of conservation tactics to help meet the needs of residential and commercial water customers. These tactics include the following:

- Rebate programs for high efficiency toilets, washing machines, and commercial water saving devices;

- Rebates for replacing grass with sustainable landscapes and micro-irrigation systems;
- Residential interior/exterior and commercial landscape survey programs; and
- Public education and outreach.

Planning efforts to increase water conservation are an ongoing process, and these conservation programs undergo periodic reevaluation to ensure the realization of forecasted savings. Table 4.17-1 shows the breakdown of how surface water, conservation, and recycled water have aided water demands in San Diego from 1990 to 2010 (City of San Diego 2018).

Table 4.17-1. San Diego Public Utilities Department Historic Imported, Local, and Recycled Water Demands¹

Fiscal Year	Imported Water (af)	Local Surface Water (af)	Conservation ² (af)	Recycled Water (af)	Total ³ (af)
1990	233,158	22,500	-	-	255,658
1995	162,404	59,024	8,914	-	230,324
2000	207,874	39,098	17,410	3,250	267,632
2005	204,144	26,584	29,410	4,294	264,432
2010	188,337	13,117	34,317	12,173	247,944

Source: City of San Diego 2018.

Notes: af = acre-feet.

¹ Includes retail and wholesale demands.

² Conserved water results in savings and is not a direct supply.

³ Total includes water supplied and conserved.

Water Distribution

The PUD's water system consists of more than 3,300 miles of pipelines, including transmission lines up to 84 inches in diameter and distribution lines as small as 4 inches in diameter. Transmission lines are pipelines 16 inches and larger in diameter that convey raw water to the water treatment plants and convey treated water from the water treatment plants to treated water storage facilities. Distribution lines are pipelines 16 inches and smaller in diameter that directly service the retail users connected to a meter. In addition, the PUD maintains and operates 49 water pump stations that deliver treated water from the water treatment plants to more than 276,000 metered service connections in 130 different pressure zones. The PUD also maintains several emergency connections to and from neighboring water agencies, including the following:

- Santa Fe Irrigation District (Miramar WTP);
- City of Poway (Miramar WTP);
- Olivenhain Municipal Water District (Miramar WTP);
- Cal-American Water Company (Alvarado and Otay WTP);
- Sweetwater Authority (Otay WTP); and
- Otay Water District (Otay WTP).

The North City Water Reclamation Plant is located in the Miramar area, and treats an average of 18,482 afy of wastewater, although the plant has an ultimate treatment capability of 33,604 afy. The Northern Service Area distribution system consists of 91 miles of recycled water pipeline, two reservoirs, and two pump stations, with

service to 574 meters. The South Bay Water Reclamation Plant is located near the international border with Mexico, and treats an average of 8,961 afy of wastewater, although the plant has a treatment capability of 16,802 afy. The Southern Service Area distribution system consists of 3 miles of recycled water pipeline, one storage tank, one pump station and seven meters. There are currently no recycled water facilities or conveyances within the Mission Valley Community Plan area.

Potable Water Service

This section is based on the reporting of Dexter Wilson Engineering. (Appendix 4.17-2) regarding existing and proposed water infrastructure improvements on the project site.

There are existing public water facilities within and directly adjacent to the project site. The existing facilities are part of the University Heights 390 Pressure Zone and the Normal Heights 536 Pressure Zone. There are existing 12-inch-diameter lines in Friars Road, San Diego Mission Road, and Camino del Rio North. There is a 16-inch-diameter water line in San Diego Mission Road east of Mission Village Drive. This 16-inch-diameter water line extends from the south side of the San Diego River and traverses the existing property. An existing 48-inch-diameter 536 Pressure Zone transmission pipeline runs through the existing site as well. This transmission pipeline runs from the southeast area of the site to the northwest area.

There is an existing pressure reducing station (PRS) within the existing Stadium site (On-site PRS). The On-site PRS feeds the 390 Pressure Zone from the 536 Pressure Zone via a 16-inch-diameter line from the aforementioned on-site 48-inch-diameter pipeline. Another 536/390 Pressure Zone PRS is located near the intersection of Friars Road and Stadium Way west of the project site (Friars Road PRS). This PRS is supplied from the 48-inch-diameter 536 Pressure Zone transmission pipeline. This PRS feeds the existing 12-inch-diameter 390 Pressure Zone water line in Friars Road. There are other PRSs which supply the 390 Pressure Zone; however, the other stations are further from the stadium property and do not influence service to the stadium site to the extent of the On-site PRS and the Friars Road PRS (Appendix 4.17-2). Figure 4.17-2, Existing Potable Water System, shows the existing public water facilities in the vicinity of the project site.

Storm Water

The project site is located in the San Diego River Watershed, an area of 440 square miles that drains to the San Diego River and discharges to the Pacific Ocean at the community of Ocean Beach. The river generally flows from the northeast to the southwest through urban areas and is the project site's receiving waters, located along the southern project site boundary. Stormwater runoff from the project site is conveyed directly to the San Diego River via three existing underground storm drain systems. The easterly system is comprised of 24-inch- to 30-inch- to 36-inch-diameter reinforced-concrete pipes (RCPs) running north to south through the existing Stadium's east parking lot. The middle system consists of a 24-inch to 36-inch RCPs draining south from the existing Stadium to drain the Stadium structure and playing surface, and the westerly system is comprised of 18-inch- to 24-inch- to 30-inch-diameter RCPs, to a 4-foot by 2-foot reinforced concrete box culvert, to a 36-inch-diameter RCP that drains the western portion of the site. The majority of stormwater runoff sheet flows across the site to the nearest inlet and is conveyed directly into one of these three existing storm drain systems. All three of the storm drain systems flow through the existing North Mission Valley Trunk Sewer along the southern boundary. Each storm drain section through the sewer consists of a 34-inch-diameter steel pipe encased in a 36-inch-diameter steel sleeve and all three systems outlet to the river in separate 36-inch-diameter RCPs (City of San Diego 2015). See Figure 4.17-3, Existing Storm Drain System.

Solid Waste

Solid waste disposal at the existing SDCCU Stadium is provided by the City of San Diego Environmental Services and private collectors (Allied Waste/Republic Services). For full/sold out events in the existing Stadium, the site utilizes 150 40-yard dumpsters and 150 portable restrooms. For smaller events, the dumpsters and restrooms are reduced proportionately. Solid waste management involves collection, disposal, and diversion from disposal (City of San Diego 2015).

The closest landfill to the proposed project is the Miramar Landfill. It is located in Kearny Mesa and owned/operated by the City of San Diego Environmental Services Department. The Miramar Landfill receives approximately 870,000 tons of trash per year. At this rate of disposal, the Miramar Landfill, which is the only City-run landfill, will likely be filled to capacity and close by 2030 (City of San Diego 2019b).

Additional active solid waste landfills within the San Diego County include Borrego Springs Landfill, Otay Landfill, Sycamore Landfill, San Onofre Landfill, and Las Pulgas Landfill. Of these, the two closest facilities are Sycamore Landfill and Otay Landfill. Sycamore Landfill is located approximately 12 miles from the site, with a remaining capacity of approximately 114 million cubic yards (cy) as of 2016. The Sycamore Landfill is permitted to receive a maximum of 5,000 tons per day and has a maximum permitted capacity of 148 million cy with a projected closing date of December 31, 2042 (CalRecycle 2019a).

Otay Landfill is located approximately 18 miles from the project site, with a remaining capacity of approximately 21 million cy as of 2016. This landfill is permitted to receive a maximum of 6,700 tons per day with a maximum permitted capacity of 61 million cy. The projected closing date is February 28, 2030 (CalRecycle 2019b).

Electric Power

The existing electrical service for the SDCCU Stadium is fed from two 12-kilovolt electrical services. The primary or preferred service comes onto the project site from the north, and the alternate or back-up service comes onto the project site from the southwest. The on-site power distribution facilities from these two services would need to be relocated or extended (approximately 500 feet within the Stadium parking lot) on site to serve the new multipurpose stadium. There are existing electrical facilities owned by Metropolitan Transit System that serve the trolley Stadium Station (City of San Diego 2015).

Natural Gas

The existing natural gas service to SDCCU Stadium is fed from one 2-inch-diameter high-pressure gas line that is fed from a 3-inch-diameter high-pressure gas line located in Friars Road. This line enters the Stadium on the western side (City of San Diego 2015).

Telecommunications

The existing communications systems for SDCCU Stadium include telephone facilities owned by AT&T and fiber-optic facilities owned by AT&T and Cox Communications. AT&T fiber-optic facilities enter from Friars Road/Mission Village Drive in the north and enter the Stadium on the west side. AT&T also has telephone facilities that cross on the east side of the Stadium site from north to south and enter the Stadium from the east side. Cox Communications also has fiber-optic facilities that enter the Stadium from the eastern side of the project site (City of San Diego 2015).

4.17.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

Section 303 of the Clean Water Act requires states to identify surface waters that have been impaired. Under Section 303(d), states, territories, and authorized tribes are required to develop a list of water quality segments that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology (33 USC 1251 et seq.). Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants from point sources.

State

California Recycled Water Policy

On February 3, 2009, the State Water Resources Control Board (SWRCB) adopted a statewide recycled water policy, with the ultimate goal to increase the use of recycled water from municipal wastewater sources. Included in the statewide policy is the mandate to increase the use of recycled water in California by 1.5 million afy by 2020, and an additional 2.5 million afy by 2030 (SWRCB 2018). The plan also states that the SWRCB expects to develop other policies to encourage stormwater, surface, and groundwater use to promote water conservation. The SWRCB adopted an amendment to the Recycled Water Policy on January 22, 2013, which establishes monitoring requirements for constituents of emerging concern in recycled municipal wastewater.

California Green Building Standards Code

California Green Building Standards Code (CALGreen) requires new buildings in the State to become more efficient by requiring new development to meet minimum standards (CALGreen 2016). The City adopted CALGreen through its most recent Land Development Code (Chapter 14 Article 10). For new residences, CALGreen requires installation of low water use required fixtures (showerheads, bathroom and kitchen faucets, and toilets). For dishwashers and clothes washers, the Environmental Protection Agency WaterSense program was referenced. WaterSense also publishes criteria for overall indoor water use akin to CALGreen. Similar to residential indoor water use, non-residential indoor water use is mandated by CALGreen through the installation of low water use fixtures.

Water Conservation Act of 2009

The Water Conservation Act (Water Code Section 10608) (Senate Bill [SB] X7-7) requires all water suppliers to increase water use efficiency. This legislation sets an overall goal of reducing per capita urban water use, compared to 2009 use, by 20% by December 31, 2020. The state was required to make incremental progress towards this goal by reducing per capita water use by at least 10% on or before December 31, 2015. Each urban retail water supplier also was required to develop urban water use targets and an interim urban water use target by July 1, 2011.

Agricultural water suppliers also were required to implement efficient water management practices including adoption of agricultural management plans by December 31, 2012, and updated plans by December 31, 2015, and every five years thereafter. Effective 2013, agricultural water suppliers not in compliance with these planning requirements are ineligible for state water grants or loans.

Water Supply Assessments and Written Verifications of Water Supply

State legislation has improved the link between water supply and land use planning. SB 610 (Water Code Sections 10910 et seq.; SB 610) requires that, before approving any projects as defined in Water Code Section 10912, any “city or county,” acting as lead agency under CEQA, must request a “water supply assessment” from the urban water supplier most likely to serve the project site (Water Code Section 10910(b), (c)).¹ Thus, water supply assessments apply to projects proposing any of the following:

- Residential developments of more than 500 dwelling units;
- Shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- Hotels, motels, or both, having more than 500 rooms;
- Industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- Mixed-use projects that include one or more of the projects specified in Water Code Section 10912, subdivision (a); or
- Projects that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling-unit project.

The water supply assessment evaluates water supplies that are or will be available in normal, single-dry, and multiple-dry years during a 20-year planning horizon, and determines whether such supplies can meet existing and planned future demands, including the demand associated with a proposed project.

SB 221 (Government Code Sections 66455.3 and 66473.7; SB 221) requires a city, county, or local agency to include a condition to any tentative subdivision map that a sufficient water supply must be available to serve the subdivision. The term “sufficient water supply” is defined as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year planning horizon that would meet the subdivision project’s estimated water demand, and the demand from existing and planned future water uses (including agricultural and industrial uses) within the specified service area (Water Verification). SB 221 also requires verification of projected water supplies to be based on entitlement contracts, capital outlay programs, and regulatory permits and approvals.

Urban water suppliers can use their most recent UWMP as a foundational document in completing SB 610 water supply assessments and SB 221 Water Verifications.²

¹ Based on the applicable law, not every project is subject to the requirements of SB 610. (SB 610 amended the Water Code at Division 6, Part 2.10, to add Sections 10910-10915 to the Water Code.) For example, as lead agency under CEQA, CSU is not required by law to prepare water supply assessments for campus master plan projects undergoing CEQA review because Water Code Section 10910 requires any “city or county, acting as a lead agency under CEQA,” to request a “water supply assessment” from the urban water supplier most likely to serve the project site. (Water Code Section 10910(b),(c).) CEQA is consistent with Water Code Section 10910. (See Public Resources Code Section 21151.9.) CSU is not a city or county, but rather a state agency. In any case, CSU has considered the WSA already prepared for the Mission Valley Community Master Plan Update. This WSA encompasses the entire Mission Valley Community Plan area, including the SDSU Mission Valley Campus Master Plan project site.

² California Department of Water Resources, 2015 Urban Water Management Plans Guidebook for Urban Water Suppliers, March 2016.

California Urban Water Management Planning Act

The California Urban Water Management Planning Act (Water Code Sections 10610–10656) requires certain urban water suppliers that provide water to 3,000 or more customers, or provide over 3,000 af of water annually, to make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple-dry years. The Act requires reliability information be reported in the UWMP, which must be updated every five years, and describes the required contents of a UWMP, as well as how urban water suppliers should adopt and implement UWMPs.

State and local agencies and the public frequently use UWMPs to determine if agencies are planning adequately to reliably meet water demands in various service areas. As such, UWMPs serve as an important element in documenting water supply availability and reliability for purposes of complying with state laws, SB 610 and SB 221, which link water supply sufficiency to certain land-use development project approvals.

California Code of Regulations Article 22.5, Drought Emergency Water Conservation (Emergency Declaration and Executive Orders)

In response to California’s drought conditions, in January 2014, Governor Brown proclaimed a state of emergency and directed state officials to take all necessary action to make water available. In addition, Governor Brown issued numerous Executive Orders regarding water conservation commencing in 2014. Executive Order B-37-16, issued in May 2016, extends the mandatory water reduction measures outlined in previous Executive Order B-29-15 and further directs the DWR and State Water Board to develop long-term efficiency targets that go beyond the 20% reductions mandated by SB X7-7, discussed above. The Executive Order also establishes longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans.

In addition, in May 2016, the State Water Board revised emergency regulations in consideration of improved hydrologic conditions. The prior percentage reduction-based water conservation standard was replaced by a localized “stress-test” approach, which requires local water agencies to ensure a three-year supply under three more dry years like the State experienced from 2012–2015. Water agencies that would face shortages under three additional dry years are required to meet a conservation standard equal to the amount of shortage. In November 2016, state agencies, including the State Water Board, released a public draft of *Making Water Conservation A California Way of Life*, which addresses elements of Executive Order B-37-16 that require state agencies to develop a framework for using water more wisely, eliminating water waste, strengthening local drought resilience, and improving agricultural water use efficiency and drought planning.³

Due to more recent improved hydrologic conditions statewide, in April 2017, Governor Brown issued Executive Order B-40-17 lifting the drought emergency in all but four California counties.⁴ Executive Order B-40-17 rescinds the Drought Emergency Proclamations issued in January and April 2014 as well as four drought-related Executive Orders issued in 2014 and 2015. However, Executive Order B-40-17 also directs the State Water Board to maintain urban water use reporting requirements and prohibitions on wasteful practices. Water agencies will continue to strengthen drought

³ California State Water Resources Control Board, Water Conservation Portal—Emergency Conservation Regulation, State Plan Seeks to Make Water Conservation A Way of Life, November 30, 2016, www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/2016nov/pr113016_water_efficiency_report.pdf, accessed April 3, 2017.

⁴ The Counties of Fresno, Kings, Tulare, and Tuolumne remain under a drought state of emergency, per Executive Order B-40-17

readiness and water use efficiency.⁵ The regulatory requirements resulting from the existing Executive Orders have been codified in California Code of Regulations Article 22.5, Drought Emergency Water Conservation.

Pueblo Water Rights

A Pueblo Right is the “paramount” right of an American City as a successor of a Spanish or Mexican pueblo to the use of water naturally occurring within the old pueblo limits for the use of the inhabitants of a City (*City of Los Angeles v. Pomeroy* (1899) 124 Cal. 597). Furthermore, the Pueblo Right is superior to every other right, including riparian and appropriative rights, and cannot be lost (*City of San Diego*, 2015b).

A Pueblo Right attaches to the use of all surface and groundwaters of the streams that flowed through an original pueblo, including their tributaries, from their source to their mouth (*City of San Diego v Cuyamaca Water Co.* (1930) 29 Cal. 152). The City of San Diego’s Pueblo Rights attaches to the waters of the San Diego River system, including percolating groundwater that is interconnected with the San Diego River (*City of San Diego*, 2015b).

For any source of water to which its Pueblo right attached, the City of San Diego is entitled to take “to the extent of the needs of its inhabitants.” (*Feliz v. Los Angeles* (1881) 58 Cal. 73). As a Pueblo water rights holder, the City of San Diego has the highest priority right to use as much of the native flow of the San Diego River as is reasonably necessary to meet the City’s present and future needs (*City of San Diego*, 2015b).

The SDSU Mission Valley Campus Master Plan project does not propose to divert water from the San Diego River or pump groundwater. Accordingly, it is not expected to affect the City’s Pueblo Rights.

Assembly Bill 939

Assembly Bill (AB) 939 established an integrated waste management hierarchy to guide the California Integrated Waste Management Board and local agencies in the implementation of programs geared at source reduction, recycling and composting, and environmentally safe transformation and land disposal. AB 939 also included waste diversion mandates that require all cities and counties to divert 50% of all solid waste through source reduction, recycling, and composting activities (CalRecycle 2001).

Assembly Bill 75

AB 75 requires all state agencies and large state facilities to develop and implement an integrated waste management plan. AB 75 also requires all state agencies and large state facilities to divert at least 25% of their solid waste from landfills by January 1, 2002, and at least 50% on and after January 1, 2004 (CalRecycle 1997).

Assembly Bill 341

AB 341 builds from the goals and requirements of AB 939. AB 341 establishes a statewide policy goal of diverting a minimum of 75% of solid waste from landfills through source reduction, recycling, or composting by the year 2020. This bill also required the California Department of Resources Recycling and Recovery (CalRecycle) to issue a report by January 1, 2014, that included strategies, methods, and recommendations that would enable the state to reach the 75% waste diversion goal by 2020 (CalRecycle 2015).

⁵ Governor Brown Lifts Drought Emergency, Retains Prohibition on Wasteful Practices, Executive Order B-40-17.

Local

Because SDSU is a component of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The City General Plan's Public Facilities, Services, and Safety Element (City of San Diego 2008) provides objectives, policies, and programs regarding utilities, including the following.

Wastewater

- **Policy PF-F.5** Construct and maintain facilities to accommodate regional growth projections that are consistent with sustainable development policies.

Storm Water Infrastructure

- **Policy PF-G.1** Ensure that all storm water conveyance systems, structures, and maintenance practices are consistent with federal Clean Water Act and California Regional Water Quality Control Board NPDES Permit Standards.
- **Policy PF-G.2** Install infrastructure that includes components to capture, minimize, and/or prevent pollutants in urban runoff from reaching receiving water and potable water supplies.
- **Policy PF-G.5** Identify and implement BMPs [best management practices] for projects that repair, replace, extend or otherwise affect the storm water conveyance system. These projects should also include design considerations for maintenance, inspection, and, as applicable, water quality monitoring.

Water Infrastructure

- **Policy PF-H.2** Provide and maintain essential water storage, treatment, supply facilities and infrastructure to serve existing and future development.
- **Policy PF-H.3** Coordinate land use planning and water infrastructure planning with local, state, and regional agencies to provide for future development, maintain adequate service levels, and develop water supply options during emergency situations.
 - a. Plan for a water supply and emergency reserves to meet peak load demand during a natural disaster such as a fire or earthquake.
 - b. Plan for water supply and emergency reserves recognizing anticipated Climate Change impacts.
 - c. Recognize the water/energy nexus. Plan and implement water projects after consideration of their energy demands in coordination with energy suppliers to minimize and optimize the energy impact of projects.

Waste Management

- **Policy-I.1** Provide efficient and effective waste collection services.
 - a. Encourage waste reduction and recycling with source-separated collection of materials.
 - b. Provide space for recycling containers and efficient collection.
- **Policy PF-I.2** Maximize waste reduction and diversion
 - a. Conveniently locate facilities and informational guidelines to encourage waste reduction, diversion, and recycling practices.
 - b. Operate public and private facilities that collect and transport waste and recyclable materials in accordance with the highest environmental standards.
 - c. Support resource recovery programs that produce soil additives, mulch, or compost from yard debris and organic waste.
 - d. Maximize the separation of recyclable and compostable materials.
 - e. Collaborate with public and private entities to support the development of facilities that recycle materials into usable products or that compost organic materials.
 - f. Reduce and recycle Construction and Demolition (C&D) debris. Strive for recycling of 100 percent of inert C&D materials and a minimum of 50 percent by weight of all other material.
 - g. Use recycled, composted, and post-consumer materials in manufacturing, construction, public facilities and in other identified uses whenever appropriate.
 - h. Encourage advance disposal fees to prevent the disposal of materials that cause handling problems or hazards at landfills.
 - i. Provide sufficient information on the movement of waste and recyclable materials to meet regulatory requirements at public and private transfer stations and materials recovery facilities to allow adequate planning.
 - j. Reduce subsidies to disposal and encourage incentives for waste diversion.
 - k. Promote manufacturer and retailer responsibility to divert harmful, reusable, and recyclable products upon expiration from the waste stream.
 - l. Encourage the private sector to build a mixed construction and demolition waste materials recycling facility.
 - m. Expand and stabilize the economic base for recycling in the local and regional economy by encouraging and purchasing products made from recycled materials.
 - n. Continuously assess new technologies for recycling, composting, cogeneration, and disposal to maximize efficient use of City resources and environmental protection.
- **Policy PF I.5** Plan for sufficient waste handling and disposal capacity to meet existing and future needs. Evaluate existing waste disposal facilities for potential expansion of sites for new disposal facilities.

Urban Water Management Plans

In 2016, the City adopted the 2015 UWMP, which identifies projected water supplies required to meet future water demands through the year 2035 (City of San Diego 2016a). According to the City's 2015 UWMP, no water shortages are forecasted through 2040 because projected potable water demands would be met using a combination of recycled water, local surface supply, groundwater, and purchased water from the SDCWA (City of San Diego 2016a).

Also in 2016, the SDCWA adopted its own 2015 UWMP (SDCWA 2016). The SDCWA's UWMP uses the most recent regional growth forecast from the San Diego Association of Governments (SANDAG) to calculate regional water demands. SANDAG's regional growth forecasts are based on population forecasts, projected housing forecasts, and other growth forecasts provided by the member cities. The City's 2015 UWMP provides information on the City's current and future water demands and supplies, discusses the water resource challenges that the City faces, and summarizes the major water resource initiatives that the City has undertaken to ensure a safe, reliable water supply for its customers. Specifically, the plan details the City's water system, water demands, sources of water supplies, water conservation efforts, climate change impacts, energy intensity, water shortage contingency planning, and projected water supply reliability during normal/average, dry, and multi-year drought conditions (see Sections 1-10, 2015 UWMP).

The City's Public Utilities Department prepared the Water Supply Assessment Report for the Mission Valley Community Plan Update project (City of San Diego 2018). The City's 2015 UWMP, which was developed in collaboration with SDCWA and adopted by the San Diego City Council in June 2016, serves as the basis for the 2018 Water Supply Assessment (WSA) for the Mission Valley Community Plan Update. The 2018 WSA evaluates water supplies that are or will be available during normal/average year, single-dry year, and multiple-dry water years during a 20-year projection to meet the projected demands of the Mission Valley Community Plan Update, in addition to existing and planned future water demands of the City's Public Utilities Department. The 2018 WSA covers the entire Mission Valley Community Plan area, which includes the proposed SDSU Mission Valley Campus Master Plan project site.

SDCWA's 2015 UWMP was prepared in accordance with the Urban Water Management Planning Act and includes the conservation measures, programs, and policies required by Water Code Section 10608.36. The 2015 UWMP serves as SDCWA's long-term planning document to ensure a reliable water supply for the San Diego region. In accordance with its Administrative Code, SDCWA also prepares annual water supply reports to provide updated information on development of local and imported water supplies.

The 2015 UWMP provides important information on SDCWA's service area characteristics, including the region's economy and demographics, climate, population, and studies and research on climate change and water supply planning (Section 1, 2015 UWMP). The plan describes the region's water supplies and demands (Sections 2-6, 2015 UWMP). The plan also evaluates water quality and describes integrated regional water management planning (Sections 7-8, 2015 UWMP). Importantly, the 2015 UWMP analyzes the region's water supply reliability in average/normal, dry-year, and multiple dry-year conditions (Section 9, 2015 UWMP); and evaluates planning scenarios to respond to drought and climate change conditions (Section 10, 2015 UWMP). The plan includes details on the multi-year drought affecting California since 2012 and the State's drought-related emergency regulations (Section 11, 2015 UWMP).

California law requires water agencies to update their UWMPs every 5 years. Accordingly, the City and SDCWA updated their UWMPs in 2015 to reflect new development projects and assess any ongoing water supply issues, such as drought and climate change.

City of San Diego Drought Policies

In 2011, the City implemented permanent mandatory restrictions to promote water conservation as a permanent way of life in San Diego. The following measures apply year-round, regardless if the City is in a drought (City of San Diego 2016b):

- City of San Diego water customers must prohibit excessive irrigation and must immediately correct leaks in their private water systems.
- Customers cannot use a running hose to wash down sidewalks, driveways, parking areas, buildings, awnings, windows, tennis courts, patios or other hard surface areas, except to alleviate immediate safety or sanitation hazards.
- Overfilling of swimming pools and spas is strictly prohibited.
- All decorative water fountains must use a recirculating pump.
- Residents washing vehicles (automobiles, trucks, trailers, boats, RVs) must implement procedures to conserve water and prevent excessive runoff, such as:
 - Washing vehicles at a commercial car wash.
 - Washing vehicles on a lawn or pervious surface or directing water flow to a lawn or pervious area.
 - Damming wash water for collection and disposal to a pervious area or to the sanitary sewer.
 - Using a hose with an automatic shutoff nozzle.
 - Using a hand-held water container.
- The City will not provide new water service connections for customers using single pass-through cooling systems.
- All new conveyer car wash and commercial laundry systems connections will be required to employ a recirculating water system.
- Restaurants and other food establishments shall only serve and refill water for patrons upon request.
- Guests in hotels, motels, and other commercial lodging establishments will be provided the option of not laundering towels and linens daily.

Level 1 Drought Alert Conditions

In Level 1 Water Emergencies, San Diegans are asked to reduce, voluntarily, excessive irrigation and restrict landscape irrigation and car washing to before 10 a.m. or after 6 p.m. Level 1 “Drought Watch” conditions also include, but are not limited to, the following voluntary water use restrictions (City of San Diego 2016b):

- Limit watering of landscapes to no more than 3 days per week.
- When watering without an irrigation system, use either a hand-held hose with a shutoff valve or a garden hose sprinkler system on a timer.
- Washing of vehicles is limited to the same seasonal schedule as irrigation: before 10 a.m. or after 6 p.m. in the summer and after 4 p.m. in the winter (except for boats, which may be washed after use; vehicles for health and/or safety issues; or when washing at a commercial carwash that recycles water).
- No watering/irrigating during rain events.
- Recycled water should be used for construction purposes, when available.
- Construction operations may only use water for normal construction activities, consistent with San Diego Municipal Code Section 67.3803 and requirements by regulatory agencies.
- Use of water from fire hydrants will be limited to firefighting, construction, health and safety.

Level 2 Drought Alert Conditions

Conservation rules associated with Level 2 Drought Alert conditions include, but are not limited to, the following mandatory water use restrictions:

- All water use restriction of Level 1 drought water conditions.
- Limit all landscape irrigation to no more than 3 assigned days per week on a schedule established and posted by the city manager.
- Limit lawn watering and landscape irrigation using sprinklers to no more than 10 minutes maximum per watering station per assigned day from June to October (does not apply to water-efficient devices).
- Limit lawn watering and landscape irrigation using sprinklers to no more than 7 minutes maximum per watering station per assigned day from November to May (does not apply to water efficient devices).
- Stop operation of ornamental fountains, except to the extent needed for maintenance purposes.
- Use of water from fire hydrants will be limited to firefighting, meter installation by the Public Utilities Department as part of its Fire Hydrant Meter Program, and related activities necessary to maintain the health, safety, and welfare of the citizens of San Diego.
- Construction operations receiving water from a fire hydrant or water truck will not use water beyond normal activities.
- A Level 2 declaration also allows the city manager (upon resolution of the San Diego City Council) to implement a water allocation per customer account served by the City and a schedule of penalties for exceeding the water allocation (City of San Diego 2016b).

Countywide Integrated Waste Management Plan

The Countywide Integrated Waste Management Plan consists of a Countywide Siting Element, a Countywide Summary Plan, and three elements (source reduction and recycling, household hazardous waste disposal, and non-disposal facility locations) from each. The Siting Element requires that the County's landfills demonstrate remaining capacity of at least 15 years to serve all jurisdictions. The Summary Plan contains waste management policies and goals, and it summarizes the diversion programs at the County and local level implemented to meet and maintain the 50% diversion mandate required by AB 939 (County of San Diego 2005). The County publishes 5-year review reports for the Countywide Integrated Waste Management Plan that provide updates to goals and relevant jurisdictional information. The most recent County of San Diego Countywide Five-Year Review Report was published in September 2012; it provides jurisdictional demographic changes and waste generation rates through 2010 (County of San Diego 2012).

SDSU Waste Disposal Practices and Programs

Facilities Services custodial and landscape services staff collects general recycling and waste from across campus. To improve sorting, recycling containers use clear bags and landfill containers use black bags. Custodians place the bins into their carts and then to the dumpsters. Recycling containers and dumpsters are blue while landfill containers and dumpsters are typically black. This provides a chain of custody throughout the process to ensure that recyclables end up at a recycling facility and get turned into new items. EDCO is SDSU's local recycler and hauler. Post-consumer composting is not yet available campus-wide. Associated Students has a pilot project to do limited composting on campus. SDSU Environmental Health & Safety collects batteries, bulbs and hazardous waste (SDSU 2019).

City of San Diego Recycling Programs

The City maintains an active, citywide recycling program governed by the City's Recycling Ordinance. The San Diego City Council initially approved the Ordinance on November 20, 2007, and requires recycling of plastic, glass bottles and jars, paper, newspaper, metal containers, and cardboard (City of San Diego 2019c). The Recycling Ordinance applies to all single-family residences, apartments, and condominium complexes with 50 or more units, commercial buildings with 10,000 square feet or more, and all special events requiring a permit from the City. Effective January 1, 2010, the Recycling Ordinance applies to all apartment and condominium complexes and all commercial facilities (City of San Diego 2019c). In response to AB 341, the City updated the Recycling Ordinance, effective July 2012, requiring all privately serviced multifamily properties, commercial/business facilities, and institutions to recycle if they generate more than 4 cubic yards of waste per week (City of San Diego 2019c). Residential recyclables placed in City-issued blue collection bins are collected by Environmental Services Department staff.

The City's Construction and Demolition Debris Diversion Deposit Program is intended to increase the diversion of construction and demolition debris from landfill disposal and conserve the capacity and expand the life of Miramar Landfill (City of San Diego 2019d). Although not applicable to SDSU, the program requires contractors applying for a building or grading permit to pay a refundable deposit at the issuance of the permit. The contractor can recover the deposit once it submits satisfactory evidence to the director of the Environmental Services Department showing that at least 100% (by weight) of construction or demolition debris generated by development of the proposed project was diverted to a certified recycling facility (City of San Diego 2019d). The Environmental Services Department maintains a list of certified recycling facilities in the County (City of San Diego 2019d).

Mission Valley Community Plan

The Mission Valley Community Plan is intended to be a blueprint for future development in the Mission Valley community of San Diego, where the proposed project is located. A second Working Draft of the Mission Valley Community Plan Update was released on February 6, 2019 (City of San Diego 2019e). The Final Mission Valley Community Plan Update Program EIR was released on May 31, 2019, and the Final Draft Mission Valley Community Plan Update was released in July 2019. The plan contains design guidelines and policies for development to implement the City's Climate Action Plan, maximize transit ridership, and increase mobility options, among others. While the Mission Valley Community Plan Update has not yet been adopted by the City of San Diego, it is considered in this analysis.

4.17.3 Significance Criteria

The significance criteria used to evaluate the project impacts to utilities and service systems are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems are based on whether the project would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.17.4 Impacts Analysis

Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Construction

As discussed below, construction of the proposed project would require infrastructure improvements, the construction of which could cause environmental effects. Impacts associated with these improvements are discussed for each environmental resource in this EIR, specifically, Sections 4.1, Aesthetics; 4.2, Air Quality; 4.3, Biological Resources; 4.5, Energy; 4.6, Geology and Soils; 4.7, Greenhouse Gas Emissions; 4.8, Hazards and Hazardous Materials; 4.9, Hydrology and Water Quality; 4.10, Land Use and Planning; 4.11, Mineral Resources; 4.12, Noise; 4.14, Public Services and Recreation; 4.15, Transportation; and 4.18, Wildfire.

As discussed in Sections 4.2, Air Quality; and 4.12, Noise, construction impacts would remain significant and unavoidable, even with implementation of mitigation measures. However, the analysis herein is meant to determine if impacts to utilities and infrastructure would occur as part of implementation of the proposed project. Therefore, air quality and noise impacts are not considered impacts associated with this threshold.

The proposed project would result in an incremental increase in demand of water, wastewater services, and other utilities. It is anticipated that the proposed project would require new points of connection for domestic water, fire water, stormwater, sewer, electricity, telecommunications, and natural gas from the existing utility lines. All proposed connections to existing utility infrastructure would be sized to adequately serve anticipated project buildout. Similarly, all existing utilities that the proposed project would connect to are adequately sized to serve the proposed project without the need to expand. (See Sewer Study, EIR Appendix 4.17-1; and Water System Analysis, EIR Appendix 4.17-2). Further, the project site and surrounding areas are highly urbanized and are currently served by existing utility infrastructure. The proposed project would not be extending any utility or service system into undeveloped areas that are currently unserved by utilities. Therefore, impacts would be **less than significant**.

Operation

Water Treatment Plants

The City's three water treatment plants (Miramar, Alvarado, and Otay) have a total treatment capacity of 294 mgd. Water delivered to the project area is treated at the Alvarado Treatment Plant, which is located northeast of the project site adjacent to Lake Murray. The Alvarado Treatment Plant was recently expanded to increase its treatment capacity to 200 mgd. Expansion of the Alvarado Treatment Plant was undertaken in order to meet current and future water needs of the Alvarado service area. The projected water treatment needs of the Alvarado service area are based primarily on the number of existing and projected water department customers residing in the service area. Existing and projected customer data is based on land uses identified in local planning documents, including general plans and community plans (City of San Diego 2015).

Project Water Demand

As shown in Table 4.17-2, Projected Daily Water Demand, at buildout, the proposed project would result in a water demand of approximately 693,343 gallons per day (gpd) (or 776 afy), which represents approximately 024% of the Alvarado Treatment Plant capacity.

The Dexter Wilson Water Use Estimation technical memorandum (EIR Appendix 4.17-5; July 2019) calculates the SDSU Mission Valley Campus Master Plan project's water demand, using three methodologies. The first methodology, which is based on the City Water Department's Facility Design Guidelines (Book 2; 2014), estimates water use for the project site at 1,595,190 gpd (or 1,787 afy). However, Dexter Wilson reports that this estimate is likely "overly conservative" because several completed developments within the City have been shown to use less water than calculated in the City's Facility Design Guidelines. For that reason, Dexter Wilson turned to two other methodologies in determining a more realistic water use estimate for the proposed project.

The second methodology, which is based on the City's WSA water use factors, provided a "more accurate" estimate of water use for the proposed project compared to the City's Facility Design Guidelines (Methodology 1). Methodology 2 calculated the proposed project's water demand at 1,287,914 gpd or 1,443 afy. Methodology 2, however, does not account for the use of best available technology and water savings required by recently adopted water conservation laws and regulations. Therefore, Dexter Wilson also considered Methodology 3, which is based on the use of best available technology and water savings required by water conservation laws and regulations.

Methodology 3 accounts for indoor and outdoor water usage, as well as stadium water demand, and forecasts the proposed project's water demand, with conservation, at 693,343 gpd or 776 afy. According to Dexter Wilson, Methodology 3 is "likely to be the most accurate projection" of the three methodologies described in its technical memorandum. For that reason, the proposed project's estimated water demand is 693,343 gpd or 776 afy.

Table 4.17-2. Projected Potable Water Demand

Project Campus Component	Quantity	Demand Factor (gallons per day per unit)	Average Water Demand (gallons per day)
Campus Residential (Multi-Family)	8,510 people	40 gpd/person	340,400
Campus Retail	95,000 SF	15.3 gpd/SF/year	3,982
Academic	1,565,808 SF	27.1 gpd/SF/year	116,256
Campus Hotel	400 rooms	115.8 gpd/room	46,320
Stadium	35,000 seats	51,000 gpd	51,000
Park	38.2 gross-acres	2,803 gpd/gross-acre	107,075
Other Landscaping	10.1 gross-acres	2,803 gpd/gross-acre	28,310
Total			693,343*

Source: Appendix 4.17-5.

* The proposed project's water demand, using acre feet, is a total of 776 afy.

Because the proposed project's potable water demand would be minimal as compared to the Alvarado Treatment Plant capacity, impacts would be **less than significant**.

Capacity of Water-Serving Infrastructure

Water service to the project site will be provided from the City of San Diego University Heights 390 Pressure Zone. Elevations within the site will range from 55 feet to 86 feet, which results in a maximum static pressure range of 131 pounds per square inch (psi) to 145 psi. This pressure range is above the City of San Diego desirable pressure criterion. Individual pressure regulators will need to be installed for services on all buildings in order to comply with the California Plumbing Code, which limits building supply pressures to a maximum of 80 psi. Water service to the project site will be provided from the City of San Diego 390 Pressure Zone public water system through several master water meters. The number and location of the master water meters for the project site is based on the ability of the City public water system to supply the needed water demand within the established City design criteria.

The proposed private on-site water system for the proposed project will be a combined private water system, meaning domestic water service and fire protection service will be provided by the same system. The private water system will have four separate connections to the existing public water system. In addition, the four proposed service connections to the public water system will be located to make use of the existing On-site PRS.

The existing on-site PRS is composed of one 2-inch-diameter pressure reducing valve and two 10-inch-diameter pressure reducing valves. The Friars Road PRS is composed of one 4-inch-diameter pressure reducing valve and two 10-inch-diameter pressure reducing valves. These pressure reducing stations will be the primary sources of water service to the project site. Each pressure reducing station has two 10-inch-diameter pressure regulating valves; this configuration ensures redundancy within each pressure reducing station even with one large valve out of service. The maximum continuous flowrate for a 10-inch-diameter pressure reducing valve is 4,900 gallons per minute. Having two similarly sized pressure reducing stations in the near vicinity of the project site provides supply redundancy as well. If an entire pressure reducing station was to be out of service, the second station can provide sufficient flow. This will also apply to pipeline breaks, which could isolate one pressure reducing station from the other.

The on-site PRS would provide the same hydraulic grade line as the Friars Road PRS. Per the City of San Diego Water Department's Water Field Book Map, the Friars Road PRS is set to provide a downstream pressure of 125 psi at an elevation of 100.8 feet, which results in a hydraulic grade line of 389 feet.

There is an existing 48-inch-diameter 536 Pressure Zone transmission pipeline that enters the project site on the southeast end and exits the property in the north-central to northwest end. A section of this existing 48-inch transmission pipeline will be relocated due to conflicts with proposed improvements within the proposed project development. The relocation will shift the 48-inch pipeline toward the east property boundary and extend the pipeline north to Friars Road, then west in Friars Road until it connects back to the existing pipeline. The relocation of the pipeline would not conflict with the existing fuel pipeline located on the east property boundary.

The 48-inch transmission pipeline relocation will commence north of the existing on-site PRS. Therefore, the existing on-site PRS will remain in place. To the extent feasible, the existing 16-inch-diameter 390 Zone pipeline on the east side of the project site will remain in place. There are sections of this pipeline that will need to be relocated in order to accommodate improvements within the project site (Appendix 4.17-1). Please see Figure 2-10B, in Chapter 2, Project Description, for a conceptual water plan.

As discussed in Appendix 4.17-1, the public water system adjacent to the project site has adequate capacity to provide service to the proposed project. Four new water service connections are proposed as part of the project to be made to the existing 390 Zone public water system to provide service to the project site. Relocation of the 48-inch-diameter 536 Pressure Zone transmission pipeline would be required to accommodate the proposed project.

SDSU would coordinate with the City and would be responsible to construct and pay for these improvements. Impacts associated with the relocation of the 48-inch-diameter 536 Pressure Zone transmission pipeline, and segments of the 16-inch-diameter 390 Zone pipeline, have been analyzed herein. Therefore, impacts would be **less than significant**.

Sewer Infrastructure Connections

The proposed project would be served by existing sewer infrastructure located in area roadways surrounding the project site. However, connections to the nearest available facility through new service laterals would be required to provide sewer collection to the proposed project.

The sanitary sewer system will be an “engineered sewer system,” and the design criteria used for this study is the City of San Diego Sewer Design Manual, dated May 2015, and the City of San Diego Regional Standard Drawings for on-site sewer mains. The sewer mains are proposed to be private. The sewer mains will vary in size from 8 inches to 18 inches, are to be PVC, and with manhole spacing following the design guidelines in the Sewer Design Manual. The proposed project includes three sewer systems; (1) System 100 (west), (2) System 200 (central), and (3) System 300 (east), which ultimately connect to the existing 84-inch/96-inch Mission Valley Trunk sewer, which is located at the south end of the project site. Systems 100 and 300 propose new connections to the existing 84-inch/96-inch trunk sewer, which will mimic the current existing 18-inch sewer connection south of Node 218. Because the proposed project’s sewer system will be private, a Memo of Understanding will be required between the City and SDSU (Appendix 4.17-2). Please see Figure 2-10C, in Chapter 2, Project Description, for a conceptual sewer plan. Therefore, because no off-site sewer improvements are required, wastewater infrastructure improvements would be confined on site, and impacts would be **less than significant**.

Stormwater

The proposed project would require on-site and off-site drainage improvements. With implementation of on-site improvements, the total post-project flow is significantly lower than the total pre-project flow, resulting in a net decrease in peak flow rates and volume of runoff, which can be attributed to the reduction of impervious area via the planned River Park and biofiltration BMPs (Appendix 4.17-3).

There are currently six major outfalls from the project site: four that discharge south into the San Diego River and two that discharge east into the Murphy Canyon Channel. To minimize environmental disturbances, the proposed project is designed so as to maintain the existing outfall structures in the post-project condition. The improvements associated with Street ‘A’, portions of Mission Village Drive/Street ‘F’, and portions of Street ‘I’ will comeingle with on-site improvements and discharge south to the San Diego River. The improvements associated with Friars Road, San Diego Mission Road, and portions of Street ‘I’ will be conveyed by separate, existing storm drain systems to the two Murphy Canyon Channel outfalls. Street ‘A’ is proposed to connect the existing Fenton Parkway across the light rail track and into the site where there is currently a vegetated athletic field. Street ‘A’ may be considered as an “extension” of an existing road.

The proposed Street ‘A’ consists of a standard crowned⁶ section with one through lane and on-street parking in both the eastbound and westbound directions. The northern portion of the road will be captured by the on-site storm drain system and conveyed into an on-site water quality basin, while the southern portion of the proposed road will be conveyed via a separate biofiltration swale and storm drain infrastructure within the adjacent river park.

⁶ The crown refers to the slope of the roadway from a cross section. A standard crown means the roadway is of a standard slope.

East of the proposed Stadium Way, Friars Road transitions from standard crowned to super-elevated to the south. Friars Road then becomes super-elevated to the north approximately 1,000 feet west of the Mission Village Drive overpass. Intermittent slot drains and grate inlets serve to collect flows along the median along the super-elevated portions of Friars Road. From the low point below the Mission Village Drive overpass and eastward to Interstate (I) 15, the roadway generally returns to a standard crowned section. It is understood at this time that Friars Road will not be significantly re-graded beyond the proposed widening to the south. West of Stadium Way, Friars Road is proposed to be widened to the south for the addition of two right-turn lanes onto Stadium Way from eastbound Friars Road. Immediately east of Stadium Way, Friars Road is proposed to be widened to add two left-turn lanes in the westbound direction, while realigning the three eastbound through lanes. The striped median with K-rail will be realigned south and in association with these proposed improvements. The four ramps connecting Friars Road with Mission Village Drive will also be widened. The drainage pattern of Friars Road is understood to be generally consistent between the existing and proposed conditions. Approximately six inlets are anticipated to be reconstructed as a result of the proposed improvements, and approximately seven additional inlets may require improvements to increase their capacity to accommodate other proposed developments in the contributing drainage area.

The existing condition of Mission Village Drive consists of two through lanes in both the northbound and southbound directions, and single lanes onto the Friars Road ramps, north and south of the overpass over Friars Road. The through lanes will be maintained in the proposed condition. The road and overpass are proposed to be widened to add bike lanes in the north and southbound directions and to incorporate dual turn lanes onto the widened eastbound and westbound Friars Road on-ramps. One existing inlet is anticipated to be reconstructed as a result of the proposed improvements. No additional inlets are proposed to be impacted or reconstructed by these project improvements. The majority of runoff from the southbound lanes of Mission Village Drive flow directly into the on-site project area, while the majority of runoff from the northbound lanes is conveyed by San Diego Mission Road.

In the existing condition San Diego Mission Road generally consists of two through lanes in both the eastbound and westbound directions. An existing private driveway to the Mission Valley Terminal (MVT) fuel facility is connected to this road, and San Diego Mission Road continues eastward, crossing Murphy Canyon Creek and I-15 via an overpass. In the proposed condition, the two westbound lanes between Mission Village Drive and the MVT facility are understood to be protected in place and converted to an extended private driveway for MVT. The two eastbound lanes in this segment will be removed and incorporated into the on-site improvements. Beginning at MVT, a portion of San Diego Mission Road will be realigned to connect south to the proposed on-site roads via a traffic circle. The remaining portion to the east of MVT will generally be protected in place. Two inlets are anticipated to be reconstructed as a result of the proposed improvements, and a new inlet is understood to be proposed to capture and convey flow from the proposed MVT driveway.

Murphy Creek Road is proposed where there is currently a perimeter access road and existing parking. The access road connects to Rancho Mission Road at the southeast corner of the site via an overpass over the Murphy Canyon Channel and an underpass beneath I-15. An existing earthen berm along the eastern perimeter of the site, serving as a bank of the Murphy Canyon Channel, would not be impacted by the proposed improvements. The existing southeast section of Murphy Creek Road is super-elevated to the east and also protected in place. The proposed section of Murphy Creek Road along the eastern perimeter of the site is super-elevated to the west. The proposed road section will consist of one through lane in both directions and on-street parking along the southbound lane. Two inlets are proposed along the western super-elevated portion of Murphy Creek Road, and the existing inlet on the southern portion of Murphy Creek Road would be maintained (Appendix 4.17-4).

Proposed inlets will be sized for the 100-year 6-hour storm event. During final engineering, inlets will be designed to intercept all flows and not to allow inlet bypass to downstream drainage areas. Inlets will be sized per the City of San Diego Drainage Design Manual, dated January 2017. Please see Figure 2-10D in Chapter 2, Project Description, for a conceptual stormwater plan. SDSU would coordinate with the City and would construct and would pay for these improvements as part of the proposed project. Therefore, impacts would be **less than significant**.

Because natural gas, electricity, and telecommunication infrastructure improvements would be maintained and improved on site, impacts would be **less than significant** for these utilities.

Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Construction

A short-term demand for water will occur during project construction, primarily in association with dust control, grading, utilities installation and testing, concrete mixing, cleaning of equipment, and other related construction activities. These activities would occur incrementally through project build-out and be temporary in nature. The amount of water used during construction would vary depending on the conditions of the soil, weather, size of the area being worked, and site-specific operations, but is not expected to be substantial. The City of San Diego will provide water through a construction-metered connection from existing public water mains adjacent to the project site, and water tankers will deliver water for dust control to the development areas throughout project construction as needed. Therefore, an adequate supply of water will be available during project construction, and potential construction-related water supply impacts will be **less than significant**. (See Appendix 4.17-5, Water Use Estimation for the SDSU Mission Valley Campus Master Plan Project.)

Operation

According to the City of San Diego's Long-Range Water Resources Plan, SANDAG has projected that the City's service area population will increase to 1.69 million residents by the year 2035, which is a 20% increase from 2012 (City of San Diego 2012). SANDAG also calculated that the applicable water demand in 2035 would be 302,700 afy under normal weather conditions (City of San Diego 2012). SANDAG's 2035 water-demand projection assumes that the City would maintain an aggressive water conservation program throughout the forecasted timetable. Under dry weather conditions, 2035 water demand is projected to be 281,800 afy (a total reduction of almost 21,000 afy) (City of San Diego 2012). As shown in Table 4.17-2, Projected Daily Water Demand, at buildout, the proposed project would result in a water demand of approximately 693,343 gallons per day, or approximately 776 afy, which represents approximately 0.24% of the total regional demand.

Urban Water Management Plans (UWMPs) of the relevant water agencies are foundational documents to assess whether sufficient water supplies are, or will be, available to meet the projected water demands of a project, in addition to existing and planned future water demands within the water agency's service area. The current UWMPs (2015) prepared by the City of San Diego and SDCWA both conclude that adequate water supplies exist for future planned development within the San Diego region through 2035 (City of San Diego 2016a; SDCWA 2016).

In addition, in November 2018, the City of San Diego PUD prepared a WSA for the Mission Valley Community Plan Update. The Mission Valley Community Plan Update is a comprehensive update of the Mission Valley Community Plan that guides development of the entire Mission Valley community. The WSA evaluates water supplies that are or will be available during normal, single-dry year, and multiple-dry water years during a 20-year projection to meet

the projected demands of the Mission Valley Community Plan Update, in addition to existing and planned future water demands of the PUD. The WSA identifies current and future water supplies, as well as actions necessary to develop the future water supplies. The WSA assesses whether sufficient water supplies are, or will be, available to meet projected water demands. The WSA concludes that the water demand projections for the Mission Valley Community Plan Update are included in the regional water resource planning documents of the City, Water Authority and the Metropolitan Water District of Southern California. The WSA demonstrates that there will be sufficient water supplies available during normal, single-dry, and multiple-dry water years over a 20-year projection to meet the projected demands of the Mission Valley Community Plan Update, in addition to the existing and other planned development projects within the PUD service area.

The SDSU Campus Master Plan project is located on the existing SDCCU Stadium site, which is within the Mission Valley Community Plan Update planning area. The Mission Valley Community Plan Update assumed that 4,800 dwelling units, two million square feet of office space, 300,000 square feet of retail space, 450 hotel rooms, 38.1 acres of active park, 4.9 acres of open space, and a 40,000-seat stadium would be developed on the SDCCU Stadium site. The proposed project is within the Mission Valley Community Plan Update's land use assumptions of the SDCCU Stadium site. Because the proposed project is included within the buildout projections of the Mission Valley Community Plan Update, as demonstrated by the Mission Valley Community Plan Update WSA, the proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Notwithstanding the above analysis, the City's WSA also states that projected water demand was based on SANDAG's Series 13 forecasts through 2040 for dwelling units and employees in the community planning area. This suggests that the proposed project's water demand was not included in the WSA, despite the land use assumptions cited in the Mission Valley Community Plan Update (i.e., 4,800 dwelling units, two million square feet of office space, 300,000 square feet of retail space, 450 hotel rooms, 38.1 acres of active park, 4.9 acres of open space, and a 35,000-capacity stadium).

The Mission Valley Community Plan Update nonetheless provides useful information regarding water supplies available to serve project demand, in addition to existing and other planned water demands within the PUD service area during normal/average, dry, and multiple-dry years. If the proposed project's water demand was not included, it can be added to the amounts shown in the Mission Valley Community Plan Update WSA without change in the fundamental conclusions of adequate water supplies to meet water demands for the project in addition to reasonably foreseeable existing and future development during variable water years.

Furthermore, MWD, SDCWA, and the City are required by California law to update their UWMPs every 5 years. Accordingly, MWD, SDCWA, and the City updated their UWMPs in 2015 (and approved them in 2016) to reflect new development and assess any ongoing water supply issues.

The next required UWMP update is in 2020 (with anticipated approval action in mid-2021). As of this writing, the water agencies (MWD and SDCWA) and the City have likely already commenced the update process for their required 2020 UWMPs. Because of the regulatory requirement to update UWMPs, SDCWA and the City will need to update water demands, including the water demands within the Mission Valley Community Plan area, which encompasses the project site.

Because the CSU Board of Trustees will likely consider approval of the proposed project in the first quarter of 2020, if the proposed project is approved, the project's water demand can and should be included in the forecasted water demands of the City and the SDCWA in their upcoming 2020 UWMPs. Moreover, by that time, the project site is

only anticipated to be in the grading phase, with no actual development of housing or other operational, permanent water-related land uses until approximately August 2022 and thereafter.

Additionally, CSU policy on energy conservation and utilities management requires that all CSU campuses take every necessary step to conserve water resources, including installing controls to optimize irrigation water, reducing water usage in restrooms and showers, and cooperating with state, city, and county governments to the greatest extent possible to effect additional water conservation.

Consistent with CSU policy, SDSU has installed low-flow toilets, flush valve controls, electronic faucets, and low-flow showerheads in all or most of its lavatory facilities. SDSU also has required the installation of energy and water conserving fixtures in all new construction on campus. To conserve water used in landscape irrigation, SDSU utilizes irrigation controllers that are linked to weather service evapotranspiration data to deliver the irrigation water only when needed. Consistent with CSU policy, SDSU will continue to implement conservation measures to reduce the use of water and decrease wastewater flows. Further, CSU/SDSU will be required to comply with the state's water savings laws and regulations for indoor and outdoor water usage to enhance water conservation.

SDSU is also committed to obtaining Leadership in Environmental and Energy Design (LEED) Version 4 at a Silver or better certification level for the proposed project, as well as a Neighborhood Development designation for sitewide design. To obtain a LEED rating, a project is assessed and given points on the basis of environmentally responsible features incorporated into the project design. A project checklist identifying applicable project features and applicable point worth has been established for the LEED for Home Ratings System. Due to multiple stories of construction, the proposed project would be subject to the LEED BD+C New Construction (applicable to multiple-residential units within one building with more than eight stories) (USGBC 2014).

In order to obtain points towards a LEED Version 4 Silver rating, the proposed project can implement a variety of water-efficiency features into the project design. As identified in the LEED for Homes Rating System, water-efficiency elements include features associated with water reuse, irrigation systems, and indoor water use. Applicable water-reuse features may include installation of a rainwater harvesting system or a graywater reuse system. With regard to irrigation systems, LEED points can be obtained by installation of a high-efficiency irrigation system featuring elements such as drip-irrigation, timer-controlled watering devices, and the use high-efficiency spray nozzles. In addition, a project may obtain LEED points by reducing overall irrigation demand by at least 45%, which usually is achieved by the use of native, drought-tolerant landscaping. Lastly, a project may obtain LEED points by installation of very high or high-efficiency (low-flow) fixtures and fittings to lavatory faucets, showers, and toilets. Indoor water use points also can be obtained through the installation of efficient water distribution systems and appliances. The commitment to obtaining a LEED Silver rating ensures that the proposed project would be designed, constructed, and operated to maximize water efficiency.

The proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources, and impacts would be **less than significant**. However, if the project's water demand was not included in the City's 2015 UWMP and the Mission Valley Community Plan WSA, then for planning purposes, the proposed project would result in **significant impacts** until the project's water demands are incorporated into the required updated 2020 UWMPs of the SDCWA and the City (**Impact UTL-1**).

Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction

Construction of the proposed project is not anticipated to generate significant amounts of wastewater. Therefore, impacts would be **less than significant**.

Operation

Wastewater generated by the proposed project would be conveyed through the City of San Diego Metropolitan Wastewater Department's collection system and eventually treated at the Point Loma WWTP. As stated previously, the Point Loma WWTP currently treats approximately 150 mgd (5-year average) of wastewater and has capacity to treat up to 240 mgd (City of San Diego 2015). Therefore, the Point Loma WWTP has an excess capacity of 85 million gallons.

Using the anticipated water demand as shown in Table 4.17-2, the proposed project could generate 0.7 mgd of wastewater, representing 0.5% of the wastewater currently treated at the Point Loma WWTP. However, this is an overestimate considering that water would be required for irrigation. Thus, the proposed project would not significantly impact the Point Loma WWTP's ability to serve the proposed project's demand in addition to its existing commitments.

Therefore, the proposed project would not result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it does not have adequate capacity to serve the proposed project demand in addition to the provider's existing commitments. Therefore, impacts would be **less than significant**.

Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction

Demolition of existing buildings, excavation, and other related construction activities associated with the proposed project would generate construction waste. According to the Draft Environmental Impact Report for the Stadium Reconstruction Project prepared by the City, it is estimated that demolition of the Stadium and utility infrastructure would generate approximately 430,000 tons of construction waste (City of San Diego 2015). The volume/quantity of waste from the demolition of Candlestick Park (old San Francisco 49ers stadium) was used for guidance as it is a recent similar effort involving the demolition and new construction of a similarly sized professional football stadium. Disposal ratios were based on City waste management guidelines. This would result in a **potentially significant impact (Impact UTL-2)**.

To ensure that to the extent feasible, the proposed project would recycle, salvage, and reuse materials and then divert materials to the landfill, MM-UTL-1 would be required.

Operation

The proposed project's solid waste disposal needs would be served by Allied Waste Services Inc. Allied Waste would transport solid waste to a nearby waste disposal facility, possibly the Miramar Landfill or Sycamore Canyon Landfill. The Miramar Landfill is nearing capacity; however, the City's Zero Waste Plan will likely extend the useful life of the landfill to 2030. When the Miramar Landfill closes, Allied Waste would be responsible for disposing the solid waste generated by the proposed project at a landfill in the region with sufficient permitted capacity. As of 2016, the Sycamore Canyon Landfill (located in Santee) had a remaining capacity of approximately 148 million cy, with a closure year of 2042 (CalRecycle 2019a).

Current estimates of remaining permitted capacity, described above, would suggest sufficient permitted capacity exists to serve the proposed project's solid waste generation of 2,342 annual tons (shown in Appendix 4.7-1). In support of this available capacity, the current County Five-Year Report (Countywide Integrated Waste Management Plan) states that existing landfills have enough daily permitted disposal capacity for the next 17 years and would therefore meet state requirements that the County maintain 15 years of disposal capacity (County of San Diego 2012). The projected waste disposal needs of the region were developed using General Plan growth data obtained from jurisdictions throughout the County.

The County's Siting Element (California Integrated Waste Management Plan) discusses several strategies for increasing or extending regional landfill capacity, including (1) continuation of diversion programs for recyclable materials, (2) improvement of landfill technology and space management, (3) construction of enhanced recycling facilities, (4) export of waste out of the County, and (5) increase of maximum daily permitted throughput rates at County landfills (County of San Diego 2005). In addition to the recommendations included in the County Siting Element, the County and all jurisdictions in the County, and state agencies (including SDSU) are expected to implement and maintain waste diversion programs to prolong the operation of County landfill facilities.

The proposed project is projected to generate a net increase of 2,342 annual tons of solid waste over the existing Stadium uses located on the project site. Because the regional solid waste disposal landfills currently available are expected to have sufficient permitted capacity to serve the proposed project's solid waste generation through buildout, this increase in solid waste generation would be less than significant. Therefore, the proposed project would be served by landfill(s) with sufficient permitted capacity to accommodate its solid waste disposal needs and would result in a **less than significant impact**.

SDSU typically diverts over 50% of their yearly on-campus generated solid waste to a licensed recycling facility. Solid waste generated from operation of the proposed project would be subject to the existing on-campus solid waste diversion program, which historically has been successful at diverting at least 50% of on-campus generated solid waste from a landfill to an appropriate recycling facility. Maintaining the existing diversion rate would ensure compliance with AB 75, which requires all large state facilities to divert at least 50% of solid waste from landfills.

The proposed project would include recycling bins in the housing and campus innovation buildings. Recyclable materials would be transported to a certified recycling facility by a certified recyclable materials collector at least once per week. Therefore, the proposed project would not impede the City's ability to implement efforts to promote and enforce recycling. Because the proposed project would comply with federal, state, and local statutes and regulations related to solid waste, impacts would be **less than significant**.

*Would the project result in a cumulative impact to utilities and service systems?***Construction**

Construction and demolition of the proposed project could generate significant amounts of solid waste (**Impact UTL-2**). However, MM-UTL-1 would be required, which would ensure that all waste be reused and recycled to the extent possible. With implementation of MM-UTL-1, impacts would be **less than significant**.

Operation

The proposed project would result in an incremental increase in demand for utilities and would require infrastructure improvements. Sewer improvements would be confined on site; however, off-site potable water and stormwater improvements would be required. SDSU would coordinate with the City and would be responsible to construct and pay for these improvements. Impacts associated with the relocation of the 48-inch-diameter 536 Pressure Zone transmission pipeline have been analyzed herein. Therefore, impacts would be **less than significant**.

4.17.5 Summary of Impacts Prior to Mitigation

Impact UTL-1 For planning purposes, the proposed project's water demand should be included in the required 2020 urban water management plan updates of the City of San Diego and the San Diego County Water Authority. With inclusion of the project's water demand into such plans, and based on the supply and demand information in the Mission Valley Community Plan Water Supply Assessment, the available water supplies will be sufficient during normal, single-dry, and multiple-dry water years over a 20-year projection to meet the projected demands of the Mission Valley Community Plan Update (including the project site), in addition to the existing and other planned development within the City's Public Utilities Department service area.

Impact UTL-2 The proposed project would result in the generation of significant amounts of construction waste, which could result in significant impacts.

4.17.6 Mitigation Measures

The following mitigation measures are proposed to minimize the identified potential impacts to utilities and service systems. With the implementation of mitigation, all potential impacts would be reduced to less than significant.

MM-UTL-1 At or prior to project approval, the San Diego County Water Authority and the City of San Diego can and should include the proposed project's water demand in their required 2020 urban water management plan updates.

MM-UTL-2 During construction of the proposed project, California State University (CSU)/San Diego State University (SDSU), or its designee, shall reuse all demolition waste to the extent feasible. CSU/SDSU, or its designee, shall dispose of all recyclable demolition waste products at a construction waste recycling facility. Following occupancy of the proposed project, CSU/SDSU, or its designee, shall maintain an active recycling program to reduce solid waste generated by the proposed project.

4.17.7 Level of Significance After Mitigation

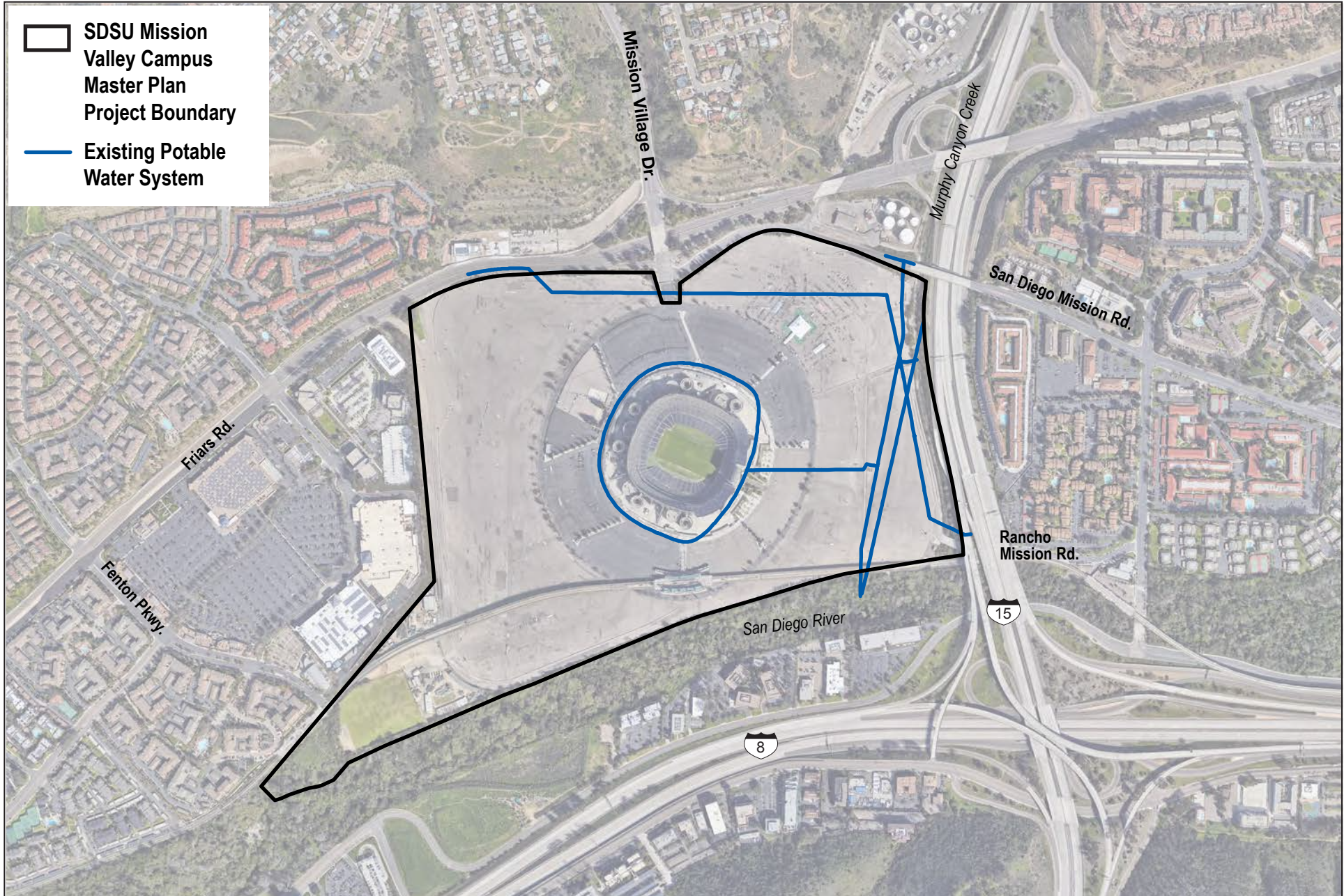
The proposed project would result in a demand for utilities and would require infrastructure improvements. Sewer improvements would be confined on site; however, off-site potable water and stormwater improvements would be required. SDSU would coordinate with the City accordingly. SDSU would be responsible for construction and would pay for these improvements. Therefore, impacts would be **less than significant**.

For planning purposes, the proposed project's water demand should be included in the required 2020 UWMP updates of the City and the SDCWA. However, **MM-UTL-1** provides the existing regulatory compliance obligations of the SDCWA and the City. With implementation of **MM-UTL-1**, impacts would be **less than significant**.

Construction and demolition of the proposed project could generate significant amounts of solid waste. However, **MM-UTL-2** would be required, which would ensure that all waste be reused and recycled to the extent possible. With implementation of **MM-UTL-2**, impacts would be **less than significant**.

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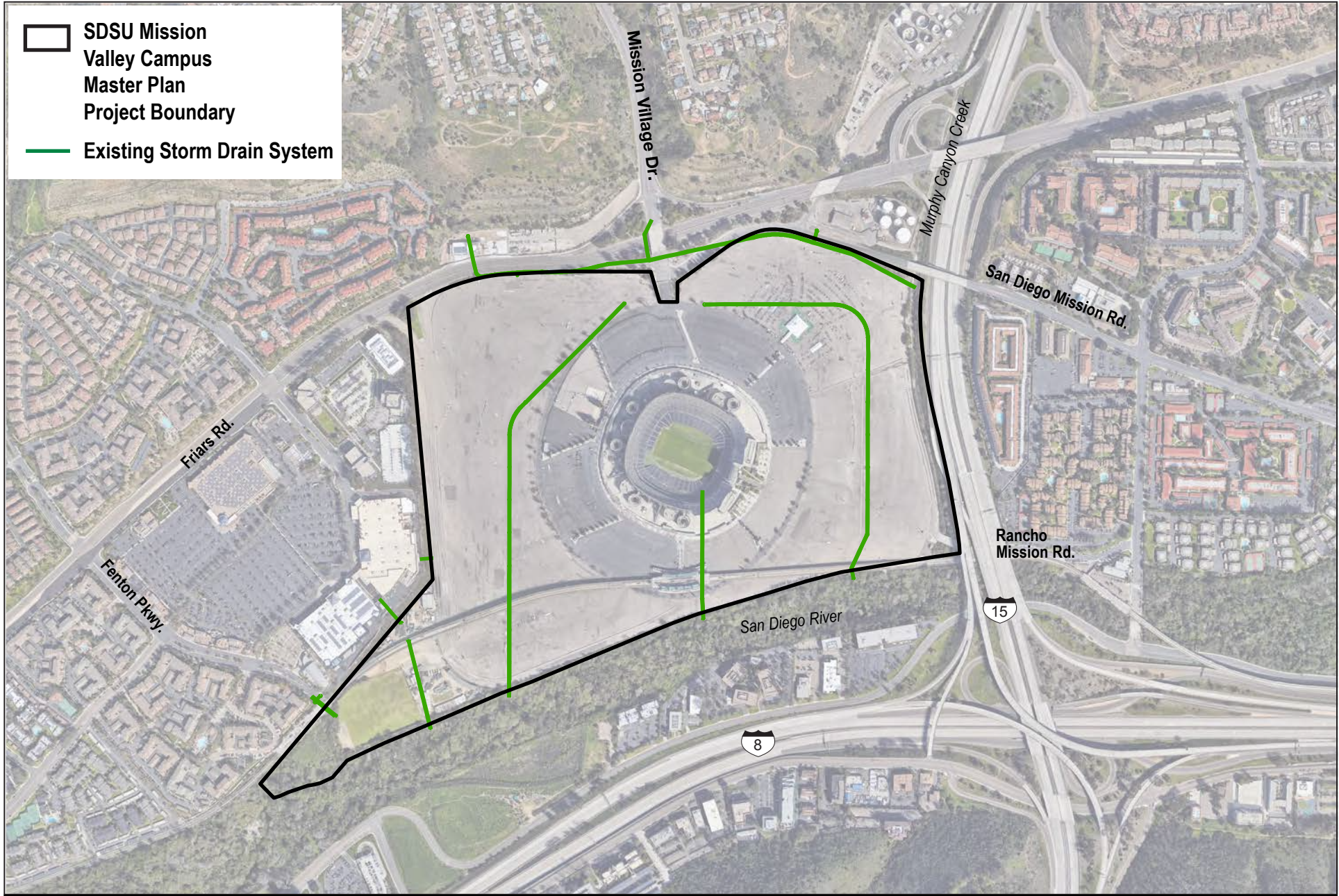
SOURCES: AERIAL-BING 2017; UTILITIES-RICK ENGINEERING 2019

SDSU Mission Valley Campus Master Plan EIR



Figure 4.17-2
Existing Potable Water System

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SOURCES: AERIAL-BING 2017; UTILITIES-RICK ENGINEERING 2019

SDSU Mission Valley Campus Master Plan EIR



Figure 4.17-3
Existing Storm Drain System

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4.18 Wildfire

This section describes the existing wildfire conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. Potential wildfire impacts resulting from construction and operation of the proposed project were evaluated based on a review of existing resources, data, and applicable laws, regulations, guidelines, and standards. This section focuses on the effect of the proposed project on wildfire risk. Fire protection services for the proposed project are addressed in Section 4.14, Public Services and Recreation.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. Approximately 150 letters were received during this comment period. Comments received related to wildfire hazards were limited to use of the current San Diego County Credit Union (SDCCU) Stadium parking area during evacuations. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.18.1 Existing Conditions

4.18.1.1 Regional Characteristics

Fire is a continuous threat in Southern California. A major area of concern is the wildland-urban interface (WUI), an area where urban development is located in proximity to open space or “wildland” areas. The City of San Diego (City) contains over 900 linear miles of WUI, where established development meets open space areas and canyons within urban and suburban areas. The region’s climate, severe dry periods, vegetative fuel composition, and steep and varied terrain make the project region susceptible to both wildland and urban fires. The shrub-dominated plant communities occurring throughout the region are highly flammable. Adaptations to the local dry, Mediterranean climate include specialized roots, stems, and leaves. The latter two become available fuels of importance and contribute to wildfire intensity and spread. Santa Ana winds bring hot, dry desert air from the east into the region during late summer and fall, which increases wildland fire hazards during these seasons. Dry vegetation, low humidity, and high air temperature can combine to produce large-scale fire events. As Santa Ana winds blow westward toward denser development, fires driven by these winds have the potential to result in a greater risk of property damage (City of San Diego 2018).

4.18.1.2 Site Setting

The project site is located within the northeastern portion of the Mission Valley community within the City. The project area is surrounded by major freeways, roadways, existing urban development, the San Diego River, and Murphy Canyon Creek. Surrounding land uses include higher density multifamily residential to the northwest, southwest, and east, and office and large commercial retail uses immediately to the west. The project site is bounded by Friars Road to the north. The San Diego River and associated southern riparian woodland habitat is located immediately to the south of the project site. South of the river are additional office uses and Interstate (I) 8. North of Friars Road is San Diego Fire-Rescue Department (SDFD) Fire Station 45, the Kinder Morgan Mission Valley Terminal, undeveloped hillsides, and single-family residences within the Serra Mesa planning area. Murphy Canyon Creek, a partially earthen and concrete-lined channel that conveys flow into the San Diego River, is located immediately to the east, and I-15 is located east of Murphy Canyon Creek.

4.18.1.2.1 Existing Uses/Land Cover

The project site contains a multipurpose Stadium (SDCCU Stadium), a surface parking lot with approximately 18,870 parking spaces, and the existing San Diego Trolley Stadium Station. Two Metropolitan Transit System-owned and operated transformer buildings are present in the southeast and southwest portions of the project site. The project site contains seven vegetation communities/land covers, as summarized in Table 4.18-1.

Table 4.18-1. Vegetation Communities/Land Cover Types on the Project Site and Off-Site Areas

Habitat Types/Vegetation Communities	Oberbauer Code	Project Site (acres)	Off-Site Areas (acres)
<i>Native Vegetation Communities</i>			
Baccharis-dominated Diegan Coastal Sage Scrub (BD-CSS)	32350	0.97	—
Diegan Coastal Sage Scrub (CSS)	32500	0.12	0.04
Southern Willow Scrub (SWS)	63320	0.08	—
Southern Cottonwood Willow Riparian Forest (SCWRF)	61330	2.59	0.04
Southern Riparian Forest (SRF)		0.10	
<i>Subtotal</i>	—	3.86	0.08
<i>Non-native Vegetation Community/Land Cover Types</i>			
Disturbed Habitat (DH)	11000	0.85	0.84
Urban/Developed (DEV)	12000	165.77	2.68
Non-vegetated Channel or Floodway (NVC)	64200	0.75	—
Disturbed Wetland (DW)	11200	0.89	—
<i>Subtotal</i>	—	168.26	3.51
Total*	—	172.12	3.60

Note:

* Acreages may not sum due to rounding.

Detailed descriptions of the vegetation types on the project site are provided in Section 4.3, Biological Resources. The distribution of vegetation communities and land cover types on the project site is shown on the biological resources map in Section 4.3 (Figure 4.3-4).

As shown in Table 4.18-1, on the project site, urban/developed land dominates the overall land cover totaling 165.77 acres (98% of the site), and includes paved roads, the large Stadium parking lot, training field, and existing Stadium structure. Urban/developed refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials.

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf size, branching patterns), and overall fuel loading. Sage scrub is considered a moderately fine fuel that is loosely compacted with a moderate fuel load. Coastal scrub has a high surface area-to-volume ratio, requiring less heat to remove fuel moisture and raise fuel to ignition temperature. It is subject to early seasonal drying in the late spring and early summer, but does not fully cure in the way that grasses do. Compared to chaparral, coastal scrub tends to have a lower content of volatile organic compounds. The live fuel moisture content reaches its low point in the late summer and early fall months. Dead fuels consist mainly of 1-hour and 10-hour fuel sizes, or twigs and small

stems ranging from 0.25 inches to 1 inch in diameter. Coastal scrub has potential for a high rate of spread, rapid ignition, and extreme fire behavior. The other habitat type(s), southern willow scrub and southern cottonwood willow riparian forest, which typically have higher fuel moisture contents and require more heat to ignite, have the potential for lower spread rates, but greater fire intensity. Should ignition in the San Diego riverbed occur under extreme weather conditions, the scrub-riparian vegetation would be expected to burn aggressively, and possibly generate a crown fire condition, due to the presence of large amounts of biomass from dense stands of trees and exotic plants, which are extremely flammable.

Another important factor is the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes disrupts plant succession, setting plant communities to an earlier state where less fuel is present for a period of time as the plant community begins its succession again. High frequency of wildfires tend to convert shrublands to grasslands or maintain grasslands, while fire exclusion tends to convert grasslands to shrublands, over time. In general, biomass and associated fuel loading will increase over time, assuming that disturbance (fire, farming, or grading) or fuel reduction efforts are not implemented. It is possible to alter successional pathways for varying plant communities through manual alteration.

4.18.1.2.2 Weather

As with most of Southern California, regional climate in the vicinity of the project site is influenced by the Pacific Ocean and is frequently under the influence of a seasonal, migratory, subtropical high-pressure cell known as the Pacific High (WRCC 2019). Wet winters and dry summers with mild seasonal changes generally characterize the Southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather, winter storms, or dry, easterly Santa Ana winds (WRCC 2019). Additionally, local vegetation and seasonal drying produce climatic conditions that result in fuel-driven wildfires and fire-associated climatic changes. This type of condition is referred to as a plume-dominated wildfire. Plume-dominated wildfires are fires where the energy produced by the fire in conjunction with atmospheric instability creates significant convective forces and increased winds. Such fires are extremely unpredictable, spread in various directions simultaneously, and exhibit extreme fire behavior. These fires are extremely dangerous and are often large in size.

The regional prevailing wind pattern is from the west, but the presence of the Pacific Ocean causes a diurnal wind pattern known as the land/sea breeze system. During the day, winds are typically from the west-southwest (sea), and at night, winds are from the northeast (land). During the summer season, the diurnal winds can be slightly stronger than the winds during the winter season due to greater pressure gradient forces. Surface winds can also be influenced locally by topography and slope variations. On the project site, the varied topography may affect wind velocity and patterns. The highest wind velocities are typically associated with downslope, canyon, and Santa Ana winds.

The fire season in Southern California typically starts in June, as vegetation begins to dry out after winter and spring rains, and typically ends in October, although fire weather may be present year-round (Schroeder and Buck 1970). The highest fire danger for this area coincides with the Santa Ana winds. Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a region-wide basis during late summer and early fall. They are dry, warm winds that flow from the higher desert elevations in the north through the mountain passes and canyons. As they converge through the canyons, their velocities increase. Consequently, peak velocities are highest at the mouths of canyons and dissipate as they spread across valley floors. Santa Ana winds can reach sustained speeds of 40 mph with gusts ranging from 70 to 115 mph possible (Schroeder et al. 1964). Santa Ana winds can lead to serious fire suppression problems.

4.18.1.2.3 Topography

Topography at the proposed project site generally slopes down from the east to west and north to south with the perimeter around the stadium structure elevated to create adequate drainage away from the stadium structure. The elevation of the project site ranges from approximately 45 feet above mean sea level to 100 feet above mean sea level. Along the southern boundary of the project site there is a small berm beyond the parking lot, which descends into the lower floodplain of the San Diego River. Similarly on the eastern boundary of the project site there is a small berm along Murphy Canyon Creek. In the western portion of the project site, there is a flat training field, and beyond that a storm drain outlet channel that conveys water down into the San Diego River floodplain. Native upland habitat occurs west of the storm drain outlet channel and has a flat grade until sloping down towards the San Diego River floodplain.

4.18.1.2.4 Fire History

Fire history data can provide an understanding of fire frequency, fire type, burn severity, significant ignition sources, and other information relevant to understanding the fire and fuels environment in an area. Fire history data was obtained from the California Department of Forestry and Fire Protection's (CAL FIRE) Fire Resource and Assessment Program (FRAP) database (CAL FIRE 2017). FRAP summarizes fire perimeter data dating to the late 1800s, but it is incomplete due to the fact that it includes only fires over 10 acres in size and has incomplete perimeter data, especially for the first half of the twentieth century (Syphard and Keeley 2016). However, the data does provide a summary of recorded fires and can be used to show whether large fires have occurred in the project area, which indicates whether they may be possible in the future.

Fire history records document 11 wildfires within 5 miles of the project site between 1935 and 2003 (CAL FIRE 2017), primarily to the north and east of the site (Figure 4.18-1, Fire History Map). No wildfires in the recorded history have burned across the project site. However, the Normal Heights Fire (1985) burned approximately 300 acres in heavy brush-covered slopes to the south of the project site. Based on a review of the fire history information, average fire return interval for the area within 5 miles of the project site is 8 years, with intervals ranging from 1 to 36 years. (CAL FIRE 2017).

4.18.1.2.5 Fire Hazard Mapping

CAL FIRE has mapped areas of significant fire hazards in the state through FRAP. These maps designate areas of the state into different fire hazard severity zones (FHSZ). CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire state and includes classifications for State Responsibility Areas, Local Responsibility Areas, and Federal Responsibility Areas. Fire hazard severity classifications take into account the following elements: vegetation, topography, weather, crown fire production, and ember production and movement.

A large portion of the City, even highly developed areas, is designated as a Very High Fire Hazard Severity Zone (VHFHSZ) (City of San Diego 2018). The very high fire hazard severity designation can be attributed to a variety of factors including highly flammable, dense, drought-adapted desert chaparral vegetation; seasonal strong winds; and a Mediterranean climate that results in vegetation drying during the months most likely to experience Santa Ana winds.

Specific to the project site, the very northern and southern portions of the project site are located within VHFHSZ as mapped by CAL FIRE and the SDFD (City of San Diego 2009). These designations are attributable to vegetated, open space slopes north of Friars Road and the San Diego riverbed to the south of the project site (see Figure 4.18-2, Fire Hazard Severity Zones). The existence of VHFHSZ on the property would require buildings to implement ignition-

resistive construction and provide a minimum 100-foot-wide defensible space area (treated, maintained vegetation) between structures and open space areas. Since a portion of the project site is classified as VHFHSZ, the requirements of Chapter 7A of the 2016 California Building Code (CBC) would apply to all project buildings.

4.18.1.2.6 Emergency Response

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information. Emergency response plans are maintained at the federal, state, and local levels for all types of disaster, both natural and human-caused. Local governments have the primary responsibility for preparedness and response activities.

San Diego County has numerous levels of emergency response and evacuation plans, including the Operational Area Emergency Operations Plan, approved in 2018. The Emergency Operations Plan is used by all key partner agencies within the County to respond to major emergencies and disasters, and describes the roles and responsibilities between the County and its departments with local jurisdictions within the County (County of San Diego 2018).

In addition to the Emergency Operations Plan, the City also participates in the County's Multi-Jurisdictional Hazard Mitigation Plan that was last revised in 2017 and identifies risks and ways to minimize damage caused by natural and human-caused disasters. Potential hazards or events that may trigger an emergency response in the County include earthquakes, tsunamis, floods, wildland fires, landslides, droughts, hurricanes, tropical storms, and freezes. Emergency response actions could also be triggered by a hazardous materials incident; water or air pollution; a major transportation accident; water, gas, or energy shortage; a health epidemic; a nuclear accident; or terrorism (County of San Diego 2017a).

The project site is located within the SDFD responsibility area. Emergency response for the project site and surrounding area is provided, initially, by the City from SDFD Station 45, located immediately to the north of the project site across Friars Road. SDFD Station 45 is equipped with a battalion chief's vehicle, fire engine, aerial fire truck, and two hazardous materials response units. Station 45 has a 4.28-square-mile service area and responds to hazardous materials incidents as well as fire incidents (City of San Diego 2019a). In 2018, Station 45 responded to 926 fire incidents (City of San Diego 2019b). Additional emergency response would be provided from fire stations as identified in Table 4.14-1, in Section 4.14, Public Services and Recreation. As shown in Figure 4.14-1 (in Section 4.14), these fire stations can respond to the project site within 7.5 minutes of receiving the 911 call in fire dispatch, which is the response time goal for urban-suburban areas according to the City's General Plan.

The SDFD provides fire response services within the City. Additionally, the SDFD has "Automatic Aid" agreements with jurisdictions adjacent to the City. Automatic Aid agreements ensure that the closest engine company responds to a given incident. Furthermore, the City has Mutual Aid agreements that allow the City to request additional resources from county, state, and federal agencies to meet the needs of a given incident. The SDFD is responsible for the preparation, maintenance, and execution of Fire Preparedness and Management Plans. The City's Emergency Operations Center trains City staff and outside agencies in their roles and responsibilities and coordinates operations in the event of an emergency or major event or incident (City of San Diego 2018).

4.18.2 Environmental Effects of Wildfires

Although fire can benefit natural ecosystems that have evolved with occasional fire and that benefit from the stimulation of growth through the reproduction of plants and wildlife habitat, fire can also be detrimental to biological and other natural resources, such as air quality and water quality.

Biological Resources

Flora. Grassland communities, usually non-native grasses, will readily establish after wildfires in chaparral and scrub communities. With repeated burning at short intervals of up to several years, it is possible to convert chaparral and scrub to non-native grasslands. Chaparral and scrub vegetation communities will typically re-sprout and absent fire or other disturbances will return to pre-fire conditions. Chaparral communities also tend to repopulate many of the San Diego County forest types following stand-replacing fire. The chaparral may establish for the first several years after the fire event, whereupon the tree cover will begin to establish (USDA 2000a). Because vegetation communities can be converted following fire, these changes in dominant vegetation communities can drastically affect plant and animal habitat and can affect the prevalence of special-status species.

Fauna. Generally speaking, fires injure or kill a relatively small proportion of wild animals. For example, birds and larger mammals can flee wildfire and small mammals and reptiles can seek refuge in subterranean burrows. Habitat changes resulting from fires have a much more profound impact on faunal populations and communities than does the fire itself. Fires can result in short-term increases in vegetation productivity and the availability and nutrient content of forage and browse (USDA 2000b). These increases can in turn lead to increases in herbivore populations. However, any increase in population size is highly dependent upon the population's ability to survive in the post-fire environment (USDA 2000b). In general, fires that devastate a landscape featuring many shrubs and trees reduce habitat cover for species requiring cover and increase habitat for species (such as raptors) that prefer open areas (USDA 2000b).

Air Quality

Carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons, and other constituent materials are all present in wildfire smoke. The specific composition of smoke depends largely on the fuel type (vegetation types contain different amounts of cellulose, oils, waxes, and starches, which when ignited produce different compounds). In addition, hazardous air pollutants and toxic air contaminants, such as benzene and formaldehyde, are also present in smoke. However, the principal pollutant of concern from wildfire smoke is particulate matter. In general, particulate matter from smoke is very small in size and can be inhaled into the deepest recesses of the lungs, presenting a serious health concern (Stone et al. 2016).

Factors including weather, stage of fire, and terrain can all dictate fire behavior and the impact of smoke on the ground. Wind, for instance, generally results in lower smoke concentrations because wind causes smoke to mix with a larger volume of air. Regional weather systems, such as the Santa Ana winds of Southern California, on the other hand, can spread fire quickly and result in numerous devastating impacts. The Santa Ana winds effectively work to reverse the typical onshore flow patterns and blow winds from dry, desert Great Basin areas westward toward the coast. As a result, coastal communities can be impacted by fires originating in inland areas (Stone et al. 2016).

Large quantities of pollutants can be released by wildland fires over a relatively short period of time. Air quality during large fires can become severely hazardous and can remain impaired for several days after the fire is ignited.

Water Quality

Fire can impact water quality by increasing potential for erosion and sedimentation in areas where vegetation has been burned by fire, resulting in increased water temperature through removal or drastic modification of shade-providing trees and vegetation. Water chemistry can also be altered through the introduction of pollutants and chemical constituents. Aquatic environments may also be impacted through the introduction of fire retardant chemicals used during firefighting activities.

Erosion and Sedimentation. Watersheds severely burned by wildfire are vulnerable to accelerated rates of soil erosion and can experience large amounts of post-fire sediment deposits. Increases in post-fire suspended sediments in streams and lakes (in addition to possible increases in turbidity) can result from erosion and overland flow, channel scouring, and creep accumulations in stream channels after an event (USDA 2005). While less is known regarding the effect of fire on turbidity, it has been observed that post-fire turbidity levels in stream water are affected by the steepness of the devastated watershed (USDA 2005). The little data available regarding post-fire turbidity levels has indicated that U.S. Environmental Protection Agency water quality standard for turbidity can be exceeded after a fire event (USDA 2005). The threat to water quality from erosion following wildfire was analyzed by CAL FIRE (2009). This analysis estimates an expected erosion rate if an area experiences a high severity fire and considers information on fire rotation to better identify locations that are more likely to experience frequent high severity fires (CAL FIRE 2010).

Water Temperature. When fire burns stream bank vegetation and shade trees, water temperature can rise, which in turn can lead to thermal pollution, which leads to increased biological activity in the stream. Increased activity levels place a greater demand on the dissolved oxygen content of the water and can affect the survivability and sustainability of aquatic populations and communities (USDA 2005). Water temperature increases up to 62° Fahrenheit have been recorded in stream flows following fires in which the stream bank vegetation was burned (USDA 2005).

Water Chemistry. Ash deposits generated by a fire can affect the pH of water immediately after the event, potentially increasing to levels that violate water quality standards. In addition, increases in the pH of nearby soil can also cause increases in stream flow pH (USDA 2005). Dissolved nitrogen levels can increase after fires as a result of accelerated mineralization and nitrification (dissolved nitrogen is commonly studied as an indicator of fire disturbance), but these levels do not typically exceed established water quality standards (USDA 2005). Dissolved phosphorous, sulfur, chloride, and total dissolved solids levels can increase after a fire, but studies have shown that these increases typically do not result in violation of drinking water quality standards (USDA 2005).

Fire Retardant. The use of fire retardants to protect communities, sensitive resources, or other assets has proven highly effective, but it can have a direct effect on aquatic environments. The use of ammonium-based retardants can affect water quality and, in some instances, can be toxic to aquatic biota (USDA 2005). Nitrogen-containing retardants can potentially affect drinking water quality, and retardants containing sodium ferrocyanide can potentially be lethal for aquatic organisms (USDA 2005).

4.18.3 Relevant Plans, Policies, and Ordinances

Federal

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. NFPA standards are recommended guidelines and nationally accepted good practices in fire protection but are not law or “codes” unless adopted as such or referenced as such by the California Fire Code or the Local Fire Agency.

National Fire Plan

The National Fire Plan was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The plan continues to provide invaluable technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (USFS 2019).

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property including fire, explosions, and hazardous materials handling or usage. The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated in order to protect life and property (often times these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted.

International Wildland–Urban Interface Code

The International Wildland–Urban Interface Code is published by the International Fire Code and is a model code addressing wildfire issues.

State

California Building Code

Chapter 7A of the CBC applies to building materials, systems and/or assemblies used in the exterior design and construction of new buildings located within a WUI Fire Area. The purpose of this chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any FHSZ within State Responsibility Areas or any WUI Fire Area to resist the intrusion of flames or burning embers projected by a

vegetation fire, and to contribute to a systematic reduction in conflagration losses. New buildings located in such areas shall comply with the ignition-resistant construction standards outlined in CBC Chapter 7A.

California Fire Code

The California Fire Code (CFC) is contained within Title 24, Chapter 9 of the California Code of Regulations. Based on the International Fire Code, the CFC is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the CFC and CBC use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

California Public Resources Code

California Public Resources Code Sections 4290 and 4291 are discussed in further detail as follows:

- **Public Resources Code Section 4290** requires minimum fire safety standards related to defensible space that are applicable to State Responsibility Area lands and lands classified and designated as VHFHSZs.
- **Public Resources Code Section 4291** requires a reduction of fire hazards around buildings, which requires 100 feet of vegetation management around all buildings and is the primary mechanism for conducting fire prevention activities on private property within CAL FIRE jurisdiction.

Fire Hazard Severity Zoning

CAL FIRE mapped FHSZs in San Diego County based on fuel loading, slope, fire weather, and other relevant factors as directed by California Public Resources Code Sections 4201–4204 and Government Code Sections 51175–51189. FHSZs are ranked from moderate to very high and are categorized for fire protection within a Federal Responsibility Area, State Responsibility Area, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively. As noted above and depicted on Figure 4.18-2, the project site is located partially within and adjacent to a VHFHSZ.

California Strategic Fire Plan

The 2018 Strategic Fire Plan for California reflects CAL FIRE’s focus on (1) fire prevention and suppression activities to protect lives, property, and ecosystem services, and (2) natural resource management to maintain the state’s forests as a resilient carbon sink to meet California’s climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan provides a vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2018). Plan goals include the following:

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.

3. Support and participate in the collaborative development and implementation of local, county and regional plans that address fire protection and landowner objectives.
4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
6. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
7. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
8. Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The California Natural Disaster Assistance Act is activated after a local declaration of emergency and the California Emergency Management Agency gives concurrence with the local declaration, or after the governor issues a proclamation of a state emergency. Once the act is activated, the local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

Local

Because San Diego State University (SDSU) is a component of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. As such, the 2016 CFC and CBC would be enforced from the authority of the California Office of the State Fire Marshal, per Title 24, Part 9, Chapter 1, Section 1.11.2.1.1. However, for informational purposes, SDSU has considered the following planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The Conservation Element (City of San Diego 2008a), Urban Design Element (City of San Diego 2008b), and Public Facilities, Services, and Safety Element (City of San Diego 2018) of the City's General Plan contain policies that pertain to wildfire hazards and emergency response in the City, including the following:

- Policy CE-B.6. Provide an appropriate defensible space between open space and urban areas through the management of brush, the use of transitional landscaping, and the design of structures. Continue to implement a citywide brush management system.
- Policy UD-A.3. Design development adjacent to natural features in a sensitive manner to highlight and complement the natural environment in areas designated for development.
 - a. Integrate development on hillside parcels with the natural environment to preserve and enhance views, and protect areas of unique topography.
 - b. Minimize grading to maintain the natural topography, while contouring any landform alterations to blend into the natural terrain.
 - c. Utilize variable lot sizes, clustered housing, stepped-back facades, split-level units or other alternatives to slab foundations to minimize the amount of grading.
 - d. Consider terraced homes, stepped down with the slope for better integration with the topography to minimize grading in sensitive slope areas.
 - e. Utilize a clustered development pattern, single-story structures or single-story roof elements, or roofs sloped toward the open space system or natural features, to ensure that the visibility of new developments from natural features and open space areas are minimized.
 - f. Provide increased setbacks from canyon rims or open space areas to ensure that the visibility of new development is minimized.
 - g. Screen development adjacent to natural features as appropriate so that development does not appear visually intrusive, or interfere with the experience within the open space system. The provision of enhanced landscaping adjacent to natural features could be used to soften the appearance of or buffer development from the natural features.
 - h. Use building and landscape materials that blend with and do not create visual or other conflicts with the natural environment in instances where new buildings abut natural areas. This guideline must be balanced with a need to clear natural vegetation for fire protection to ensure public safety in some areas.
 - i. Ensure that the visibility of new development from natural features and open space areas is minimized to preserve the landforms and ridgelines that provide a natural backdrop to the open space systems. For example, development should not be visible from canyon trails at the point the trail is located nearest to proposed development. Lines-of-sight from trails or the open space system could be used to determine compliance with this policy.
 - j. Design and site buildings to permit visual and physical access to the natural features from the public right-of-way.
 - k. Encourage location of entrances and windows in development adjacent to open space to overlook the natural features.
 - l. Protect views from public roadways and parklands to natural canyons, resource areas, and scenic vistas.
 - m. Preserve views and view corridors along and/or into waterfront areas from the public right-of-way by decreasing the heights of buildings as they approach the shoreline, where possible.

- n. Provide public pedestrian, bicycle, and equestrian access paths to scenic view points, parklands, and where consistent with resource protection, in natural resource open space areas.
- o. Provide special consideration to the sensitive environmental design of roadways that traverse natural open space systems to ensure an integrated aesthetic design that respects open space resources. This could include the use of alternative materials such as “quiet pavement” in noise sensitive locations, and bridge or roadway designs that respect the natural environment.
- p. Design structures to be ignition and fire-resistant in fire prone areas or at-risk areas as appropriate. Incorporate fire-resistant exterior building materials and architectural design features to minimize the risk of structure damage or loss due to wildfires.
- Policy PF-D.1. Locate, staff, and equip fire stations to meet established response times as follows:
 - a. To treat medical patients and control small fires, the first-due unit should arrive within 7.5 minutes, 90 percent of the time from the receipt of the 911 call in fire dispatch. This equates to 1-minute dispatch time, 1.5 minutes company turnout time and 5 minutes drive time in the most populated areas.
 - b. To provide an effective response force for serious emergencies, a multiple-unit response of at least 17 personnel should arrive within 10.5 minutes from the time of 911-call receipt in fire dispatch, 90 percent of the time.
 - This response is designed to confine fires near the room of origin, to stop wildland fires to under 3 acres when noticed promptly, and to treat up to 5 medical patients at once.
 - This equates to 1-minute dispatch time, 1.5 minutes company turnout time and 8 minutes drive time spacing for multiple units in the most populated areas.
- Policy PF-D.12. Protect communities from unreasonable risk of wildfire within very high fire hazard severity zones.
 - a. Assess site constraints when considering land use designations near wildlands to avoid or minimize wildfire hazards as part of a community plan update or amendment. (see also LU-C.2.a.4)
 - b. Identify building and site design methods or other methods to minimize damage if new structures are located in very high fire hazard severity zones on undeveloped land and when rebuilding after a fire.
 - c. Require ongoing brush management to minimize the risk of structural damage or loss due to wildfires.
 - d. Provide and maintain water supply systems to supplies for structural fire suppression.
 - e. Provide adequate fire protection. (see also PF-D.1 and PF-D.2)
- Policy PF-D.13. Incorporate fire safe design into development within very high fire hazard severity zones to have fire-resistant building and site design, materials, and landscaping as part of the development review process.
 - a. Locate, design and construct development to provide adequate defensibility and minimize the risk of structural loss from wildland fires.
 - b. Design development on hillsides and canyons to reduce the increased risk of fires from topography features (i.e., steep slopes, ridge saddles).
 - c. Minimize flammable vegetation and implement brush management best practices in accordance with the Land Development Code.
 - d. Design and maintain public and private streets for adequate fire apparatus vehicles access (ingress and egress), and install visible street signs and necessary water supply and flow for structural fire suppression.
 - e. Coordinate with the Fire-Rescue Department to provide and maintain adequate fire breaks where feasible or identify other methods to slow the movement of a wildfire in very high fire hazard severity zones.

- Policy PF-D.14. Implement brush management along City maintained roads in very high fire hazard severity zones adjacent to open space and canyon areas.
- Policy PF-D.15. Maintain access for fire apparatus vehicles along public streets in very high fire hazard severity zones for emergency equipment and evacuation.

Brush Management and Weed Abatement Program

In February 2008, the SDFD expanded the City's Proactive Brush Management Program to cover the entire City. This program requires that brush be managed on properties within WUI areas in the City, in accordance with the City's Brush Management Policy. Annual brush inspections are conducted on properties on canyon rim that have been identified in the Proactive Brush Management program (SDFD 2015). Additionally, privately owned vacant lots are inspected yearly to ensure compliance with the CFC (City of San Diego 2019c).

City of San Diego Brush Management Policy and Landscape Standards

The City's Brush Management Policy and Landscape Standards were adopted in April 2008 and updated in May 2010. This policy regulates the construction, alteration, movement, repair, maintenance, and use of any building, structure, or premises within the WUI areas in the City. It requires that a Brush Management Plan and Program be processed in conjunction with any development that is required to obtain discretionary grading and/or building permits. The policy also includes requirements for thinning and pruning native/naturalized vegetation within WUI areas and allowable coverage, massing, and spacing for plants that would be retained. If the full brush management zone(s) cannot be provided, the policy requires that alternative means of fire protection, including fire-rated construction, be identified by the SDFD and implemented.

San Diego Fire-Rescue Department Fire Access Roadways Policy

The SDFD has adopted the Fire Access Roadways Policy to clarify requirements outlined in CFC Section 503. Fire access roadways for new and existing buildings are regulated by this policy. The policy requires buildings to be accessible to emergency vehicles. Under this policy, fire apparatus access roadways shall not be less than 20 feet of unobstructed width, shall have an adequate roadway turning radius, and shall have a minimum vertical clearance of 13 feet 6 inches.

City of San Diego Municipal Code

Municipal Code Section 55.0304

Municipal Code Section 55.0304 regulates the management of combustible waste material, including vegetation, by requiring vegetation clearance in WUI areas in accordance with Chapter 49 of the CFC and the City of San Diego Land Development Code. Furthermore, this code requires persons who own, control, operate, or maintain electrical transmission or distribution lines to have an approved program in place that identifies poles or towers with equipment and hardware types that have a history of becoming an ignition source, and provides a combustible free space consisting of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower during such periods of time as designated by the Fire Code Official.

Municipal Code Section 142.0412

Municipal Code Section 142.0412 requires brush management in all base zones on publicly or privately owned properties that are within 100 feet of a structure and contain native or naturalized vegetation. This code allows for brush management activities within environmentally sensitive lands, excluding wetlands, that are located within 100 feet of an existing structure. Brush management in wetlands may be requested with a development permit in accordance with Section 143.0110 where the Fire Chief deems brush management necessary. Where brush management is required, a comprehensive program is required to be implemented that reduces fire hazards around structures by providing an effective fire break between all structures and contiguous areas of native or naturalized vegetation. The code requires this fire break to consist of two distinct brush management areas called “Zone One” and “Zone Two.” Brush management Zone One is the area adjacent to the structure, and must be least flammable and typically consist of pavement and permanently irrigated ornamental planting. Brush management Zone Two is the area between Zone One and any area of native or naturalized vegetation and typically consists of thinned, native, or naturalized non-irrigated vegetation. The code specifies specific brush management measures and landscape standards for these zones. The code requires that the width of Zone One and Zone Two not exceed 100 feet. A site-specific plan that includes brush management measures is required to establish brush management Zones One and Two for new development. Brush management activities are prohibited within coastal sage scrub, maritime succulent scrub, and coastal sage-chaparral habitats from March 1 through August 15, except where documented to the satisfaction of the City Manager that the thinning would be consistent with conditions of species coverage described in the City of San Diego’s Multiple Species Conservation Plan Subarea Plan.

County of San Diego Multi-Jurisdictional Hazard Mitigation Plan

The County Multi-Jurisdictional Hazard Mitigation Plan is implemented by the County of San Diego Office of Emergency Services. The Multi-Jurisdictional Hazard Mitigation Plan is a County-wide plan that identifies risks posed by natural and human-caused disasters, and discusses ways to minimize potential damage occurring as a result of these disasters. The plan is intended to serve many purposes, including enhancing public understanding and awareness of potential hazardous situations, creating a decision tool for managing hazards, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, providing inter-jurisdictional coordination, and achieving regulatory compliance (County of San Diego 2017b).

Operational Area Emergency Operations Plan

The Office of Emergency Services implements the Operational Area Emergency Operations Plan (Plan) in collaboration with the Unified San Diego County Emergency Services Organization. The Plan is for use by the County and all of the cities within the County to respond to major emergencies and disasters. It describes the roles and responsibilities of all County departments (including many city departments), and the relationship between the County and its departments and the jurisdictions within the County. The Plan contains 16 annexes detailing specific emergency operations for different emergency situations (County of San Diego 2018).

4.18.4 Significance Criteria

The significance criteria used to evaluate the project impacts to wildfire are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to wildfire would occur if the project is located in or near State Responsibility Areas or lands classified as VHFHSZs and would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

As depicted on Figure 4.18-2, portions of the project site are located within a VHFHSZ; therefore, it is appropriate to evaluate the project in the context of the above significance criteria.

4.18.5 Impacts Analysis

Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

An emergency plan describes a comprehensive emergency management system that provides for the planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. The County of San Diego and all cities within the County use the Operational Area Emergency Operations Plan to respond to major emergencies and disasters. The Plan identifies a broad range of potential hazards and a response plan. According to Annex Q, Evacuation, primary evacuation routes identified in the Plan consist of the major interstates, highways, and prime arterials within San Diego County (County of San Diego 2018). The primary evacuation routes nearest to the project site include I-15, which is located immediately east of the site, I-8, which is located 0.15 miles south of the site, and I-805, which is located 0.7 miles west of the site. However, as noted in the Plan, specific evacuation routes would be determined based on the location and extent of the incident and would include as many predesignated transportation routes as possible (County of San Diego 2018).

The City of San Diego Office of Homeland Security oversees the City's emergency Prevention and Protection Program, Mitigation and Finance Program, Response and Recovery Program, and Regional Training Program. Through these programs, the City Office of Homeland Security supports and coordinates numerous risk management planning efforts; trains City employees; assists with the integration of emergency plans; ensures information flow to the public to assist in their emergency preparation and response; interfaces with County of San Diego, state, and federal jurisdictions; maintains the City's two Emergency Operations Centers; and secures grants from state and federal agencies related to homeland security (City of San Diego Office of Homeland Security 2017).

The City is also responsible for the development and maintenance of the emergency operational documents and guides for the existing SDCCU Stadium (City of San Diego 2008). Current SDCCU Stadium emergency response procedures and evacuation plans include procedures for evacuating the Stadium as well as for emergency responses to fire, earthquake or building collapse, explosions, chemical spills, suspicious packages, bomb threats,

power outages, and flooding. Demolition of the existing SDCCU Stadium and construction and operation of the new Stadium and other buildings and facilities included in the proposed project would be performed in accordance with standards, codes, and regulations pertaining to emergency response and evacuation planning, including the Emergency Operations Plan.

However, the new Stadium will have a different on-site location and design, and the proposed project would also include additional buildings and facilities throughout the project site. Therefore, the proposed project would have the potential to conflict with existing emergency response and evacuation plans. Inconsistencies between existing emergency response and evacuation plans and the proposed project would represent a **potentially significant impact (Impact WDF-1)**.

It is acknowledged that the SDCCU Stadium parking lot has been used for disaster response staging such as during firestorm emergencies over the last two decades. The elimination of a large expanse of parking lot that would occur when the site is redeveloped would not result in a significant impact because other such expanses of publically owned parking lots are located throughout the region, including at local City and County offices or complexes and at the Del Mar Fairgrounds. The availability of other publically accessible spaces coupled with the infrequent need of such disaster staging, would result in a **less-than-significant impact**.

Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The VHFHSZ associated with the hillsides across Friars Road and north of the project site and that associated with the San Diego River to the south of the project site extend onto the project site despite the site's lack of flammable vegetation, steep slopes or wildland terrain which are the drivers of such wildfire hazard designations. While partially designated a VHFHSZ, there are several characteristics of the project site that reduce its susceptibility to wildfire that may occur in adjacent off-site areas (San Diego River and Murphy Canyon Creek riparian areas, wildland areas to the south and east, and the vegetated hillsides located north of Friars Road and several hundred feet north of the project site). First, the project site is nearly flat – wildfire spread rates increase with increasing slope gradients. Second, Friars Road is an approximately 120-foot-wide, six-lane roadway that separates the project site from the potentially flammable vegetated hillsides to the north. This roadway would serve as a buffer between the project site and a potential wildfire burning in this location. Third, SDFD Station 45 is located adjacent to the project site on Friars Road, minimizing emergency response times. Because 95% of all wildfire ignitions are controlled during the initial attack (Smalley 2008), the proximity of firefighting resources would greatly reduce potential wildfire impacts on the project site.

The above notwithstanding, the project site is technically located partially within a VHFHSZ, so CSU/SDSU has evaluated the potential for the proposed project to exacerbate wildfire risk during construction and operational phases.

Construction

As noted, the project site is partially located within a VHFHSZ, and heat or sparks from construction equipment or vehicles, as well as the use of flammable materials, have the potential to ignite adjacent vegetation and start a fire, especially during weather events that include low humidity and high wind speeds that are typically experienced in the summer and fall, but can occur year round in the San Diego region. The following construction-related equipment and practices have the potential to generate heat or sparks that could result in wildfire ignition:

- Earth-moving and excavating equipment, chainsaws and other small gas-powered equipment and tools can cause sparks which serve as a source of fire ignition.

- Tractors, graders, mowers, bulldozers, backhoes, cranes, excavators, trucks, and vehicles may result in heated exhaust which, if it they came into contact with vegetation, may result in fire ignition.
- Welders consist of an open heat source which may result in metallic sparks which could ignite vegetation.

The risk of potential ignitions resulting from construction activities would be considered very low for the vast majority of the project site (98%) with non-combustible land cover (parking lot, existing stadium). Construction activity within the southern and eastern portions of the property adjacent to the San Diego River and Murphy Canyon Creek, respectively, could be subject to increased ignition potential resulting from construction equipment due to the proximity of native vegetation communities (**Impact WLD-2**).

Data indicate that 95% of all wildfire ignitions are controlled during initial attack (Smalley 2008). The potential risk of wildfire ignition and spread associated with construction of the proposed project can be managed and pre-planned so that the potential for vegetation ignition along the Murphy Canyon Creek and the San Diego River interfaces is reduced by having adequate water available to service construction activities; implementing a construction-phase fire prevention plan; providing proper wildfire awareness, reporting, and suppression training to construction personnel; and requiring that all construction-phase components of the defensible space (fuel modification), landscape, and irrigation plans be fulfilled prior to delivery of combustible materials to the project site. Pre-planning and construction personnel fire awareness, reporting, and suppression training not only results in lower probability of ignition, but also in higher probability of fire control and extinguishment in its incipient stages.

Operation

By design, and generally consistent with City of San Diego General Plan policies CE-B.6, UD-A.3, PF-D.12, and PF-3.14, the proposed River Park would create a buffer area of at least 200 feet between existing native vegetation associated with Murphy Canyon Creek and the San Diego River and the nearest proposed structure. The River Park would consist of irrigated and maintained landscape vegetation, turf sports fields, and non-combustible roads, trails, and other hardscape features. Friars Road and proposed landscaping along the project site's northern boundary provide a buffer of at least 100 feet from the nearest proposed structure. Along the western boundary, the project site abuts existing developed land uses. The River Park component of the project would also function as a larger fuel break, positively affecting adjacent developed areas by slowing potential fire spread in the region. The above notwithstanding, given its location in a VHFHSZ and the adjacent and nearby naturally vegetated areas, the proposed project would comply with Chapter 7A of the 2016 CBC and CFC requirements for structural hardening (e.g., Class A roof systems), access, water supply, and fuel modification. Structural hardening requirements address roofs, eaves, exterior walls, vents, appendages, windows, and doors and result in hardened structures that have been proven to perform at high levels (resist ignition) during the typically short duration of exposure to burning vegetation from wildfires. There are two primary concerns for structure ignition: 1) radiant and/or convective heat and 2) burning embers (NFPA 1144 2008, IBHS 2008). Burning embers have been a focus of building code updates for at least the last decade, and structures built to these codes have proven to be very ignition resistant. Likewise, radiant and convective heat impacts on structures have been minimized through the Chapter 7A exterior fire ratings for walls, windows and doors. Additionally, provisions for defensible space (described below) separating wildland fuels from structures and requirements for interior sprinklers (required in the 2016 Building/Fire Code update) have proven to reduce the number of structure losses in WUI areas.

Following construction, the proposed project would be maintained according to these fire protection standards to reduce the risk of fire ignition and/or spread. Proposed project landscaping along north, east, and southern edges of the project site, including that in the River Park, would be required to be consistent with state level 100-foot defensible space standards (California Public Resources Code Section 4291). Additionally, these landscaped and

maintained areas would meet the 100-foot brush management standards outlined in San Diego Municipal Code Sections 55.0304 and 142.0412 and the City’s Brush Management Policy and Landscape Standards. Adherence to the CBC and CFC, compliance with best design and management practices similar to what is spelled out in the City’s Municipal Code and General Plan, development of the River Park, and installation and maintenance of project landscaping, would result in project-related wildfire impacts being **less than significant**.

Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Given its partial location within a VHFHSZ, SDSU would maintain defensible space around project structures consistent with California Public Resources Code 4291. As noted, this would be consistent with the standards outlined in City Municipal Code Sections 55.0304 and 142.0412. The proposed project would also comply with all applicable CBD and CFC requirements for development in a VHFHSZ, including, but not limited to, specific requirements for structural hardening, water supply and flow, hydrant and standpipe spacing, signage, and fire department access. Proposed project roads and trails would facilitate site access by responding fire agency personnel and project maintenance staff. Power lines would be installed below ground and would not pose an ongoing wildfire risk during project operations. None of the proposed project infrastructure or development features required for development in a VHFHSZ are expected to exacerbate wildfire risk or result in additional temporary or permanent impacts beyond those identified in this EIR. For these reasons, impacts to the environment resulting from installation and maintenance of infrastructure would be **less than significant**.

Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Wildfires can greatly reduce the amount of vegetation from hillsides. Plant roots stabilize the soil and above-ground plant parts slow water, allowing it to percolate into the soil. Removal of surface vegetation resulting from a wildfire reduces the ability of the soil surface to absorb rainwater and can allow for increased runoff that may include large amounts of debris. If hydrophobic conditions exist post-fire, the rate of surface water runoff is increased as water percolation into the soil is reduced (Moench and Fusaro 2012). The potential for surface runoff and debris flows therefore increases significantly for areas recently burned by large wildfires (Moench and Fusaro 2012).

Slope failures, mudflows, and landslides are common in areas where steep hillsides and embankments are present and such conditions would be exacerbated in a post-fire environment where vegetative cover has been removed. However, as presented in Section 4.6, Geology and Soils, the proposed project site is relatively flat, is not adjacent to steep slopes or hillsides, and is therefore not at risk of landslide or mudflow. Given the flat characteristics of the project site, post-fire conditions are not expected to increase risks associated with slope failures, mudflows, or landslides.

Increases in surface runoff and erosion are also possible in a post-fire environment where surface vegetation has been removed and steep slopes can increase runoff flow velocity. As presented in Section 4.9, Hydrology and Water Quality, the significant decrease of impervious surfaces on the project site and the incorporation of stormwater treatment basins, as well as the relatively flat nature of the project site, would greatly reduce the potential for off-site erosion as compared to the project site’s current, paved condition. CAL FIRE mapping data also indicates no post-fire erosion threat potential for the project site or the immediate surrounding area (CAL FIRE 2009). Finally, the irrigated and maintained landscaping in River Park is not be expected to be burned (removed) entirely should a fire occur on the project site, unlike post-fire conditions in native vegetation where complete removal is common. Considering these project site features and characteristics, post-fire conditions are not expected to increase risks

associated with runoff and erosion. In addition, as described in Chapter 2, Project Description, and analyzed in Section 4.9, Hydrology and Water Quality, proposed project grading would raise the vertical development areas of the proposed project within the project site outside the 100-year and 500-year floodplains, further reducing the potential for such impacts associated with flooding of the project site.

Considering the project site's terrain and proximity of hillsides, and with implementation of project grading, construction and erosion control BMPs, potential impacts associated with runoff, post-fire slope instability, or drainage changes are considered **less than significant**.

Would the project result in a cumulative impact to wildfire?

The cumulative context considered for project wildfire impacts is San Diego County. As discussed in Section 4.18.1, CAL FIRE has mapped areas of fire hazards in the state through its FRAP, based on fuels, terrain, weather, and other relevant factors.

As described above, portions of the northeastern and southern areas of the project site would be located in a VHFHSZ. Such zones are also designated approximately 0.5 miles to the east and 0.75 miles to the west of the site (SDFD 2009). The proposed project, combined with other projects in the region, would increase the population and/or activities and ignition sources in the Mission Valley area, which may increase the chances of a wildfire and increase the number of people and structures exposed to risk of loss, injury, or death.

Individual projects located within the City of San Diego are required to comply with applicable City building codes, which have been increasingly strengthened as a result of severe wildfires that have occurred in the last two decades in the San Diego area. The fire and building codes include fire prevention and protection features that reduce the likelihood of a fire igniting on a specific project and spreading to off-site vegetated areas. These codes also protect projects from wildfires that may occasionally occur in the area through implementation of brush management/fuel management zones, ensuring adequate water supply, preparation of fire protection plans, and other measures. Particularly fire-prone projects may also enter into a Fire Service Agreement, which result in additional project-provided funding to the fire agencies to augment response capabilities. Fire agencies such as the SDFD use the funding to provide the personnel and apparatus needed to respond to the types of emergencies that will be generated from the cumulative projects. The fire and building codes and funding stream are intended to offset the potential impacts so that fire service can be provided, and people and structures are not exposed to significant risk of loss, injury, or death involving wildland fires.

Furthermore, other cumulatively considerable projects would be required to comply with the City's vegetation clearance requirements, as outlined in San Diego Municipal Code Sections 55.0304 and 142.0412 and the City's Brush Management Policy and Landscape Standards to reduce the fuel load on vacant and developed properties in the City. The San Diego County Fire and Building codes, along with project-specific needs assessments and fire prevention plan requirements ensure that every project approved for construction includes adequate emergency access. Roads are required to meet widths, have all-weather surface, and be capable of supporting the imposed loads of responding emergency apparatus. Therefore, cumulative impacts related to wildfire hazards and emergency response and access would be **less than significant**.

4.18.6 Summary of Impacts Prior to Mitigation

This section provides a synopsis of the conclusion reached in each of the impact analyses. In summary, the proposed project would result in the following potentially significant wildfire impacts:

- Impact WLD-1** The proposed project would have the potential to substantially impair an adopted emergency response plan or emergency evacuation plan.
- Impact WLD-2** Construction activity within the southern and eastern portions of the property adjacent to the San Diego River and Murphy Canyon Creek, respectively, could be subject to increased ignition potential resulting from construction equipment due to the proximity of native vegetation communities.

4.18.7 Mitigation Measures

The following mitigation measures would be implemented to reduce all impacts described in Section 4.18.5 to levels below significance.

- MM-WLD-1** Implement MM-HAZ-9, identified in Section 4.8, Hazards and Hazardous Materials.
- MM-WLD-2** To avoid impeding emergency vehicle and evacuation traffic around construction vehicles and equipment, prior to commencement of construction activities California State University/San Diego State University or its designee shall develop an Emergency Vehicle Access Plan that includes the following:
- Evidence of advanced coordination with emergency service providers, including but not necessarily limited to the University Police Department, San Diego Police Department, San Diego Fire-Rescue Department, ambulance services, and paramedic services;
 - Notification to emergency service providers of the proposed project locations, nature, timing, and duration of any construction activities, and request for advice about any road access restrictions that could impact their response effectiveness; and
 - Project construction schedules and routes designed to avoid restricting movement of emergency vehicles to the best extent possible. Provisions to be ready at all times to accommodate emergency vehicles. Provisions could include the use of platings over excavations, short detours, and/or alternate routes.
- MM-WLD-3** Throughout the duration of construction, the construction contractor shall ensure that adequate access to all buildings on the project site be provided for emergency vehicles during all building construction phases.
- MM-WLD-4** Throughout the duration of construction, the construction contractor shall ensure that adequate water is available to service all construction activities during all phases.
- MM-WLD-5** The construction contractor shall ensure the implementation of all construction-phase defensible space, landscape, and irrigation plan components prior to combustible building materials being delivered to the project site.

- MM-WLD-6** Prior to commencement of construction activities, California State University/San Diego State University or its designee shall develop a Construction Fire Prevention Plan that addresses training of construction personnel and provides details of fire-suppression procedures and equipment to be used during construction. Information contained in the plan shall be included as part of project-related environmental awareness training. At minimum, the plan shall include the following:
- Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, use of spark arrestors, and hot work restrictions;
 - Work restrictions during Red Flag Warnings and High to Extreme Fire Danger days;
 - Fire coordinator role and responsibility;
 - Worker training for fire prevention, initial attack firefighting, and fire reporting;
 - Emergency communication, response, and reporting procedures;
 - Coordination with local fire agencies to facilitate agency access through the project site;
 - Emergency contact information;
 - Demonstrate compliance with applicable plans and policies established by state agencies.
- MM-WLD-7** California State University/San Diego State University or its designee shall prepare a defensible space plan to address landscape requirements for the perimeter structures along the northern, eastern, and southern edges of development. The defensible space plan shall conform to the standards outlined in California Public Resources Code Section 4291, at a minimum.

4.18.8 Level of Significance After Mitigation

Anticipated impacts to emergency response and evacuation would be potentially significant because the proposed project could potentially conflict with the existing emergency response procedures and evacuation plan for the SDCCU Stadium (**Impact WLD-1**). Mitigation measure **MM-WLD-1** requires implementation of **MM-HAZ-9**, which is included in Section 4.8, Hazards and Hazardous Materials. This mitigation measure requires plans and policies pertaining to emergency response and evacuation procedures to be updated to reflect the location and design of the new Stadium, new buildings, and other proposed project features. Plans would be required to be submitted to the San Diego Fire-Rescue Department Fire Prevention Bureau and Unified San Diego County Emergency Services Organization for review and comment. Implementation of mitigation measure **MM-WLD-1** would reduce impacts related to emergency response and evacuation to **less than significant** by ensuring that emergency response and evacuation plans are updated to reflect the proposed site design and features.

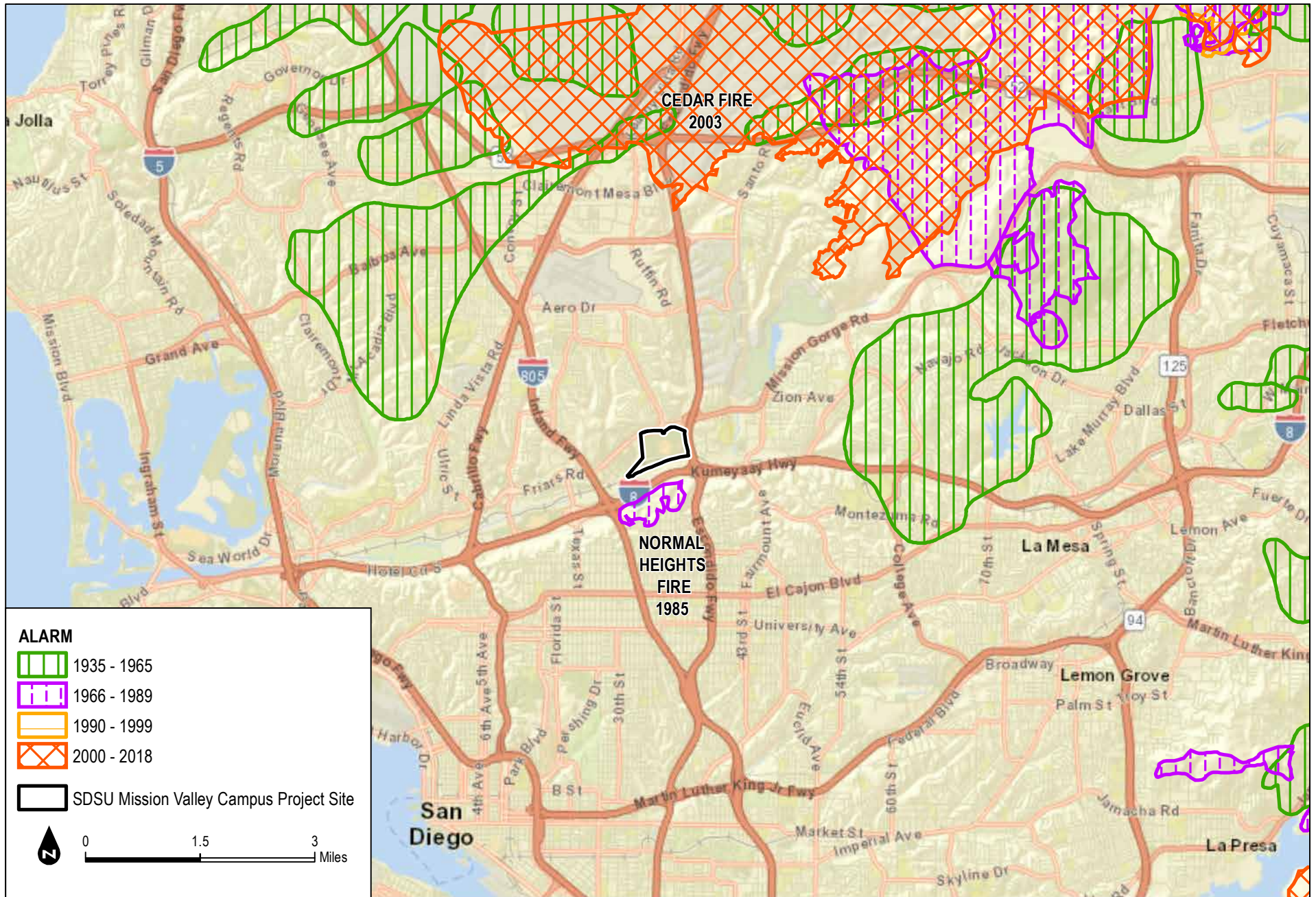
Anticipated impacts to wildfire risk during project construction would be potentially significant because project construction activities have the potential to generate heat or sparks that could result in wildfire ignition within a VHFHSZ (**Impact WLD-2**). Mitigation measures **MM-WLD-2** and **MM-WLD-3** would ensure that emergency vehicles and evacuation traffic have adequate access in the event that fire suppression is needed during project construction. Furthermore, mitigation measure **MM-WLD-4** would ensure that adequate water supply is available in the event of a fire during project construction. Mitigation measure **MM-WLD-5** would ensure that on-site fuels are reduced and that landscaping and irrigation is installed prior to combustible building materials being delivered to the project site. Additionally, mitigation measure **MM-WLD-6** and **MM-WLD-7** would require CSU/SDSU to develop a Construction Fire Prevention Plan, which would address the training of construction personnel and provide details of fire-suppression procedures and equipment to be used during construction, and a defensible space plan for

buildings along the northern, eastern, and southern perimeters edge of the project site. Implementation of mitigation measures **MM-WLD-2** through **MM-WLD-7** would reduce wildfire hazards during project construction to less than significant. With compliance with the CBC and consistency with City of San Diego Fire Code, operational impacts would be less than significant.

With compliance with CBC and Fire Code requirements, and consistency with San Diego Municipal Code Sections 55.0304 and 142.0412 and the City's Brush Management Policy and Landscape Standards, anticipated impacts to wildfire risk associated with project-related infrastructure would be **less than significant**.

As presented in Section 4.18.5, compliance with existing regulations and construction and erosion-control BMPs would ensure that anticipated impacts associated with post-fire erosion, flooding, or landslides would be **less than significant**.

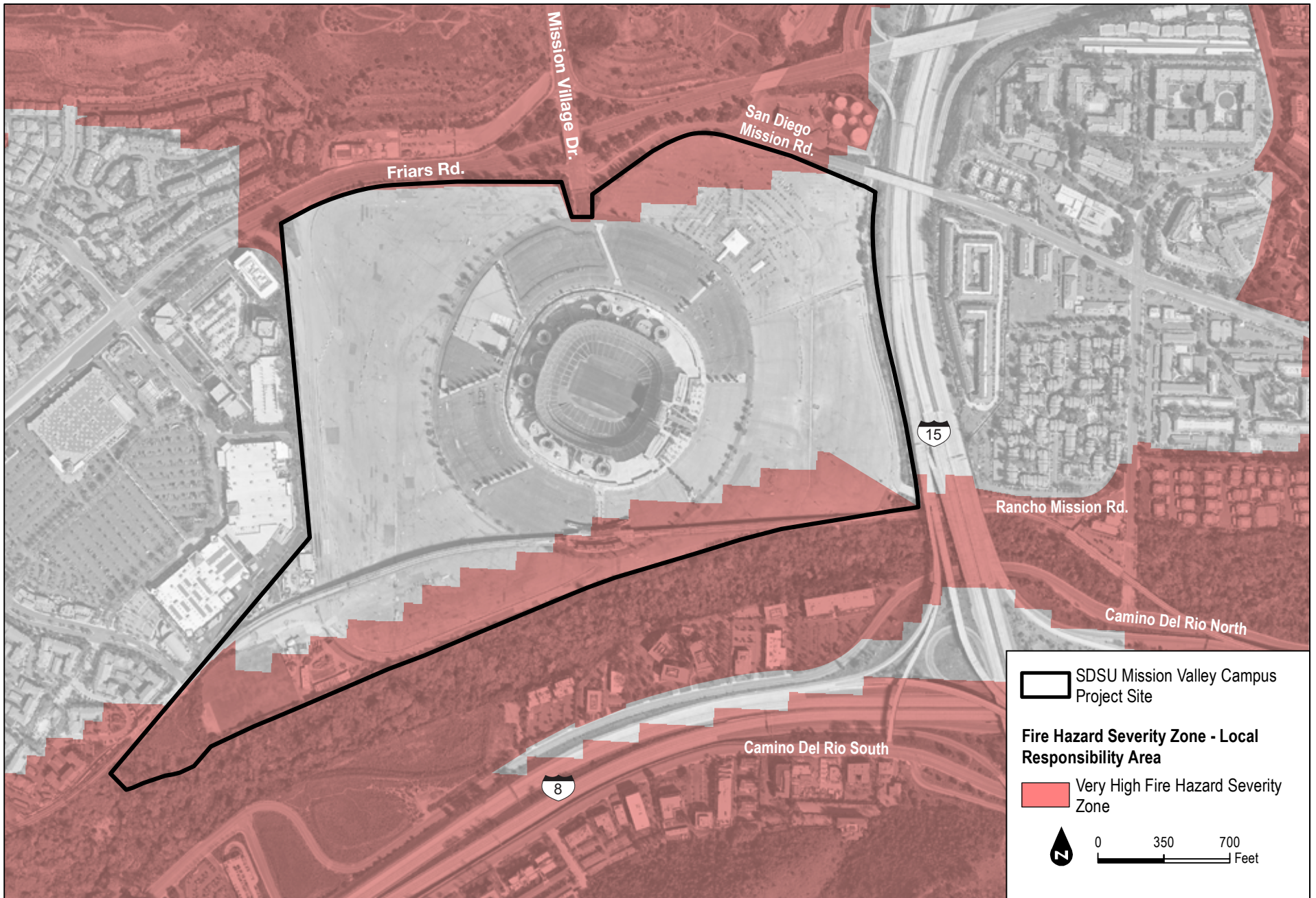
As presented in Section 4.18.5, consistency with San Diego County Fire and Building Codes, the San Diego Municipal Code, and the City's Brush Management Policy and Landscape Standards would ensure that anticipated impacts associated with cumulative wildfire impacts would be **less than significant**.



SOURCE: ESRI; CAL FIRE 2017



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SOURCE: ESRI; CAL FIRE 2007

SDSU Mission Valley Campus Master Plan EIR



Figure 4.18-2
Fire Hazard Severity Zones

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5 Other Environmental Considerations

5.1 Growth Inducement

The California Environmental Quality Act (CEQA) Guidelines Section 15126.2(e) requires an environmental impact report (EIR) to consider the growth-inducing impacts of a project. Growth-inducing impacts are characteristics of a project that could, either directly or indirectly, foster economic or population growth or the construction of additional housing or development in the surrounding environment. According to the CEQA Guidelines, such projects include those that would remove obstacles to population growth (e.g., a major expansion of a waste water treatment plant). In addition, as set forth in the CEQA Guidelines, increases in the population may tax existing community service facilities, requiring construction of new facilities that could induce growth in the surrounding environment. The CEQA Guidelines also require a discussion of the characteristics of projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. The CEQA Guidelines state that it must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

Examples of growth-inducing aspects of a project may include the following:

- Extension of utility lines, construction of roads, or construction or expansion of water/wastewater facilities.
- Encouragement of growth in surrounding areas through economic stimulus (e.g., construction of shopping centers, industrial facilities, and residential areas).
- Revisions to land use policies, such as General Plan amendments, annexations, and rezones.
- Removal of an obstacle to growth and development, such as removal of a constraint on a required public service.

A project that is determined to be potentially growth inducing may result in subsequent environmental effects as a result of such growth. These indirect secondary effects of growth can result, for example, in significant increased demand on community and public service infrastructure, increased traffic and noise, and degradation of air and water quality. Such potential secondary effects of growth are assessed in separate reports for the proposed project and associated environmental impact report.

5.1.1 Extension/Expansion of Utilities

Construction of new roadways could result in potential inducement of growth if a roadway is constructed in a previously undeveloped or underdeveloped area by improving accessibility. The project site is located within a highly urbanized area that is currently served by existing roadway/access infrastructure. The proposed project would include off-site circulation improvements, including roadway improvements and provisions of additional lanes, in the surrounding roadway network (refer to Figure 4.15-15, Traffic Impacts and Improvements for Buildout). While the proposed project would increase roadway capacity, such off-site improvements would facilitate traffic circulation to existing developed areas in the vicinity of the project site, which is a highly urbanized area. Therefore, the proposed project would not directly or indirectly induce growth in the area surrounding the project due to the extension or expansion of roadways in previously undeveloped or underdeveloped areas.

The proposed project would result in an incremental increase in demand of water and wastewater services. It is anticipated that the proposed project would require new points of connection for domestic water, fire water, and sewer from the existing utility lines. All proposed connections to existing utility infrastructure would be sized to

adequately serve anticipated project buildout. Similarly, all existing water and sewer facilities that the proposed project would connect to are adequately sized to serve the proposed project without the need to expand (refer to Section 4.17, Utilities and Services Systems, and Figures 2.10-A through 2.10-E). Further, the project site and surrounding areas are highly urbanized currently served by existing utility infrastructure. The proposed project would not be extending any utility or service system into undeveloped areas that are currently unserved by utilities. Therefore, the proposed project would not directly or indirectly induce growth in the area surrounding the project site as a result of the provision of new infrastructure involving roadways or utilities.

5.1.2 Economic Stimulus

The proposed project is located on a site that is currently underutilized as a 65,000-seat stadium and 132-acre parking lot. Redevelopment of the project site is considered infill in a previously disturbed area. As described above, the proposed project would result in economic stimulus through the implementation of a San Diego State University (SDSU) Mission Valley Campus Master Plan, which would include 1,565,000 square feet of office, innovation, research and development, and academic/administrative uses; 4,600 new residential units, 95,000 square feet of commercial space; and a new 35,000-capacity multipurpose Stadium.

The office, innovation, research and development, and academic/administrative use is expected to generate approximately 5,324 jobs (Appendix 4.13-1). The commercial component is sized to serve the proposed campus project and is not anticipated to attract significant traffic or compete with existing commercial uses throughout Mission Valley. No industrial facilities are proposed. Implementation of the proposed project would include construction of approximately 4,600 residential units, including housing for students, faculty, and staff, in proximity to a vibrant university village atmosphere. However, the proposed project would not encourage additional growth because the project site is considered a previously developed, infill site which is largely surrounded either by existing development or is largely constrained (i.e., the San Diego River to the south and Interstate 15 to the east).

In addition to the direct growth as a result of the development of the project site, a project may also indirectly encourage or induce economic stimulus. As explained in Section 4.13, Population and Housing, the proposed project's economic contribution has three components:

- Direct contribution. The direct contribution includes the total full-time and part-time employees, labor income (including the value of benefits), economic output, and value-added associated with the construction expenditures to build the project and subsequent operation of businesses on the site.
- Indirect contribution. The indirect economic contribution is attributable to purchases from suppliers within San Diego County. The indirect contribution also captures the additional input purchases from local suppliers by the suppliers. These additional purchases create subsequent rounds of indirect effects.
- Induced contribution. The induced contribution includes spending by construction employees or employees that work at businesses at the Mission Valley site, and employees of suppliers at local businesses, including grocery stores, restaurants, and service providers.

Direct and indirect contributions are analyzed in Section 4.13, Population and Housing and were determined to be less than significant. Relative to the proposed project's potential induced contributions to economic stimulus, induced job growth was also calculated in Appendix 4.13-1. As explained above, induced economic contributions includes the spending by construction employees or employees that work at businesses at the project site, and the employees of suppliers at local businesses, including grocery stores, restaurants, and service providers. As calculated in Appendix 4.13-1, the number of employees indirectly created by the proposed project is estimated at

5,117 jobs. This total would be considered as part of the overall employment within San Diego County. As shown in Table 4.13-6 in Section 4.13, employment in San Diego County is estimated to increase by 460,492 by 2050. The proposed project's induced contribution to this total of 5,117 jobs represents 1.1% of the increased employment in San Diego County over the next 30 years. Therefore, economic stimulus resulting from the project would not directly or indirectly induce growth in the area surrounding the project site.

5.1.3 Revisions to Land Use Policies

Because SDSU is a component of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan or City municipal zoning code.

In consideration of the above, the proposed project includes a Campus Master Plan, as contemplated by San Diego Municipal Code Section 22.0908, which would establish a full-time equivalent student ceiling of 15,000 for the SDSU Mission Valley campus. No other revisions to land use policies, General Plan Amendments, annexations, or rezones are required. For additional discussion, please refer to Section 4.10, Land Use and Planning. While the Campus Master Plan would establish the number of full-time equivalent students by 15,000 for the SDSU Mission Valley campus, there are no changes to land use policies, including General Plan amendments, annexations, and rezones that would result in any indirect or direct growth in the area surrounding the project.

5.1.4 Removal of an Obstacle to Growth and Development

The proposed project would demolish the existing San Diego County Credit Union (SDCCU) Stadium and provide for the redevelopment of the project site, including a new Stadium. No other constraints to growth and development would be removed as a result of implementation of the proposed project. The proposed project would be developed in a campus configuration and would be consistent with the Draft Final Mission Valley Community Plan, as well as the San Diego Association of Governments Smart Growth Map. Therefore, the removal of an obstacle to growth and development, such as removal of a constraint on a required public service, would not directly or indirectly induce growth in the area surrounding the project site.

5.2 Environmental Effects Found Not To Be Significant

5.2.1 Introduction

CEQA requires that an EIR focus on the significant effects of the proposed project on the environment, discussing the effects with emphasis in proportion to their severity and probability of occurrence. Effects dismissed in an Initial Study as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless information inconsistent with the finding in the Initial Study is subsequently received.

Section 21100(c) of the Public Resources Code requires that an EIR contain a statement briefly explaining the reasons why various possible significant effects of a project were determined not to be significant and were,

therefore, not discussed in detail in the Draft EIR. The CEQA Guidelines provide that the statement may be in the form of an attached copy of the Initial Study. (CEQA Guidelines, Section 15128.)

In this case, the Initial Study (Environmental Checklist) was prepared and circulated with the Notice of Preparation for public review on January 18, 2019 (Appendix 1-1). The Initial Study concluded that the proposed project would not result in potentially significant impacts relative to the following environmental impact categories:

- Agriculture and Forestry Resources

Therefore, as stated in the Initial Study/Notice of Preparation, these topics need not be addressed further in this EIR. For information purposes, following summary is presented.

5.2.2 Agriculture and Forestry Resources

According to the San Diego County Important Farmlands Map (California DOC 2016), the proposed project site is designated as “Urban and Built-Up Lands.” The project area does not include any lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, development of the proposed project would not convert agricultural land to non-agricultural uses. The project area is not currently zoned for agriculture, nor does the project site include any land under a Williamson Act contract. No surrounding uses are designated as farmland or forest land; therefore, no changes in the existing environment are anticipated that would convert farmland, as defined, to nonagricultural use or forest land to nonforest use. No impacts to agricultural resources or forest land are anticipated to occur as a result of the proposed project.

5.3 Significant Irreversible Environmental Changes

CEQA Guidelines Section 15126.2(d) requires that an EIR identify any significant irreversible environmental changes associated with a proposed project. Such changes include, for example, the intensification of land use, the use of non-renewable resources during the initial and continued phases of the proposed project, or irreversible damage from environmental accidents associated with the proposed project. The potential for such environmental changes is discussed below.

5.3.1 Intensification of Land Use

Under the proposed project, the existing land uses on the project site would be redeveloped to permit a new 35,000-capacity multipurpose stadium; approximately 4,600 dwelling units and 95,000 square feet of campus-serving commercial/retail uses; 1,565,000 square feet of office,; approximately 400 hotel rooms with 40,000 square feet of conference space; and approximately 86 acres of parks, recreation and open space. Redevelopment of the project site to accommodate more-intensive land uses to the area would result in a long-term increase in housing and employment as discussed in Section 4.13, Population and Housing, and Section 5.1, Growth Inducement. Development of small areas of land that have not previously been developed also would occur during construction, which would result in the removal of potential habitat (i.e., riparian habitat, foraging habitat, and migration corridors) for sensitive wildlife and plant species. However, despite converting the existing land use from a Stadium and parking lot into a campus, the proposed project would improve the integration of existing uses with a functional use of space that currently sits vacant as a paved parking lot and oversized Stadium. As a result, the commitment of these

nonrenewable resources is reasonable and justified under the circumstances, and with appropriate mitigation, irreversible environmental change impacts associated with intensification of land uses would be **less than significant**.

5.3.2 Nonrenewable Energy Consumption

Construction of the proposed project would result in the use of nonrenewable resources and energy sources. This consumption would occur during the construction phase of the proposed project and would continue throughout its operational lifetime. In particular, project construction would require fossil fuels, a nonrenewable resource, to power construction vehicles, delivery, and employee vehicles. Construction of the proposed project would require consumption of resources that are not renewable or that may renew so slowly as to be considered nonrenewable. Construction equipment also would use electricity and natural gas. Use of these energy sources would be considered a permanent commitment of resources. In addition, a variety of resource materials would be used during the construction process, including certain types of lumber and other forest products; concrete and aggregate materials used in concrete and asphalt such as sand, gravel, and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; water; and fossil fuels such as gasoline and oil and fabricated materials. The commitment of such materials and fuels would be considered irreversible.

Once operational, the proposed project would consume more energy on a daily basis than what is presently consumed on site. The resources that would be committed during operation of the proposed project would include water, as well as fossil fuels including natural gas, for purposes of electricity demand for the proposed new buildings, building heating and hot water, and transportation. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the proposed project, and the existing, finite supplies of these natural resources would be incrementally reduced. Assuming at least a portion of the energy used during operations would be provided by nonrenewable resources, the proposed project would result in the commitment of nonrenewable energy resources during operation. (See EIR Section 4.5, Energy, for analysis of the proposed project's impacts relative to energy consumption.)

Although nonrenewable resources would be utilized during the construction and operational phases of the proposed project, the commitment of these resources is reasonable and justified under the circumstances, particularly as the proposed project is designed to accommodate the existing and projected demand for student housing. As discussed in EIR Section 4.5, the proposed project's use of energy will not have a substantial effect on statewide, regional, or local energy resources; the proposed project will comply with all applicable energy standards; and there is a less-than-significant potential for the proposed project to result in wasteful, inefficient, or unnecessary consumption of fuel or energy. Further, the proposed project would achieve Leadership in Energy and Environmental Design (LEED) Silver rating or its equivalent by implementing a variety of water and energy efficiency features that would offset some of the impacts related to these resource areas. CSU/SDSU's commitment to achieving LEED Silver rating for the proposed project ensures that it would be designed and operated in an environmentally-conscious and sustainable manner.

Project impacts related to consumption of nonrenewable resources are considered to be less than significant because the proposed project would not use unusual amounts of energy or construction materials. Because the proposed project would not consume an unusual amount of energy or materials, and would implement design features to operate in a sustainable manner, potential impacts associated with nonrenewable energy consumption would be **less than significant**.

5.3.3 Accidental Hazardous Release

The CEQA Guidelines Section 15126.2(d) also states that irreversible damage can result from environmental accidents associated with the project. Construction activities on the project site would involve the transportation, use, and storage of commonly used hazardous materials such as diesel fuel, gasoline, lubricating oil, grease, solvents, and other janitorial supplies. These materials would be transported and handled in accordance with all federal, state, local, and SDSU guidelines and regulations applicable to the management and use of hazardous materials.

The proposed project would increase the routine transport, use, and disposal of hazardous materials and/or wastes generated by the campus; however, all hazardous wastes would be managed and handled in full compliance with SDSU Environmental Health and Safety procedures, and state and federal law (see EIR Section 4.8, Hazards and Hazardous Materials, for analysis of the proposed project's impacts relative to hazardous waste and materials). Although accidental spills or unauthorized releases of hazardous materials during construction, including ground clearing and foundation excavation, potentially could result in soil contamination, as discussed in EIR Section 4.8, Hazards and Hazardous Materials, implementation of the mitigation measures described in EIR Section 4.8.6 would reduce all such impacts to levels below significance.

In light of the multitude of federal, state, and local regulations governing the use of hazardous substances, and with implementation of the mitigation measures set forth in EIR Section 4.8, Hazards and Hazardous Materials, the proposed project is not expected to involve activities that would damage the environment or pose a risk to public health. Therefore, impacts associated with irreversible damage from environmental impacts associated with the proposed project would be **less than significant**.

5.3.4 Biological Resources

The project site would be altered by grading and development of the proposed project. Specifically, the proposed project would result in permanent direct impacts to approximately 164.2 acres on site, of which 163.8 acres (99.7% of the project on-site impacts) are to existing, developed areas. The remaining impacts to native vegetation communities or land covers include 0.04 acres of Baccharis-dominated Diegan coastal sage scrub, 0.01 acres of coastal sage scrub, 0.34 acres of southern cottonwood willow riparian forest, and 0.02 acres of unvegetated channel, as well as to 0.07 acres of U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife jurisdictional non-wetland waters, as well as 0.29 acres of California Department of Fish and Wildlife riparian vegetation. A complete listing of potential impacts is provided in Section 4.3.5. Off-site impacts to 3.5 acres consist of impacts to urban/developed areas (2.7 acres) and disturbed habitat (.8 acres).

Potentially significant impacts are limited to direct and indirect impacts to sensitive natural communities, jurisdictional features, and least Bell's vireo; southwestern willow flycatcher and California gnatcatcher (if determined to be present); and nesting birds protected under the Migratory Bird Treaty Act. Mitigation to reduce all impacts to a level less than significant includes habitat preservation in a mitigation bank and/or on site, avoidance of the breeding bird season or pre-construction surveys for nesting birds, and implementation of construction noise limitations/setbacks, if necessary. With implementation of the recommended mitigation measures identified in Section 4.3.6, all potentially significant impacts would be reduced to less than significant. As a result, impacts associated with irreversible changes to biological resources would be **less than significant**.

5.3.5 Mineral Resources

As discussed in Section 4.11.1 of EIR Section 4.11, Mineral Resources, the project site is located within Mineral Resource Zone 2 (MRZ-2), as indicated on the State of California Department of Conservation California Geological Survey, which indicates areas known or inferred to have mineral resources, the significance of which is undetermined based on available data (DOC 2000). However, the project site is underlain by fill soils placed during grading for stadium construction in 1966, Quaternary alluvial flood-plain deposits, and the Friars Formation. In addition, the site is urban, currently the location of existing development, and does not have an operating mine, sampling, or availability of a known mineral resource that would be of value to the region and the residents of the state per the City of San Diego's General Plan. Therefore, the project site is not currently a known mineral resource that would be of value to the region and the residents of the state. Further, the project site is constrained by existing surrounding development, the presence of shallow groundwater, and the limited construction time frame contemplated by San Diego Municipal Code Section 22.0908 for development of the River Park and Stadium on any potential mining operations that could occur. As a result, impacts associated with irreversible changes to, or commitments of, mineral resources would be **less than significant** (see EIR Section 4.11, Mineral Resources, for analysis of the proposed project's impacts relative to mineral resources).

5.3.6 Conclusion

In summary, construction and operation of the proposed project would result in the irretrievable commitment of nonrenewable resources, which would limit the availability of these particular resources for future generations or for other uses during the life of the proposed project. However, the proposed project includes requirements for energy and water conservation so that use of those resources would be of a relatively small scale compared to similar development without such requirements. Additionally, the proposed project would accommodate growth forecasted for the Mission Valley area, as discussed in Section 4.13, Population and Housing. The loss of such resources would not be highly accelerated when compared to existing conditions and growth projections for San Diego County. The proposed project's irretrievable commitments of resources have been evaluated and, based on that evaluation, the proposed project's consumption of those resources is justified (14 CCR 15126.2(c)). Therefore, although irretrievable commitments of resources would result from the proposed project, such changes would be **less than significant**.

5.4 Significant Unavoidable Impacts

The proposed project would result in significant, unavoidable impacts to the following resources as discussed in Section 4 of this EIR:

- Air Quality (Regional Air Quality Strategy compliance, construction-related exceedances, operational exceedances, cumulative impacts)
- Cultural Resources (historic resources)
- Noise (nighttime construction, off-site construction, cumulative impacts)
- Population and Housing (cumulative impact)
- Public Services and Recreation (fire and emergency medical services cumulative impact)
- Transportation (roadway segments, intersections, freeway segments, ramps)

Impacts would be mitigated, but not to a level of less than significant, or otherwise no feasible mitigation measures exists within the control of CSU, which would reduce certain impacts to less than significant.

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6 Alternatives

6.1 Introduction

The California Environmental Quality Act (CEQA) requires the lead agency, in this case the California State University (CSU) Board of Trustees, to consider a range of reasonable and feasible alternatives to the proposed project and analyze the impacts of those alternatives. By comparing these alternatives to the proposed project, the advantages of each alternative can be analyzed and evaluated.

CEQA Guidelines Section 15126.6(a) requires that an environmental impact report (EIR) “describe a range of reasonable alternatives to the proposed project, or to the location of the project, that would feasibly attain most of the basic objectives but would avoid or substantially lessen any of the significant environmental effects of the project, and evaluate the comparative merits of the alternatives.” Thus, the focus of this alternatives analysis is on those alternatives that can reduce the proposed project’s significant impacts; alternatives that merely reduce the project’s less-than-significant impacts receive less attention. Further, Section 15126.6(a) also provides that an EIR need not consider every conceivable alternative to a project. Instead, the EIR must consider a range of reasonable alternatives; an EIR need not consider alternatives that are infeasible. “Feasible” is defined in the CEQA Guidelines Section 15364 to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” Further, “feasibility” encompasses “desirability” to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors” (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App3d 410, 417). There also is no ironclad rule governing the nature or scope of the alternatives to be discussed in an EIR, other than the “rule of reason.” The “rule of reason” governing the range of alternatives specifies that an EIR should only discuss those alternatives necessary to foster meaningful public participation and informed decision-making.

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (California Public Resources Code Section 21002.1), the purpose of an EIR’s alternatives discussion is to focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if the alternatives would impede to some degree the attainment of the project’s objectives or be more costly. Further, CEQA requires that an EIR identify the environmentally superior alternative from among the alternatives.

The analysis in this EIR indicates that implementation of the San Diego State University (SDSU) Mission Valley Campus Master Plan Project (proposed project) would result in potentially significant impacts to the following environmental issue areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise
- Population and Housing

- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

Of the above impacts, the following were identified as impacts that were significant and unavoidable with implementation of all feasible mitigation measures as discussed in Chapter 4 of this EIR:

- Air Quality (Regional Air Quality Strategy compliance, construction-related exceedances, operational exceedances, cumulative impacts)
- Cultural Resources (historic resources)
- Noise (nighttime construction, off-site construction, cumulative impacts)
- Population and Housing (cumulative impact)
- Public Services and Recreation (fire and emergency medical cumulative impact)
- Transportation

Impacts would be mitigated, but not to a level of less than significant. Further, no feasible mitigation measures are available within the control of CSU to reduce certain impacts to less than significant.

All other potential impacts associated with the proposed project, including impacts to Aesthetics and Visual Quality, Energy, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, and Wildfire, would be less than significant.

6.2 Criteria for Selection of Alternatives

The criteria for the selection and analysis of alternatives are provided in CEQA Guidelines Section 15126.6(c). The alternatives must (1) meet most of the project objectives, (2) be feasible, and (3) avoid or substantially lessen the significant impacts resulting from the project.

6.2.1 Project Purpose and Objectives

SDSU is projected to grow in the future to help meet the exiting and projected need to accommodate more higher education students in California. The proposed SDSU Mission Valley Campus Master Plan would constitute the next step in SDSU's long-term planning effort.

The underlying purpose of the proposed project is to implement a SDSU Mission Valley campus, including a new multipurpose Stadium, faculty/staff/student residences and homes, academic/office/innovative uses, hotel rooms and conference space, and commercial/retail uses to support SDSU's academic, educational and cultural mission through the demolition and redevelopment of the existing San Diego County Credit Union (SDCCU) Stadium; and the restoration and revitalization of a River Park pursuant to the framework set forth in San Diego Municipal Code (SDMC) Section 22.0908.

To implement this underlying purpose, the project objectives are to:

1. Enable CSU to expand SDSU's education, research, entrepreneurial, innovation technology, and athletic programs to accommodate increasing demand for higher education within a vibrant SDSU Mission Valley campus, innovation district, and Stadium venue proximate to SDSU's existing main campus.
2. Situate and design a River Park, shared parks and open space, and recreation areas in a manner that integrates the site's natural features and green space into the SDSU Mission Valley campus.
3. Restore and revitalize the River Park.
4. Establish a sustainable, walkable, efficient, and transit-oriented SDSU campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development.
5. Create a new, 35,000-capacity multipurpose Stadium as the "home" for SDSU Division I collegiate football and other events and make the new Stadium fully operational in time for the opening of the SDSU 2022 football season.
6. Provide an SDSU Mission Valley campus innovation village with up to approximately 1.6 million square feet for academic, office, research and development and technology transfer uses with adequate faculty, staff, student and employee parking.
7. Demolish the existing SDCCU Stadium in accordance with SDMC Section 22.0908.
8. Enhance transit ridership through pedestrian and bicycle improvements, and transit connections to the existing Metropolitan Transit System (MTS) Trolley Station and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line.
9. Provide up to 4,600 residences with a mix of student, faculty, staff, workforce, and affordable housing, with adequate parking, within a vibrant, transit-oriented university village setting and in proximity to trolley and other public transportation uses to reduce reliance on automobiles.
10. Provide neighborhood-serving retail with adequate parking to serve students, faculty, staff, alumni, neighborhood residents, businesses, and park and other visitors engaging in academic, cultural, athletic and artistic endeavors, as well as game-day sporting and other events.
11. Provide hotel/hospitality services, including up to 400 hotel rooms and 40,000 square feet of conference space and associated parking, to support visitors to campus, Stadium, and other events; meeting and conference facilities; and academic opportunities for undergraduate and graduate students in SDSU's hospitality and tourism management programs.
12. Provide potential employment opportunities in close proximity to the campus and transit.
13. Encourage on-campus learning, research, and internship opportunities for students, faculty, and staff through public-private partnerships.
14. Meet the City's greenhouse gas (GHG) emission reduction goals as required by SDMC Section 22.0908.

15. Reflect SDSU and Mission Valley’s heritage through campus planning, architecture, landscape, signage and wayfinding, and cultural and artistic design elements.
16. Create a “sense of place” within the campus open space, trails, pathways, streets, walkways, and outdoor “space,” which form the campus landscape.
17. Bring together diverse groups of people for intellectual, social, and recreational exchange; foster learning, creativity, collegiality, collaboration, and innovation; facilitate student, faculty, and staff activities with innovative businesses in the community; and create a sense of community derived from actively shared park and recreation space.
18. Generate revenue to finance project elements and further support and benefit SDSU’s academic and athletic programs for the SDSU campus and the San Diego region.
19. Implement a Transportation Demand Management Plan that incorporates land use, employer, and resident strategies, to encourage transit use and reduce vehicle miles traveled .

6.2.2 Feasibility

CEQA Guidelines Section 15126.6(f)(1) also identifies factors to be taken into account to determine the feasibility of alternatives. The factors are site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and whether the applicant can reasonably acquire, control, or otherwise have access to the alternative site. No one of these factors establishes a fixed limit on the scope of reasonable alternatives. An alternative does not need to be considered if its environmental effects cannot be reasonably ascertained and if implementation of such an alternative is remote or speculative.

6.2.3 Evaluation of Significant Impacts

According to CEQA Guidelines Section 15126.6(b), the alternatives discussion should focus on those alternatives that, if implemented, could eliminate or reduce any of the significant environmental impacts of a project. The alternatives are evaluated to determine if, as anticipated when selected as alternatives, they eliminate any significant adverse environmental impacts or reduce those impacts to less than significant. Project-related impacts are considered to be those that are identified prior to the incorporation or implementation of any mitigation measures.

The performance of an alternative relative to a project is evaluated to determine the “comparative merits of the alternative” (CEQA Guidelines Section 15126.6(a)). This analysis is based, in part, on a comparison to a project’s impacts. This analysis also includes a discussion of the relative feasibility of each alternative.

6.3 Rationale for the Selection of Alternatives

This alternatives discussion focuses on alternatives to the proposed project or its location that are capable of avoiding or substantially reducing any significant effects of the proposed project, even if these alternatives would impede to some degree the attainment of the project’s objectives, as listed in Chapter 2, Project Description, and restated above.

As part of an alternatives analysis, CEQA requires an EIR to address a No Project (No Build) Alternative. The purpose of describing and analyzing a No Project (No Build) Alternative is to allow the decision makers to compare the impacts of approving a project with the impacts of not approving the project. This EIR addresses the No Project (No Build) Alternative in Section 6.4.1 of this EIR.

EIRs should also identify any alternatives that were considered by the lead agency but rejected as infeasible, and briefly explain the reasons why the lead agency made such a determination. Among the factors that may be used in an EIR to eliminate alternatives from detailed consideration are (1) failure to meet most of the basic project objectives, (2) infeasibility, and/or (3) inability to avoid significant environmental impacts.

In accordance with these requirements and based on comments received during the EIR Notice of Preparation and scoping process for the proposed project (see Appendix 1-1), five alternatives were identified, including the No Project (No Build) Alternative, Stadium Re-Use Alternative, Reduced Density Alternative, Stadium and River Park Alternative, and Alternative Stadium Location alternatives to the proposed project. Each alternative is further analyzed below (see Section 6.4).

6.3.1 Project Alternatives

Five project alternatives were developed during the conceptual planning phase of the proposed project, including the required No Project Alternative (CEQA Guideline Section 15126.6(e)). These alternatives were selected in an effort to reduce the proposed project's identified significant impacts:

- (1) “No Project Alternative.” The No Project Alternative assumes that the proposed project would not be developed, and the existing environmental conditions in the project area would remain in their current state. As such, the project area would continue to be a parking lot and 68,000-seat Stadium. Note, however, that CEQA also recommends that the No Project Alternative analysis analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the proposed project were not approved, based on current plans and consistent with available infrastructure and community services (CEQA Guidelines Section 15126.6(e)(3)(C)). In this case, the No Project Alternative would be inconsistent with the City’s current planning efforts, including the Mission Valley Community Plan Update and the San Diego River Master Plan, which call for development of the project site with a variety of land uses similar to the proposed project. Similarly, the No Project Alternative would not be consistent with the City’s CAP, which establishes transit priority areas, such as the project site, and directs the development of these sites to include a mix of land uses at densities and intensities that support adjacent transit. The No Project Alternative would be inconsistent with these recent planning efforts.
- (2) “Stadium Re-Use Alternative.” The Stadium Re-Use Alternative would restore SDCCU Stadium to the original configuration of approximately 51,000 seats, as first constructed in 1968. Under this alternative, the proposed project would be re-configured around the existing SDCCU Stadium to achieve similar land uses and intensities as the proposed project to the extent feasible based on existing grades, topography, and accommodating the floodplain.
- (3) “Reduced Density Alternative.” The Reduced Density Alternative would develop similar land uses in the same configuration as the proposed project and have the same physical impacts as the proposed project; however, the Reduce Density Alternative would reduce the intensity of such development. Under this alternative, the following use intensities would be developed:
 - Stadium with a capacity of 35,000 (same as the proposed project)
 - Up to 550 apartment units
 - Up to 10,000 square feet of neighborhood commercial
 - Up to 130,000 square feet of campus/office

- Up to 100 hotel rooms
 - Similar parks, recreation, and open space uses as the proposed project.
- (4) “Stadium and River Park Only Alternative.” The Stadium and River Park Only Alternative was developed in response to comments received on the Notice of Preparation, which called for the project site to only be developed with a new Stadium, with the remainder of the project site developed as a park. Under the Stadium and River Park Alternative, the project site would be developed with a 35,000-capacity multipurpose Stadium, surface parking lot containing approximately 6,050 parking spaces, and a River Park. This alternative would generally be consistent with the 1984 Mission Valley Community Plan land uses and zoning for the project site, prior to the adoption of SDMC Section 22.0908 and the 2019 Final Draft of the Mission Valley Community Plan Update.
- (5) “Alternative Stadium Location Alternative” entails construction of the 35,000-capacity multipurpose Stadium on SDSU’s existing main campus east of College Avenue, north of Interstate (I) 8. The SDSU Mission Valley campus proposed project’s non-stadium land uses would be developed at the Mission Valley campus project site, including the 4,600 residential uses, up to 1.6 million square feet of office space, approximately 95,000 square feet of commercial/retail uses, up to 400 hotel rooms, and 86 acres of parks, recreation, and open space. To accommodate such land uses, the existing SDCCU Stadium would be demolished.

Analysis of the impacts of each of these alternatives relative to the proposed project is presented in this chapter. For each of the alternatives identified, the EIR conducted the following assessment:

- Description of the alternative
- Identification of the impacts of the alternative and evaluation of the significance of those impacts
- Evaluation of each alternative relative to the proposed project, specifically addressing consistency with the project objectives, feasibility, avoidance or reduction of significant impacts, and comparative merits.

In summary, the five alternatives evaluated in Section 6.4 were developed to avoid or lessen the significant environmental impacts of the proposed project as identified in this EIR and explained above. The alternatives address the significant impacts identified in the environmental analysis presented in Chapter 4.

6.3.2 Alternatives Considered But Rejected

6.3.2.1 City Stadium Reconstruction EIR Project and Alternatives

The City of San Diego (City) considered a proposed project and numerous alternatives for the reuse of the project site (see City’s Stadium Reconstruction EIR, SCH No. 2015061061, City of San Diego 2015). The City’s proposed project was to construct a new multipurpose sports stadium with a permanent seating capacity of up to 68,000 seats, expanding to approximately 72,000 seats for special events, and capable of hosting professional football games, other professional and amateur sports, entertainment, cultural, and commercial events. Under the City’s proposed project, the existing stadium would have been demolished subsequent to construction of the new stadium to avoid displacing stadium events for up to 2 years during construction, including the football games of the Chargers, SDSU, and bowl games. The City’s proposed project also would have constructed associated hardscape and landscape improvements throughout the project site.

In that same EIR (SCH No. 2015061061), the City evaluated project alternatives. All such alternatives centered on a new stadium for the National Football League (NFL) San Diego Chargers. For example, the City's EIR, though not certified, considered and rejected the following three alternatives on the project site during its EIR scoping process: (1) using the stadium site for a regional park, (2) expanding the San Diego River Park, (3) constructing a parking structure to accommodate stadium event parking, and (4) demolishing the existing stadium prior to construction of a new stadium. The two park alternatives were considered but rejected as infeasible because they did not meet any of the City's project objectives. The parking structure option was considered, but rejected as infeasible because it resulted in greater access/egress and parking impacts than the City's proposed project or any of the alternatives. Demolishing the existing stadium prior to construction of a new stadium was also considered but rejected as infeasible because it would have displaced all stadium events for the up to 2 years during the construction phase of the proposed project.

Further, the City considered but rejected as infeasible two alternative site locations, namely, a downtown stadium (just east of Petco Park) and a downtown stadium associated with an expanded convention center. The two downtown alternative site locations were rejected primarily because they would result in inadequate parking, would require zoning and other discretionary entitlements, and could not be acquired or controlled by the City in the time frame needed to provide a stadium in time for identified football seasons. In addition to the above-identified alternatives, the City considered but rejected No Project Alternatives and other stadium site locations within the existing stadium site.

6.3.2.2 Other Alternatives Considered but Rejected

The CSU considered and likewise rejected applicable alternatives in the City's Stadium Reconstruction EIR (SCH No. 2015061061, City of San Diego 2015), and it considered and rejected other additional alternatives described in Sections 6.3.2.3 through 6.3.2.5, below.

6.3.2.3 NFL Stadium Alternative

The CSU considered a NFL Stadium Alternative. The alternative would include construction of a football stadium to accommodate a NFL team on the stadium site. The NFL Stadium Alternative was considered, but ultimately rejected as infeasible because it would not eliminate or reduce any project impacts. Further, SDMC Section 22.0908 requires that the sale provide for "(1) A new Joint Use Stadium for SDSU Division 1 collegiate football and other Potential Sports Partners including but not limited to professional, premier, or MLS soccer and *adaptable for the NFL*" (*italics added*). This alternative assumed a minimum of a 50,000-capacity stadium constructed on the project site of the proposed Stadium. In addition, this alternative assumed that the proposed tailgate park/multipurpose recreation site west of the stadium would be constructed as a parking garage to accommodate additional stadium capacity.

As explained in Section 4.10, Land Use and Planning, the proposed project Stadium site is approximately 15 acres and includes a large concourse area designed to be expandable to accommodate an NFL stadium. Accordingly, the proposed project was determined to be consistent with the requirements of SDMC Section 22.0908(c)(1).

Because the remaining uses, including hotel, residential, campus, and parks and open spaces would be the same under this alternative, impacts would be the same or similar as the proposed project. Impacts related to land use and planning, and population and housing would be the same as the proposed project. Physical impacts associated with the development footprint to biological resources, cultural resources, paleontological resources, and tribal cultural resources also would be the same as the proposed project. However, due to the size of an NFL stadium,

which is anticipated to seat 50,000 spectators, a number of impacts would be greater than those of the proposed project. These impacts include the following.

1. Construction-related air quality, energy, GHG emissions, and noise impacts would be greater than the proposed project due to the larger size of the stadium; therefore, additional construction duration would be required, as compared to the proposed project.
2. Operational-impacts (including air quality, energy, GHG emissions, noise, and traffic impacts related to an increase in vehicle trips coming to a larger stadium) would be greater than the proposed project. While the overall number of average daily vehicle trips to the project site would be limited by the number of parking spaces, the conversion of the Tailgate Park/multipurpose recreation site west of the stadium site to a parking garage to accommodate additional stadium capacity would generate an increase in the total number of vehicle trips to the project site during major events. This would result in greater daily air emissions, energy usage, GHG emissions, greater traffic-related noise, and higher traffic levels and impacts to the surrounding roadway network.
3. Utility impacts under the NFL Stadium Alternative would be similar compared to the proposed project; however, the increase in stadium capacity would require additional water usage and sewer capacity. Therefore, demand for these utilities would be greater as compared to the proposed project.
4. While impacts related to aesthetics and visual resources would be similar compared to the proposed project, the larger NFL stadium would represent additional changes in visual resources as compared to the proposed project.
5. Impacts related to potential bird-strikes due to vertical construction would be similar compared to the proposed project; however, the larger size of the NFL stadium may increase this impact as compared to the proposed project's smaller Stadium.
6. Impacts related to an increase in demand for parks and recreation facilities, both at the project and cumulative level would be similar to the proposed project; however, the impacts would be greater due to the conversion of the Tailgate Park/multipurpose recreation site west of the stadium site to a parking garage to accommodate the parking requirements of a larger stadium.

The NFL Stadium Alternative would achieve some but not all of the project objectives. Specifically, the NFL Stadium Alternative would be inconsistent with Objective 5 that calls for a 35,000-capacity stadium that is ready to open by 2022. It is noted, consistent with SDMC Section 22.0908, that the proposed project's stadium footprint (including the concourse area) and adjacent park area have already been designed to accommodate a future expansion should an NFL team decide to relocate to San Diego, which would accomplish the primary goal of this alternative. Therefore, this alternative would meet CEQA's feasibility requirements, but, as explained below, the alternative would cause greater environmental impacts when compared to the proposed project.

Moreover, this alternative has been rejected as infeasible because at the time of the writing of this EIR, no NFL team is considering relocation to San Diego, nor does CSU/SDSU have the ability to compel any such move. Further, the financing for a larger stadium has not been identified. As identified above, the NFL Stadium Alternative would increase environmental impacts as compared to the proposed project. Further, as stated, there is no plan, proposal, nor any probable future plans or proposals for an NFL franchise to relocate to San Diego, particularly in the time frame required for a fully operational stadium (i.e., 2022 collegiate football season). Accordingly, the NFL Stadium Alternative has been rejected as infeasible.

6.3.2.4 All Park Alternative

During CSU's EIR Notice of Preparation, comments were received suggesting the entire project site be developed as a park and include the restoration of the adjacent Murphy Canyon Creek. Under the All Park Alternative, the existing SDCCU Stadium would be demolished, similar to the proposed project, and the project site would be graded to accommodate various parks, recreation, and open space uses. Under this alternative, there would be no housing, hotel, mixed-use campus, research park, retail, or stadium uses; rather, the entire project site would be converted to parks, recreation, and open space including passive and active open space uses.

Overall, impacts under the All Park Alternative would be reduced compared to the proposed project. Specifically, grading and land development-related construction activities would be somewhat less compared to the proposed project in terms of earth moving and potential import of soil to raise portions of the project site out of the floodplain. Overall construction-related impacts would generally be reduced due to the absence of developing buildings on the project site; however, demolition of the existing uses would result in the same impacts as the proposed project and extensive grading would be required to construct a regional park on this site. This would reduce construction-related impacts to air quality, energy, GHG emissions, and noise.

Physical impacts would be similar to the proposed project because most of the project site would be disturbed through demolition of existing buildings and construction of park facilities under the All Park Alternative. Specifically, physical impacts to biological resources, cultural resources (including historic resources), geology and soils (including paleontological resources), and tribal cultural resources, would be similar compared to the proposed project.

Operational impacts under this alternative would be reduced compared to the proposed project. Under the All Park Alternative, the number of daily trips to the project site would be significantly reduced compared to the proposed project. Accordingly, operational impacts related to air quality, energy, GHG emissions, noise, and traffic would be reduced. Similarly, the All Park Alternative would reduce demand for sewer and water, natural gas, electricity, and telecommunications facilities; as well as for school, library, police, fire and emergency services, and parks and recreational services. Therefore, impacts to public services and recreation and utilities and utility systems would be reduced compared to the proposed project. Impacts to hazards and hazardous materials, hydrology and water quality, and wildfire would be reduced compared to the proposed project because the project site would not introduce new residents into the project area and instead would convert the project site to a large, landscaped park.

The All Park Alternative would be consistent with the adopted 1984 Mission Valley Community Plan, which identified the project site for park and recreation and commercial recreation land uses; however, this alternative would be inconsistent with the Final Draft of the Mission Valley Community Plan, as well as SDMC Section 22.0908. Therefore, this alternative would be inconsistent with the City's current planning efforts.

While the All Park Alternative would not provide any residential uses, and therefore, there would be no impacts to population and housing, this alternative would not facilitate the provision of housing, including affordable housing, and would hinder efforts by the City to achieve its Regional Housing Needs Assessment (RHNA) goals. Similarly, the All Park Alternative would preclude transit-oriented development in a recognized Transit Priority Area (TPA), which would impede efforts to achieve state-mandated GHG reductions through the construction of transit-oriented development in an area already served by a trolley line with plans for additional transit service (i.e., MTS Trolley Green Line and future Trolley Purple Line).

The All Park Alternative is considered feasible because there is nothing precluding development of the project site as a regional park; however, the cost associated with such a project would be significant, and the future use as a

regional park would not cover the expected costs of demolishing the existing SDCCU Stadium and the extensive grading and landscaping required to develop a large-scale regional park. To finance such a project, a bond measure may be put on a future ballot for the residents of the City of San Diego to vote on; or fundraising or other financing measures including sale(s) of other City-owned property or a significant increase in parks development impact fees may be required to fund these improvements.

The All Park Alternative would not meet the project objectives or achieve the objectives to the same degree as the proposed project. Specifically, the All Park Alternative would not achieve the underlying purpose of the proposed project because it would not implement a SDSU Mission Valley campus, including a new Stadium, faculty/staff/student residences and homes, academic/office/innovative uses, hotel rooms, and commercial/retail uses to support SDSU's academic, educational and cultural mission through the demolition and redevelopment of the existing SDCCU Stadium.

Further, the All Park Alternative would not enable the CSU to expand SDSU's education, research, entrepreneurial, innovative technology, and athletic programs to accommodate increasing demand for higher education within a vibrant SDSU Mission Valley campus, innovative research center, and Stadium venue (Objective 1); establish a sustainable, walkable, and transit-oriented SDSU Mission Valley campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development (Objective 4); create a new 35,000-capacity Stadium in time for the 2022 collegiate football season (Objective 5); provide an SDSU Mission Valley campus with up to approximately 1.6 million square feet for academic, office, research and development and technology transfer uses (Objective 6); enhance transit ridership and transit connections to the existing MTS Trolley Station; and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line (Objective 8); provide up to 4,600 residences with a mix of housing, including student, faculty, staff, workforce, and affordable housing near a vibrant university village atmosphere and in proximity to trolley and other public transportation uses to reduce reliance on automobiles (Objective 9); provide neighborhood-serving retail uses (Objective 10); provide hotel/hospitality services (Objective 11); provide employment opportunities (Objective 12); encourage on-campus learning, research, and internship opportunities for students, faculty, and staff through public-private partnerships (Objective 13); create a "sense of place" with a campus open space system and an "outdoor space" forming a campus landscape (Objective 16); and generate revenue to finance project elements and further support and benefit SDSU's academic and athletic programs for the benefit of the SDSU Mission Valley campus and the San Diego region (Objective 18).

The All Park Alternative would provide for a River Park and other shared parks and open space (Objective 2); demolish the existing SDCCU Stadium (Objective 7); and may facilitate Objective 15 (reflect SDSU and Mission Valley's heritage through campus planning, architecture, landscape, signage and wayfinding, and cultural and artistic design elements) and Objective 17 (bring together diverse groups of people for intellectual, social, and recreational exchange; foster learning, creativity, collegiality, collaboration, and innovation; facilitate student, faculty, and staff activities with innovative businesses in the community; and create a sense of community derived from actively shared park and recreation space); however, it would not meet these Objectives to the same degree as the proposed project.

Because the All Park Alternative would not meet most of the project objectives, and because there is no reasonably foreseeable means to finance such a project, it was considered but rejected from further analysis.

6.3.2.5 "Single Channel" Murphy Canyon Creek Alternative

The CSU received comments expressing interest in an alternative project design that would widen Murphy Canyon Creek and consolidate drainage in a "single channel," rather than diverting drainage west of the existing berm on

the eastern edge of the project site. The intent of this alternative is to widen and improve Murphy Canyon Creek to address the 100-year storm event and avoid potential flooding of the project site (i.e., design Murphy Canyon Creek to convey all flows to the San Diego River). The remaining vertical improvements would remain largely unchanged; however, under this alternative, the River Park area would be substantially reduced to accommodate a widened Murphy Canyon Creek, and the access road west of Murphy Canyon Creek (i.e., the extension of Rancho Mission Road) would be realigned out of the widened Murphy Canyon Creek area.

Overall, impacts under the “Single Channel” Murphy Canyon Creek Alternative would be similar to the proposed project as similar construction and operational uses would be developed. Specifically, physical impacts would be similar to the proposed project because the project site would maintain the same intensity of development as contemplated by the proposed project. Impacts to biological resources, cultural resources (including historic resources), geology and soils, including paleontological resources, and tribal cultural resources, would be similar compared to the proposed project.

Operational impacts under this alternative would be similar compared to the proposed project. Under the “Single Channel” Murphy Canyon Creek Alternative, the number of daily trips to the project site would be similar to the proposed project. Accordingly, operational impacts related to air quality, energy, GHG emissions, noise, and traffic would be similar to the proposed project. Similarly, the “Single Channel” Murphy Canyon Creek Alternative would have similar demand for sewer and water, natural gas, electricity and telecommunications facilities; as well as for school, library, police, fire and emergency services and parks and recreational services as the proposed project. Therefore, impacts to public services and recreation and utilities and utility systems would be similar to the proposed project. Impacts to hazards and hazardous materials, hydrology and water quality, and wildfire would also be similar to the proposed project.

As with the proposed project, the “Single Channel” Murphy Canyon Creek Alternative would be consistent with the proposed draft Final Mission Valley Community Plan Update; however, as described below, the presence of an existing multi-product fuel pipeline, an existing 48-inch sewer line and MTS facilities located at the southern end of the channel would restrict the ability to implement this alternative within the 7-year time frame in SDMC Section 22.0908. Overall, impacts to land use and planning and population and housing would be similar to the proposed project.

The “Single Channel” Murphy Canyon Creek Alternative would be largely similar to the proposed project with the above-noted exceptions to the configuration of the eastern half of the project and the alignment of the southeastern access road (i.e., the extension of Rancho Mission Road) (see Figure 6-1A).

However, the “Single Channel” Murphy Canyon Creek Alternative is considered infeasible because the flooding of the project site is the result of floodwaters both from flooding that occurs north of the project site due to an undersized culvert, as shown in Figure 6-1B and the confluence of Murphy Canyon Creek and the San Diego River. The existing undersized culvert results in floodwaters “jumping” Murphy Canyon Creek approximately 3,000 feet north of the project site, at the northern edge of the Kinder Morgan Mission Valley Terminal. At this point, floodwaters surface drain through the Kinder Morgan site, cross San Diego Mission Road, and continue to surface flow onto the project site as shown in Figure 6-1B. CSU lacks site control necessary to make the off-site improvements needed to address the undersized culvert situation 3,000 feet north of the project site; therefore, floodwaters would necessarily continue to enter the project site through the Kinder Morgan property.

The proposed project has accommodated this flooding through the provision of open space which drains into the River Park area and ultimately into the San Diego River. However, creating a “single channel” to accommodate these flows would require widening Murphy Canyon Creek from the Kinder Morgan property, including upsizing an

existing culvert, to where floodwaters enter the project site and then diverting Murphy Canyon Creek to the southwest through the project site, roughly along the alignment of the River Park within the proposed project. Further, this alternative would cause the need to relocate existing infrastructure for the MTS Trolley, and to reinforce existing trolley abutments to withstand floodwaters (see Figure 6-1A).

Other reasons for rejecting this alternative as infeasible are that the various permits that would be required to impact and widen Murphy Canyon Creek to this extent, including permits from the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife for impacts to wetlands and waters of the United States. While it is feasible to secure such permits, doing so without control of the property to the north is not reasonably and foreseeably accomplished in a successful manner within a reasonable period given the requirement in SDMC Section 22.0908 to complete construction of the Stadium and River Park within 7 years of execution of the Purchase and Sale Agreement, taking into account economic, environmental, social, and technological factors (see CEQA Section 21061.1 and Guideline 15364). The proposed project, in contrast, would not require any federal or state permitting for Murphy Canyon Creek because there are no project improvements, features, or facilities (ie, impacts) proposed within Murphy Canyon Creek. Project permits for other wetlands impacts are not anticipated to preclude construction of the River Park within 7 years.

Additional permitting would be required due to the location of a fuel line that runs north/south along the eastern edge of the project site, just west of Murphy Canyon Creek. The fuel line from the Kinder Morgan Mission Valley Terminal, northeast of the project site, turns east approximately 250 feet north of Rancho Mission Road and exits the project site. Relocating this fuel line for approximately 1,350 feet would require permits and approvals outside the discretion of the CSU. Potential temporary disruption of this fuel line, which serves as a major supply to the downtown San Diego and San Diego Port areas, would also risk disruptions to a major natural resource that supports the region's economy. These permits and approvals also require several years of planning and approval processes; and no such permits/approvals could be obtained in the time required to construct a fully operational Stadium prior to the 2022 football season (Objective 5). Moreover, the proposed project does not require the need to relocate the fuel line because, as stated, the project has no impact on Murphy Canyon Creek. The proposed project would accommodate the 100-year storm event by conveying any overflow in a more natural flow pattern, allowing for the flooding waters to permeate the natural fields and delivering cleaner water to the San Diego River.

6.3.2.6 Existing SDSU Campus Alternative Project Location Alternative

An off-site alternative to develop the entire proposed project on the existing SDSU campus was considered. Under this alternative, a new Stadium with a capacity of 35,000, 4,600 residences, 1.565 million square feet of office, and 95,000 square feet of commercial/retail would be constructed on the existing SDSU campus site. Due to existing site constraints on the SDSU campus, no parks, recreation and open space would be built. This alternative was rejected because it was determined that there was insufficient capacity on the existing SDSU campus to accommodate such development and would result in the potential for greater impacts due to the increase in residents, vehicle trips, and short-term construction-related impacts. This alternative would also preclude implementation of several of the project objectives, including the provision for parks, recreation, and open space.

6.4 Alternatives Analysis

The alternatives evaluated in Sections 6.4.1 through 6.4.5 below, were developed to avoid or lessen the significant environmental impacts of the proposed project as identified in this EIR. The alternatives address the significant impacts identified in the environmental analysis presented in Chapters 4-1 through 4-18. This analysis of

alternatives focuses on the proposed project's effects found to be significant, and provides a comparison analysis of the alternative's effects to the proposed project, as shown in Table 6-1. In addition, the following analysis also provides a qualitative comparison of those environmental effects of the proposed project that were determined to be less than significant.

6.4.1 No Project Alternative

Description of the No Project Alternative

The No Project Alternative considers the effects of forgoing the proposed project entirely, and leaving the project site in its current condition. Under the No Project Alternative, the proposed project would not be approved and the existing 71,500-seat multipurpose stadium, 18,870-space surface parking lot, and San Diego Trolley Station would remain as shown in Figure 6-2, No Project Alternative. The No Project Alternative allows decision makers to compare the impacts of the proposed project to retaining the existing condition of the project site. The No Project Alternative describes the environmental conditions that existed at the time that the environmental analysis commenced when the Notice of Preparation was released on January 18, 2019 (CEQA Guidelines, Section 15126.6 (e)(2)). The difference between the proposed project and the No Project Alternative is immaterial when the latter assumes development pursuant to existing planning documents. Therefore, only the potential of forgoing the proposed project completely is considered under analysis of the No Project Alternative.

Comparison of Impacts to the Proposed Project

The No Project Alternative would produce no changes on the project site, because the project site would remain in its current condition, effectively eliminating those project impacts discussed in this EIR. There would be no change to aesthetics related to conflicting with applicable zoning that governs scenic quality or an increase in light or glare under the No Project Alternative. There would be no air or GHG emissions associated with project construction and operation; and the No Project Alternative would not increase emissions of volatile organic compounds (VOC), oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter 2.5 microns in diameter or less (PM_{2.5}), or particulate matter 10 microns in diameter or less (PM₁₀). There would be no land disturbance so there would be no impacts to biological or cultural resources, and no mitigation would be required. Under the No Project Alternative, no buildings or structures would be constructed, nor would the existing SDCCU Stadium or parking lot be removed; therefore, no impacts related to geologic hazards or hazards and hazardous materials would not occur. No temporary or permanent ambient noise or groundborne vibration impacts would occur due to demolition or construction activities under the No Project Alternative. No new housing would be constructed; therefore, no population-inducing impacts would occur. Because there would be no change in the existing conditions, there would be no increase in the number of vehicles accessing the project site and on area roadways and intersections, or increase in demand for public utilities or services and adequate emergency access would be available on area roadways. Lastly, wildfire hazards would not change under this alternative.

Evaluation of Significant Impacts

Under the No Project Alternative, there would be no development on the proposed project site. The existing 71,500-seat multipurpose stadium, 18,870-space surface parking lot, and San Diego Trolley Station would remain. As outlined below, this alternative would generally avoid potentially significant impacts associated with construction and operation of the proposed project. However, this alternative would not alleviate the deficit in student amenities in the proposed project vicinity or reduce the demand for a mix of housing in the neighborhoods surrounding the campus. Additionally, this objective would not meet the objectives of the proposed project.

Aesthetics and Visual Quality

CEQA states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a TPA shall not be considered significant impacts on the environment.” The proposed project includes residential and employment opportunities, is located on an infill site and within a TPA, as identified by the City of San Diego (City of San Diego 2019). As such, any aesthetics impact the proposed project may produce cannot be considered a significant impact on the environment. In addition, as demonstrated in Section 4.1.4, construction and operation of the proposed project would not result in significant impacts to existing views, and visual quality and character, or conflict with the underlying zoning and other regulations governing scenic quality, or increase in light and glare affecting day or nighttime views of the project site. Therefore, it was determined that the proposed project would not result in significant impacts to scenic views or vistas, scenic resources within a state highway, and scenic quality, or create new sources of substantial light and glare.

Under the No Project Alternative, there would be no demolition, construction, or operational activities; therefore, no additional potentially significant aesthetic impacts would occur. Because the No Project alternative would not alter the visual character or quality of the project site, there would be no impacts to aesthetics or visual quality compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Construction and operational activities associated with the proposed project would result in an increase in the emission of criteria pollutants and GHGs. Impacts related to project emissions of VOC, NO_x, CO, PM_{2.5}, and PM₁₀ would remain significant and unavoidable based on a comparison of the proposed project’s construction and operational emissions to the San Diego County Air Pollution Control District (SDAPCD) thresholds. Further, the proposed project would result in significant, unavoidable impacts regarding conformity with the applicable air quality plan. The proposed project was determined not to result in significant impacts related to GHG emissions.

Under the No Project Alternative, there would be no demolition activities or construction of additional buildings, or change in existing uses and emissions on site. Thus, no potentially significant impacts relating to air quality and GHG emissions would occur. However, the No Project Alternative would be inconsistent with the City of San Diego Climate Action Plan (CAP) because it would not provide for development within a designated transit priority area and would hinder the City’s efforts to reduce GHG emissions in the near-term. Because there would be no construction or operational emissions beyond those under existing conditions for the No Project Alternative, impacts to air quality and GHG emissions would be reduced compared to the proposed project.

Biological Resources

The proposed project would result in significant impacts to special-status wildlife species, sensitive vegetation communities, federally and state-regulated wetlands/riparian areas, and native habitat without mitigation. Proposed mitigation measures would reduce the potential for direct and indirect impacts on special-status plant and wildlife species, sensitive natural communities, jurisdictional waters, and wildlife corridors by ensuring that special-status resources would be avoided to the extent possible and compensatory mitigation provided to address significant impacts. Impacts to biological resources would be reduced to less than significant.

Under the No Project Alternative, there would be no site disturbance or alteration of existing structures on site; therefore, no potentially significant impacts to biological resources would result. Impacts to biological resources would be reduced compared to the proposed project.

Cultural and Tribal Cultural Resources

The proposed project would contribute to potentially significant impacts to cultural resources, including significant and unavoidable impacts to historic resources as a result of the demolition of SDCCU Stadium. Impacts to archeological resources and human remains would be reduced to less than significant through implementation of mitigation.

Under the No Project Alternative, the existing SDCCU Stadium would not be demolished, and there would be no development or ground-disturbing activities. Therefore, there would be no potentially significant impacts to cultural resources. Impacts would be reduced compared to the proposed project, and the significant and unavoidable impacts to historical resources (SDCCU Stadium) would be avoided. Overall impacts to cultural and tribal cultural resources would be reduced compared to the proposed project.

Energy

The proposed project would result in less-than-significant impacts related to use of energy resources because the proposed project would not engage in wasteful or unnecessary energy usage, and all new buildings would be designed to meet current energy conservation building code requirements.

Because the No Project Alternative would not involve any development, demolition, or construction, it would not consume additional energy, and no impact to energy resources would occur. The existing SDCCU Stadium would continue to operate with outdated and inefficient electrical equipment compared to a new Stadium constructed to meet current building code requirements. Overall, impacts to energy would be reduced compared to the proposed project.

Geology/Soils

The proposed project would result in potentially significant impacts to geology and soils. These impacts are related to liquefiable, corrosive, and unstable soils, and the potential for paleontological resources to be present. Mitigation measures are identified to ensure impacts to geology and soils, including paleontological resources, associated with implementation of the proposed project would be fully mitigated to less-than-significant levels.

Under the No Project Alternative, because there would be no development of additional buildings or soil disturbance associated with construction, no potentially significant impacts would arise regarding geology, soils, and paleontological resources. Impacts would be reduced compared to the proposed project.

Hazards and Hazardous Materials

The proposed project would result in impacts related to the routine transport or disposal of hazardous materials due to the potential to encounter asbestos, asbestos containing material (ACM), lead based paints (LBP), and polychlorinated biphenyl (PCBs) during the demolition process. Furthermore, the proposed project has the potential to create a significant hazard to the public or the environment through the routine transport or disposal of contaminated soil. Other significant impacts include impacts from existing groundwater monitoring and remediation wells on the project site, potential to expose future residential buildings to cumulative carcinogenic risks, and potential exceedances of applicable Federal Aviation Administration (FAA) regulations and safety hazards. Compliance with mitigation measures would reduce identified impacts to less than significant.

The No Project Alternative would not result in any impacts related to hazards and hazardous materials because it would not modify the project site through demolition, construction, or operational activities, nor introduce a new population to the project site. Impacts would be reduced compared to the proposed project.

Hydrology and Water Quality

Design of the proposed project considered the hydrology of the project site and the need to accommodate future flooding of portions of the project site while providing for water quality treatment in compliance with all requirements, including implementation of the City's Municipal Separate Storm Sewer System (MS4) permit requirements and National Pollutant Discharge Elimination System (NPDES) permit requirements. The proposed project also converts approximately half of the project site from an impervious parking lot area into park, recreation, and open space areas, which would reduce the amount of impervious area and runoff. With the inclusion of drainage and stormwater treatment improvements, the proposed project would result in less-than-significant impacts related to hydrology and water quality.

Although the project site is located within the Murphy Canyon Creek floodplain, the No Project Alternative would not alter the project site through demolition, construction, or operational activities; therefore, this alternative would not result in any changes to the existing hydrology on site or create a risk for people or property on the project site from flooding. However, the No Project Alternative would not provide for any type of water quality treatment and would keep the existing, impervious surface parking lot, which would increase the amount of stormwater runoff compared to the proposed project. Therefore, impacts to hydrology and water quality would be somewhat greater compared to the proposed project.

Land Use and Planning

Impacts related to land use and planning would be less than significant because the proposed project would not physically divide an established community or result in a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As analyzed in Section 4.10, the proposed project would be consistent with SDMC Section 22.0908 and not conflict with the draft Final Mission Valley Community Plan Update, the San Diego River Park Master Plan, or the City's CAP.

The No Project Alternative would not affect land use and planning because no development would occur on the project site and the current land uses are consistent with the City's existing land use and zoning regulations. However, the No Project Alternative would be inconsistent with the City's current planning efforts, including the draft Final Mission Valley Community Plan Update and San Diego River Master Plan, which call for development of the project site with a variety of land uses similar to the proposed project. Similarly, the No Project Alternative would not be consistent with the City's CAP, which establishes TPAs, such as the project site, and directs that development of these sites to include a mix of land uses at densities and intensities that support adjacent transit. The No Project Alternative would be inconsistent with these recent planning efforts and SDMC 22.0908, therefore, impacts to land use and planning would be greater compared to the proposed project.

Mineral Resources

The proposed project would not impact mineral resources because the project site does not contain known mineral resources that would be of value to the region and the residents of the state, per the City of San Diego's General Plan, nor is the project site delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site.

The No Project Alternative would not involve any construction or operational activities on the project site. Therefore, no impacts to mineral resources would result under the No Project Alternative; and future extraction of potential

resources would not be precluded to the same extent as the proposed project. Therefore, impacts to mineral resources would be reduced compared to the proposed project.

Noise

The proposed project would result in significant impacts related to an increase in short-term temporary and long-term ambient noise levels and generation of groundborne vibration due to short-term construction activities, long-term increase in operational traffic, and nighttime events at the future stadium. Noise impacts would be mitigated to a less-than-significant level with the exception of noise from nighttime construction activities, off-site roadway and utility improvements, and permanent operation-related noise impacts at the nearest noise sensitive land uses to the northwest of the project site.

The No Project Alternative would not result in noise or vibration impacts because no construction or operational activities would occur on the project site beyond existing conditions. Thus, impacts associated with noise would be reduced compared to the proposed project.

Population and Housing

The proposed project would result in growth due to an increase in future residents and employees. On a cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects in Mission Valley, would result in a significant increase in the amount of growth anticipated in the Mission Valley area by both the San Diego Association of Governments (SANDAG) and draft Final Mission Valley Community Plan Update. Therefore, the proposed project would result in a cumulatively considerable impact to population and housing that would be considered significant and unavoidable.

The No Project Alternative would not induce population growth and would not impact housing or divide an existing community. Therefore, under this alternative, no impacts to population and housing would occur. However, the No Project Alternative would hinder the City's attainment of its share of the RHNA because it would preclude development of 4,600 units planned for in the draft Final Mission Valley Community Plan Update. Overall, impacts would be reduced compared to the proposed project.

Public Services and Recreation

Direct impacts to public services and recreation associated with project implementation would be less than significant with mitigation. However, without mitigation, cumulative impacts related to increased demand for fire and emergency medical services, and schools would be considered significant. Identified mitigation would reduce the proposed project's cumulative impacts to schools; however, cumulative impacts to fire and emergency medical services would remain significant and unavoidable.

The No Project Alternative would not result in any construction or operational activities; therefore, the alternative would not contribute to an increase in demand for public services or recreational facilities. The No Project Alternative would not provide for the same level of parks and recreation uses as the proposed project (i.e., over 80 acres of parks, recreation, and open space); thus, the existing parks deficiency in the Mission Valley and Navajo community planning areas would be greater when compared to the proposed project. Overall, impacts to public services and recreation under the No Project Alternative would be reduced compared to the proposed project.

Transportation

The proposed project would result in significant traffic impacts at local intersections, roadway segments, and freeway segments by increasing in traffic in the project vicinity. Compliance with mitigation measures would reduce transportation impacts; however, because certain identified mitigation measures are outside the control of the CSU to implement, **Impacts TR-1 through TR-32** would remain significant and unavoidable.

The No Project Alternative would not result in significant transportation impacts because it would not result in any construction or operational activities on site that would generate an increase in traffic or changes to the transportation system. Impacts would be reduced compared to the proposed project.

Utilities and Service Systems

Significant impacts would result from off-site infrastructure improvements and generation of significant amounts of construction waste by the proposed project. Construction of off-site utilities would result in noise impacts that would remain significant and unavoidable with implementation of identified mitigation measures.

The No Project Alternative would result in no development or operational activities; therefore, it would not result in impacts to utilities and service systems. Impacts would be reduced compared to the proposed project.

Wildfire

The very northern and southern portions of the project site are located within Very High Fire Hazard Severity Zones (VHFHSZ) as mapped by the California Department of Forestry and Fire Protection (CAL FIRE) and the San Diego Fire-Rescue Department (SDFD). It was determined that the proposed project would result in significant impacts related to emergency response, emergency call volumes, and on-site evacuation, and that the proposed project could exacerbate wildfire risks. Proposed mitigation measures would reduce these impacts to less than significant.

The No Project Alternative would not alter the project site or result in any operational activities on the project site. The project site would still be within the VHFHSZ as mapped by CAL FIRE and be required to comply with all applicable requirements under any future development scenario. No impacts related to wildfire hazards would occur under the No Project Alternative as the alternative would not introduce any new buildings to the project site. Impacts would be reduced compared to the proposed project.

Relationship to Project Objectives

The No Project Alternative would not achieve any of the project objectives. Specifically, the No Project Alternative would not enable the CSU to expand SDSU's education, research, entrepreneurial, innovative technology, and athletic programs to accommodate increasing demand for higher education within a vibrant SDSU Mission Valley campus, innovative research center, and stadium venue (Objective 1); establish a sustainable, walkable, and transit-oriented SDSU Mission Valley campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development (Objective 4); create a new 35,000-capacity stadium (Objective 5); provide an SDSU Mission Valley campus with up to 1.6 million square feet for academic, office, research and development and technology transfer uses (Objective 6); enhance transit ridership and transit connections to the existing MTS Trolley Station; and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line (Objective 8); provide up to 4,600 residences with a mix of housing, including student, faculty, staff, workforce, and affordable housing near a vibrant university village atmosphere and in proximity to trolley and other public transportation uses to reduce reliance on

automobiles (Objective 9); provide neighborhood-serving retail uses (Objective 10); provide hotel/hospitality services (Objective 11); provide employment opportunities (Objective 12); encourage on-campus learning, research, and internship opportunities for students, faculty, and staff through public-private partnerships (Objective 13); and generate revenue to finance project elements and further support and benefit SDSU's academic and athletic programs for the new SDSU Mission Valley campus and the San Diego region (Objective 18).

Further, the No Project Alternative would not provide for a River Park and other shared parks and open space (Objective 2); demolish the existing SDCCU Stadium (Objective 7); reflect SDSU and Mission Valley's heritage through campus planning, architecture, landscape, signage and wayfinding, and cultural and artistic design elements (Objective 15); create a "sense of place" within the campus open space, trails, pathways, streets, walkways, and outdoor "space," which form the campus landscape (Objective 16); or bring together diverse groups of people for intellectual, social, and recreational exchange; foster learning, creativity, collegiality, collaboration, and innovation; facilitate student, faculty, and staff activities with innovative businesses in the community; and create a sense of community derived from actively shared park and recreation space (Objective 17).

Feasibility

The No Project Alternative would not develop the project site, leaving it in its current condition as an underutilized Stadium and parking lot. Though this is feasible, it would not achieve any of the project objectives, including allowing the CSU to expand SDSU's education, research, entrepreneurial, innovative technology, and athletic programs to accommodate a growing higher education student body for the benefit of San Diego and the region. This alternative would also not implement SDMC Section 22.0908, adopted by San Diego voters, nor would it contribute towards achieving RHNA goals for the City of San Diego. Similarly, the No Project Alternative would preclude a transit-oriented campus development in a recognized transit priority area, which would frustrate efforts to achieve state-mandated GHG reductions through construction of such development in an area already served by a trolley line with plans for additional transit service (i.e., the MTS Trolley Green Line and future Trolley Purple Line).

6.4.2 Stadium Re-Use Alternative

Description of the Stadium Re-Use Alternative

The Stadium Re-Use Alternative involves retaining the existing SDCCU Stadium and restoring it to its original design, as constructed in the late 1960s. The alternative would forgo construction of a new 35,000-capacity multipurpose Stadium and concourse on the project site. All other project components, including campus uses, campus residential, campus hospitality, retail space, trolley/transit opportunities, and associated infrastructure, utilities, facilities, and other amenities, would be constructed under this alternative to achieve similar land uses and intensities as the proposed project as shown in Figure 6-3, Stadium Re-use Alternative. Because the existing SDCCU Stadium would remain, proposed uses on the project site would be reconfigured and may require a reduction in the amount of parkland, with the Stadium being located in the center of the project site instead of the northwestern portion. This alternative would reduce impacts related to demolition of the existing SDCCU Stadium and construction of a new Stadium, but result in similar impacts overall, and would increase event-related impacts due to the larger seating capacity of the Stadium compared to the proposed project.

Comparison of Impacts to the Proposed Project

The Stadium Re-Use Alternative would produce similar changes to the project site as the proposed project, with the exception of constructing a new Stadium and demolishing the existing SDCCU Stadium. Construction and

operational activities under this alternative would result in criteria air pollutant and GHG emissions, though these emissions would be reduced without construction of a new Stadium. Impacts to special-status species, sensitive vegetation communities, federally and state-regulated wetlands/riparian areas, and native habitat would still occur under this alternative. As this alternative would occur on the same site, significant impacts related to liquefiable, corrosive, and unstable soils, and paleontological resources would still occur. Impacts related to the potential to encounter asbestos, ACM, LBP, and PCBs during the demolition process would occur under this alternative because, while the existing SDCCU Stadium would not be demolished, it would experience significant upgrades which have the potential to encounter these materials. Similar to the proposed project, this alternative would also result in impacts related to the routine transport or disposal of contaminated soil and impacts from existing groundwater monitoring and remediation wells on the project site, potential to expose future residential buildings to cumulative carcinogenic risks, and potential exceedances of applicable FAA regulations. This alternative would result in reduced impacts related to ambient noise levels and groundborne vibration generated during demolition of the existing SDCCU Stadium, but would still result in temporary noise impacts associated with construction activities. The Stadium Re-Use Alternative would result in growth due to the future residents and employees that would result from the proposed project. This alternative would still result in significant traffic impacts at local intersections, roadway segments, and freeway segments by promoting an increase in traffic in the project area. Additionally, significant impacts would result from off-site infrastructure improvements.

Evaluation of Significant Impacts

Under the Stadium Re-Use Alternative, the SDCCU Stadium would be restored to the original configuration of approximately 51,500 seats, and proposed project campus land uses would be re-configured around the existing SDCCU Stadium to achieve similar land uses and intensities as the proposed project. As outlined below, this alternative would avoid potentially significant impacts associated with demolition of the existing SDCCU Stadium and construction of the new Stadium (i.e., impacts to historic resources), but would require significant additional amounts of imported fill to raise the building pads above the 100 year flood plain, and would otherwise result in similar or potentially greater impacts as the proposed project.

Aesthetics and Visual Quality

CEQA states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” The proposed project includes residential and employment opportunities; it is located on an infill site and within a TPA as identified by the City of San Diego (City of San Diego 2019). As such, any aesthetics impacts the proposed project may produce cannot be considered a significant impact on the environment. In addition and as demonstrated in Section 4.1.4, construction and operation of the proposed project would not result in significant impacts to existing views, visual quality and character, or substantial conflicts with zoning and other regulations governing scenic quality. Therefore, it was determined that the proposed project would not result in significant impacts to scenic views or vistas, scenic resources within a state highway, and scenic quality, or create new sources of substantial light and glare.

The Stadium Re-Use Alternative would result in similar land uses and development intensities the proposed project. Therefore, the exemption for projects within a TPA would still apply, and no potentially significant aesthetics impacts would occur under the Stadium Re-Use Alternative. However, due to the size of SDCCU Stadium and relatively inefficient land plan that would result from designing around an existing use, the remaining vertical improvements would be necessarily at a greater scale of development, predominately in the form of taller buildings, in order to achieve similar density and intensity of development. As a result, and due to the size of the existing SDCCU Stadium, impacts to aesthetics and visual quality would be greater compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Construction and operational activities associated with the proposed project would result in an increase in the emission of criteria pollutants and GHGs. Impacts related to project emissions of VOC, NO_x, CO, PM_{2.5}, and PM₁₀ would remain significant and unavoidable based on a comparison of the proposed project's construction and operational emissions to the SDAPCD thresholds. Further, the proposed project would result in significant, unavoidable impacts regarding conformity with the applicable air quality plan. The proposed project was determined not to result in significant impacts related to GHG emissions.

Under the Stadium Re-Use Alternative, the existing SDCCU Stadium would not be demolished, and the new Stadium would not be constructed. Therefore, air quality and GHGs emissions associated with construction of the new Stadium and Stadium demolition activities would not occur under the Stadium Re-Use Alternative. Significant, unavoidable impacts due to construction emissions would be reduced. However, the remainder of the project site would still be developed to achieve similar land uses and intensities as the proposed project. Additional imported fill material would also be required to raise the project site out of the floodplain, which may offset the construction-related emissions reduced by not demolishing the existing SDCCU Stadium and re-using the recycled material as base for a new Stadium. Further, the Stadium Re-use Alternative would result in more intense development to achieve similar levels of development compared to the proposed project due to the inefficient design that results from planning around SDCCU Stadium. Therefore, this alternative is likely to result in similar impacts, including significant and unavoidable impacts due to operational emissions and conformity with the applicable air quality plan, as the proposed project with regard to air quality. Impacts related to GHG would be similar due to similar operational uses compared to the proposed project.

Biological Resources

The proposed project would result in significant impacts to special-status species, sensitive vegetation communities, federally and state-regulated wetlands/riparian areas, and native habitat. Proposed mitigation measures would reduce the potential for direct and indirect impacts on special-status plant and wildlife species, sensitive natural communities, jurisdictional waters, and wildlife corridors by ensuring that special-status resources would be avoided to the extent possible and compensatory mitigation provided to address significant impacts. Impacts to biological resources would be reduced to less than significant.

The Stadium Re-Use Alternative would result in similar impacts to biological resources as the proposed project. Temporary impacts during project construction would be slightly reduced under the Stadium Re-Use Alternative because no demolition of the existing SDCCU Stadium or construction of a new Stadium would occur. Operational impacts to biological resources, mostly in the form of bird strike impacts, would be increased compared to the proposed project due to the size of SDCCU Stadium and taller buildings that would occur to achieve similar intensity of development as the proposed project. Overall, impacts to biological resources would be similar compared to the proposed project.

Cultural and Tribal Cultural Resources

The proposed project would result in potentially significant impacts to cultural resources, including significant and unavoidable impacts to historic resources as a result of the demolition of SDCCU Stadium. Impacts to archeological resources and human remains would be reduced to less than significant through implementation of mitigation measures.

Under the Stadium Re-use Alternative, significant, unavoidable impacts to historical resources associated with the demolition of SDCCU Stadium would be reduced to less than significant because this alternative would focus on restoring, not demolishing, SDCCU Stadium to its original configuration. SDCCU Stadium would remain oversized compared to the needs of SDSU. Other impacts to cultural resources, including impacts to archeological resources and human remains, would be similar to the proposed project and would be reduced to less than significant through implementation of mitigation measures. Overall, impacts to cultural and tribal cultural resources would be reduced compared to the proposed project.

Energy

The proposed project would result in a less-than-significant impact related to use of energy resources because resulting energy use from implementation of the proposed project is not wasteful or unnecessary, and efficiencies are gained on a per-service population basis.

Because the Stadium Re-Use Alternative would forgo demolition of the existing SDCCU Stadium and construction of a new Stadium, this alternative would reduce energy use associated with stadium demolition and construction activities. However, because the existing SDCCU Stadium is larger and would be less energy-efficient than the proposed Stadium, this alternative could result in greater energy impacts associated with the Stadium use than the proposed project. The remaining uses would be similar under the Stadium Re-use Alternative as the proposed project; thus, impacts to energy would be similar. Overall, impacts to energy would be slightly increased compared to the proposed project due to the increases stadium size and age of SDCCU Stadium.

Geology/Soils

Potentially significant impacts related to liquefiable, corrosive, and unstable soils, and paleontological resources, associated with implementation of the proposed project would be fully mitigated to less-than-significant levels by mitigation measures outlined in Section 4.6.6 of this EIR.

Under the Stadium Re-Use Alternative, because development of the same project site would occur, these impacts would remain potentially significant, and the same mitigation measures would apply to reduce impacts to less-than-significant levels. Impacts to geology and soils, including paleontological resources, would be similar compared to the proposed project.

Hazards and Hazardous Materials

The proposed project would result in impacts related to the routine transport or disposal of hazardous materials due to the potential to encounter asbestos, ACM, LBP, and PCBs during the demolition process. Furthermore, the proposed project has the potential to create a significant hazard to the public or the environment through the routine transport or disposal of contaminated soil. Other significant impacts include impacts from existing groundwater monitoring and remediation wells on the project site, potential to expose future residential buildings to cumulative carcinogenic risks, and potential exceedances of applicable FAA regulations and safety hazards. Compliance with mitigation measures would reduce identified impacts to less than significant.

The Stadium Re-Use Alternative would result in similar impacts related to the potential to encounter asbestos, ACM, LBP, and PCBs because, even though demolition of the existing SDCCU Stadium would not occur, this alternative would require significant renovation activity would result in potential exposure to these materials. All other impacts related to hazards and hazardous materials would remain potentially significant under this alternative, and the

same mitigation measures would apply to reduce impacts to less than significant. Overall, impacts related to hazards and hazardous materials would be similar compared to the proposed project.

Hydrology and Water Quality

The proposed project design considered the hydrology of the project site and was designed to accommodate the future flooding of portions of the project site while providing for water quality treatment in compliance with all requirements, including implementation of the MS4 permit requirements and NPDES permit requirements. The proposed project would convert approximately half of the project site from an impervious parking lot into parks, recreation and open space areas, which would reduce the amount of impervious area and runoff. As a result of implementing the proposed project design and drainage and stormwater treatment improvements, the proposed project would result in less-than-significant impacts related to hydrology and water quality.

The Stadium Re-Use Alternative would result in similar impacts to the proposed project. Because demolition and stadium construction activities would not occur, overall soil disturbance impacts may be reduced under this alternative for the stadium site; however, the remainder of the project site would be developed similar to the proposed project. To raise the remainder of the project site out of the floodplain, additional fill material may be required; however, the Stadium Re-use Alternative would be subject to the same permit requirements and would have similar water quality treatment features as the proposed project. Overall, impacts to hydrology and water quality would be similar compared to the proposed project.

Land Use and Planning

Impacts related to land use and planning would be less than significant because the proposed project would not divide an established community or result in a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As analyzed in Section 4.10, the proposed project would be consistent with SDMC Section 22.0908 and not conflict with the draft Final Mission Valley Community Plan Update, the San Diego River Park Master Plan, and the City's CAP.

The Stadium Re-Use Alternative would result in no new impacts to land use and planning because it would involve retaining the existing SDCCU Stadium and developing the project site to achieve similar land uses and intensities as the proposed project, which would not conflict with the draft Final Mission Valley Community Plan Update, the San Diego River Park Master Plan, and the City's CAP. However, the Stadium Re-use Alternative would conflict with SDMC Section 22.0908(j), which provides that "*Such sale shall result in the demolition, dismantling, and removal of the Existing Stadium and construction of a new Joint Use Stadium*" (emphasis added). Accordingly, impacts to land use and planning would be slightly greater compared to the proposed project.

Mineral Resources

The proposed project would not impact mineral resources because the project site does not contain known mineral resources that would be of value to the region and the residents of the state per the City of San Diego's General Plan, nor is the project site delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site.

The Stadium Re-Use Alternative would result in similar impacts to mineral resources because this alternative would be constructed on the same project site. Impacts would be less than significant, similar to the proposed project.

Noise

The proposed project would result in significant impacts related to temporary and ambient noise levels and generation of groundborne vibration. Noise impacts would be mitigated to a less-than-significant level with the exception of noise from nighttime construction activities, off-site roadway and utility improvements, and permanent operation-related noise impacts at the nearest noise sensitive land uses to the northwest of the project site.

The Stadium Re-Use Alternative would result in similar impacts to the proposed project because it would develop similar land uses and intensities as the proposed project, with the exception of removal of the existing SDCCU Stadium and construction of a new Stadium. Noise and vibration impacts related to the location of the new Stadium and demolition of the existing SDCCU Stadium would be reduced under this alternative. Noise levels resulting from potentially larger stadium audiences would be greater; however, they would be located further from adjacent noise-sensitive land uses, and would be buffered by a larger, more enclosed stadium configuration, similar to existing conditions. Overall, noise impacts would be reduced compared to the proposed project.

Population and Housing

The proposed project would result in growth due to the future residents and employees that would result from the project. At a cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects, would result in a significant total of the projected growth anticipated in the Mission Valley area by both SANDAG and draft Final Mission Valley Community Plan Update estimates. Therefore, the proposed project would result in a cumulatively considerable impact to population and housing that would be significant and unavoidable.

The Stadium Re-Use Alternative would result in the same impacts, including a significant unavoidable cumulative impact, as the proposed project because it would involve development of similar land uses and intensities as the proposed project, minus the new Stadium, and would result in similar population increase. Impacts would be similar compared to the proposed project.

Public Services and Recreation

Direct impacts to public services and recreation would be less than significant with mitigation. However, cumulative impacts related to fire services, schools, emergency medical services, and recreation facilities would remain significant and unavoidable.

The Stadium Re-Use Alternative would result in similar impacts as the proposed project because it would involve development of similar land uses and intensities as the proposed project, minus the new Stadium and the potential for less parkland, but would result in similar population increase. Overall, impacts would generally be similar compared to the proposed project.

Transportation

The proposed project would result in significant traffic impacts at local intersections, roadway segments, and freeway segments by promoting an increase in traffic in the project vicinity. Compliance with mitigation measures would reduce transportation impacts; however, because many of the identified mitigation measures are outside the control of the CSU to implement, **Impacts TR-1 through TR-32** would remain significant and unavoidable.

The Stadium Re-Use Alternative would result in similar impacts as the proposed project as it proposes development of similar land uses and intensities as the proposed project, with a slightly larger Stadium. None of the significant

and unavoidable impacts (**Impacts TR-1 through TR-32**) would be reduced or avoided, similar to the proposed project. Transportation impacts would be similar to the proposed project.

Utilities and Service Systems

Significant impacts would result from off-site infrastructure improvements and generation of significant amounts of construction waste by the proposed project. Construction of off-site utilities would result in noise impacts that would remain significant and unavoidable even with implementation of mitigation measures.

The Stadium Re-Use Alternative would result in similar impacts as the proposed project because it would develop similar land uses intensities as the proposed project and have similar demands for sewer, water, solid waste, and electrical and natural gas service. However, it would result in reduced impacts related to solid waste generation as the existing SDCCU Stadium would not be demolished and materials from this demolition would not have to be removed from the project site. Overall impacts would be similar as the proposed project.

Wildfire

The very northern and southern portions of the project site are located within VHFHSZs as mapped by CAL FIRE and the SDFD. It was determined that the proposed project would result in significant impacts related to emergency response, emergency call volumes, and on-site evacuation and that the project could exacerbate wildfire risks. Proposed mitigation measures would reduce these impacts to less than significant.

The Stadium Re-Use Alternative would result in similar impacts compared to the proposed project because it would be located on the same project site and develop similar land uses and intensities. Impacts to wildfire would be mitigated to less than significant, similar to the proposed project.

Relationship to Project Objectives

The Stadium Re-Use Alternative would not achieve Objective 5 (creating a new, 35,000-capacity multipurpose stadium as the “home” for SDSU football and other events within the desired time frame) and Objective 7 (demolishing existing stadium in accordance with SDMC Section 22.0908). These two project objectives are essential to satisfying the San Diego voter requirements codified in SDMC Section 22.0908. Further, while the Stadium Re-Use Alternative would develop similar land uses and intensities as the proposed project, it would be designed around the existing SDCCU Stadium and would not provide for as efficient or walkable of a land plan. Accordingly, the Stadium Re-Use Alternative would not meet Objective 4 (a sustainable, walkable, and transit-oriented SDSU Mission Valley campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development); Objective 8 (enhance transit ridership through pedestrian and bicycle improvements, and transit connections to the existing MTS Trolley Station; and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line); and Objective 16 (create a “sense of place” within the campus open space, trails, pathways, streets, walkways, and outdoor “space,” which form the campus landscape) to the same degree as the proposed project. The Stadium Re-Use Alternative would achieve the remaining objectives.

Feasibility

The Stadium Re-Use Alternative is considered compatible with the proposed campus development as analyzed throughout this EIR. However, such an alternative would conflict with SDMC Section 22.0908, because it would not develop the new Stadium or demolish, dismantle, and remove the existing SDCCU Stadium. Rather, this alternative

would retain the existing SDCCU Stadium; it would also require substantial renovation costs that are expected to at least equal the cost of constructing a new stadium/venue and the existing seating configuration limits desired sightlines necessary to achieve a multi-purpose stadium and premium seating (i.e., seats and boxes/suites are set back too far from the field). This Alternative would also incur significant maintenance costs for the aging stadium. Furthermore, this alternative would not achieve all of the project objectives or to the same degree as the proposed project, and would only reducing impacts to historic resources (CUL-1 through CUL-3).

6.4.3 Reduced Density Alternative

Description of the Reduced Density Alternative

The Reduced Density Alternative would develop the same mix of uses on the project site; however, aside from the 35,000-capacity stadium, the remaining uses would be reduced to approximately 10% of the proposed project to reduce and avoid operational impacts including air quality, noise, and traffic-related impacts as shown in Figure 6-4, Reduced Density Alternative. As described in Section 6.1, above, the Reduced Density Alternative would include the following land uses:

- Stadium with a capacity of 35,000 (same as the proposed project)
- Up to 550 apartment units
- Up to 10,000 square feet of neighborhood commercial
- Up to 130,000 square feet of campus/office
- Up to 100 hotel rooms
- Similar parks, recreation and open space uses as the proposed project.

Comparison of Impacts to the Proposed Project

Overall, impacts under the Reduced Density Alternative would be reduced compared to the proposed project. Specifically, grading and land development-related construction activities would be similar to the proposed project in terms of earth moving and potential import of soil to raise portions of the project site out of the floodplain; however, overall construction-related impacts would be reduced due to the reduction in the amount of vertical improvements. This would reduce construction-related impacts to air quality, energy, GHG emissions, and noise.

Physical impacts would be similar to the proposed project because the project site would be disturbed through construction activities under the Reduced Density Alternative. Specifically, physical impacts to biological resources, cultural resources (including historic resources), geology and soil (including paleontological resources), and tribal cultural resources would be similar compared to the proposed project.

Operational impacts would be reduced compared to the proposed project. Under the Reduced Density Alternative, the number of daily trips to the project site would be reduced compared to the proposed project. Accordingly, operational impacts related to air quality, energy, GHG emissions, noise, and traffic would be reduced. Similarly, the Reduced Density Alternative would reduce demand for sewer and water, natural gas, electricity and telecommunications facilities; as well as for school, library, police, fire and emergency services and parks and recreational services. Therefore, impacts to public services and recreation, and utilities and utility systems would be reduced compared to the proposed project. Impacts to hazards and hazardous materials, hydrology and water quality, and wildfire would be reduced compared to the proposed project because the project site would not introduce new residents into the project area and instead convert the project site into a large, landscaped park.

Evaluation of Significant Impacts

Aesthetics and Visual Quality

CEQA states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” The proposed project includes residential and employment opportunities, is located on an infill site, and is within a TPA as identified by the City of San Diego (City of San Diego 2019). As such, any aesthetics impact the proposed project may produce cannot be considered a significant impact on the environment. In addition and as demonstrated in Section 4.1.4, construction and operation of the proposed project would not result in significant impacts to existing view, visual quality and character, or substantial conflicts with zoning and other regulations governing scenic quality. Therefore, the proposed project would not result in significant impacts to scenic views or vistas, scenic resources within a state highway, and scenic quality, or create new sources of substantial light and glare.

The Reduced Density Alternative would result in the development of the same site as the proposed project. Therefore, the exemption for projects within a TPA would still apply and no potentially significant aesthetics impacts would occur under the Reduced Density Alternative. However, due to the reduced scale of the Reduced Density Alternative compared to the proposed project, impacts to aesthetics and visual quality would be reduced compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Construction and operational activities associated with the proposed project would result in an increase in the emission of criteria pollutants and GHGs. Impacts related to project emissions of VOC, NO_x, CO, PM_{2.5}, and PM₁₀ would remain significant and unavoidable based on a comparison of the proposed project’s construction and operational emissions to the SDAPCD thresholds. Further, the proposed project would result in significant, unavoidable impacts regarding conformity with the applicable air quality plan. The proposed project was determined not to result in significant impacts related to GHG emissions.

The Reduced Density Alternative would result in reduced construction-related air quality and GHG emissions due to a reduction in buildings and associated construction activity. Operational emissions would be reduced compared to the proposed project because there would be fewer daily trips as a result of less overall development compared to the proposed project. However, the Reduced Density Alternative would hinder attainment of GHG emissions reductions goals under the City’s Climate Action Plan compared to the proposed project because it would not be developed at the same level of intensity at a TPA as the proposed project. Overall, impacts related to air quality and GHG emissions would be reduced compared to the proposed project.

Biological Resources

The proposed project would result in significant impacts to special-status species, sensitive vegetation communities, federally and state-regulated wetlands/riparian areas, and native habitat. Proposed mitigation measures would reduce the potential for direct and indirect impacts on special-status plant and wildlife species, sensitive natural communities, jurisdictional waters, and wildlife corridors by ensuring that special-status resources would be avoided to the extent possible and compensatory mitigation provided to address significant impacts. All impacts would be reduced to less than significant with implementation of recommended mitigation.

The Reduced Density Alternative would result in similar physical impacts to biological resources as the proposed project. Temporary impacts during project construction would be reduced under the Reduced Density Alternative because less overall construction would occur, resulting in a shorter construction duration. Operational impacts to biological resources, mostly in the form of bird strike impacts, would be reduced compared to the proposed project due to the lower scale of buildings that would occur. Overall, impacts to biological resources would be slightly reduced compared to the proposed project.

Cultural and Tribal Cultural Resources

The proposed project would result in potentially significant impacts to cultural resources, including significant and unavoidable impacts to historic resources as a result of the demolition of SDCCU Stadium. Impacts to archeological resources and human remains would be reduced to less than significant through implementation of mitigation measures.

Under the Reduced Density Alternative, impacts to cultural resources, including impacts to historical resources, archeological resources and human remains would be the same as the proposed project. Significant and avoidable impacts to historical resources would remain and impacts to archeological resources and human remains would be reduced to less than significant through implementation of mitigation measures. Overall, impacts to cultural and tribal cultural resources would be similar compared to the proposed project.

Energy

The proposed project would result in a less-than-significant impact related to use of energy resources because resulting energy use from implementation of the proposed project is not wasteful or unnecessary, and efficiencies are gained on a per-service population basis.

Because the Reduced Density Alternative would result in less overall development than the proposed project, including less construction activity, energy usage would be less. Impacts to energy would be reduced compared to the proposed project.

Geology/Soils

Potentially significant impacts related to liquefiable, corrosive, and unstable soils, and paleontological resources, associated with implementation of the proposed project would be fully mitigated to less than significant levels by mitigation measures outlined in Section 4.6.6 of this EIR.

Under the Reduced Density Alternative, because development of the same project site would occur, these impacts would remain potentially significant and the same mitigation measures would apply to reduce impacts to less-than-significant levels. Impacts to geology and soils, including paleontological resources, would be similar compared to the proposed project.

Hazards and Hazardous Materials

The proposed project would result in impacts related to the routine transport or disposal of hazardous materials due to the potential to encounter asbestos, ACM, LBP, and PCBs during the demolition process. Furthermore, the proposed project has the potential to create a significant hazard to the public or the environment through the routine transport or disposal of contaminated soil. Other significant impacts include impacts from existing groundwater monitoring and remediation wells on the project site, potential to expose future residential buildings to cumulative

carcinogenic risks, and potential exceedances of applicable violation of applicable FAA regulations and safety hazards. Compliance with mitigation measures would reduce identified impacts to less than significant.

The Reduced Density Alternative would result in similar development as the proposed project; however, at a reduced scale. All impacts related to hazards and hazardous materials would remain potentially significant under this alternative and the same mitigation measures would apply to reduce impacts to less than significant. Overall, impacts related to hazards and hazardous materials would be similar, but slightly reduced due to the reduction in development intensity, compared to the proposed project.

Hydrology and Water Quality

The proposed project design considered the hydrology of the project site and was designed to accommodate the future flooding of portions of the project site while providing for water quality treatment in compliance with all requirements, including implementation of the MS4 permit requirements and NPDES permit requirements. The proposed project also converts approximately half of the project site from an impervious parking lot area into parks, recreation, and open space areas, which would reduce the amount of impervious area and runoff. As a result of stormwater treatment improvements, the proposed project would result in less-than-significant impacts related to hydrology and water quality.

The Reduced Density Alternative would result in similar impacts to the proposed project. The project site would be developed similar to the proposed project. The Reduced Density Alternative would be subject to the same permit requirements and would have similar water quality treatment controls devices as the proposed project. Overall, impacts to hydrology and water quality would be similar compared to the proposed project.

Land Use and Planning

Impacts related to land use and planning would be less than significant because the proposed project would not divide and established community or result in a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As analyzed in Section 4.10, the proposed project would be consistent with SDMC Section 22.0908 and not conflict with the draft Final Mission Valley Community Plan Update, the San Diego River Park Master Plan, and the City's CAP.

The Reduced Density Alternative would develop similar land uses as the proposed project, however, at reduced levels. While these land uses would be consistent with the uses anticipated by the draft Final Mission Valley Community Plan Update, they would be significantly reduced. Further, as described above, the Reduced Density Alternative would hinder attainment of GHG emissions reductions goals under the City's CAP compared to the proposed project because it would not be developed at the same level of intensity at a TPA as the proposed project. Accordingly, impacts to land use and planning would be slightly greater compared to the proposed project.

Mineral Resources

The proposed project would not impact mineral resources because the project site does not contain known mineral resources that would be of value to the region and the residents of the state per the City of San Diego's General Plan, nor is the project site delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site.

The Reduced Density Alternative would result in similar less-than-significant impacts to mineral resources because this alternative would be constructed on the same project site. Impacts would be similar compared to the proposed project.

Noise

The proposed project would result in significant impacts related to temporary and ambient noise levels and generation of groundborne vibration. Noise impacts would be mitigated to a less-than-significant level with the exception of noise from nighttime construction activities, off-site roadway and utility improvements, and permanent operation-related noise impacts at the nearest noise sensitive land uses to the northwest of the project site.

The Reduced Density Alternative would result in reduced construction related noise due to the reduced vertical construction activity and may reduce the need for off-site improvements. Also, due to the reduced scale of buildings (besides the Stadium), more intensive construction techniques may be avoided under the Reduced Density Alternative. Operational noise levels would also be reduced compared to the proposed project because there would be fewer daily trips as a result of less overall development compared to the proposed project. Noise levels from the Stadium and Stadium events would be the same because the Stadium would be the same capacity; however, noise levels emanating from the Stadium would be greater because of the reduced scale of the surrounding development, which would not shield Stadium noise on surrounding land uses to the same extent as the proposed project. Overall, noise impacts would be reduced compared to the proposed project.

Population and Housing

The proposed project would result in growth due to the future residents and employees that would result from the project. At a cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects, would result in a significant total of the projected growth anticipated in the Mission Valley area by both SANDAG and draft Final Mission Valley Community Plan Update estimates. Therefore, the proposed project would result in a cumulatively considerable impact to population and housing that would be significant and unavoidable.

The Reduced Density Alternative would result in similar land uses as the proposed project, however, at much less intensity. Accordingly, fewer units would result in reduced impacts to population and housing at the cumulative level than the proposed project. However, the Reduced Density Alternative would hinder the City's attainment of its share of the RHNA requirements because it would preclude development of 4,600 units planned for by the latest City planning document (the Final Draft Mission Valley Community Plan Update). Overall, impacts to population and housing would be reduced compared to the proposed project, but would remain significant and unavoidable.

Public Services and Recreation

Direct impacts to public services and recreation would be less than significant with mitigation. However, cumulative impacts related to fire services, schools, emergency medical services, and recreation facilities would remain significant and unavoidable.

The Reduced Density Alternative would result in similar land uses as the proposed project, however, at much less intensity. Therefore, would not induce population growth that would generate a demand for public services or recreational facilities. The Reduced Density Alternative would not provide the same benefits to the City. Overall, impacts to public services and recreation under the Reduced Density Alternative would be reduced compared to the proposed project.

Transportation

The proposed project would result in significant traffic impacts at local intersections, roadway segments, and freeway segments by promoting an increase in traffic in the project vicinity. Compliance with mitigation measures would reduce transportation impacts; however, because many of the identified mitigation measures are outside the control of CSU to implement, **Impacts TR-1 through TR-32** would remain significant and unavoidable.

The Reduced Density Alternative would result in fewer average daily trips than the proposed project. Therefore, the Reduced Density Alternative would be expected to reduce transportation-related impacts. **Impact TR-1** would remain significant and unavoidable. Impacts would be reduced compared to the proposed project.

Utilities and Service Systems

Significant impacts would result from off-site infrastructure improvements and generation of significant amounts of construction waste by the proposed project. Construction of off-site utilities would result in noise impacts that would remain significant and unavoidable with implementation of **MM-NOI-1** and **MM-NOI-2**.

The Reduced Density Alternative would reduce demand for utilities and service systems because it would result in less than development than the proposed project. Demolition of SDCCU Stadium would generate similar amounts of solid waste during construction; however, operation of the Reduced Density alternative would reduce the amount of solid waste generated at the project site. Accordingly, the Reduced Density Alternative would reduce impacts to utilities and service systems compared to the proposed project.

Wildfire

The very northern and southern portions of the project site are located within VHFHSZs as mapped by the CAL FIRE and the SDFD. It was determined that the proposed project would result in significant impacts related to emergency response, emergency call volumes, and on-site evacuation and that the project could exacerbate wildfire risks. Proposed mitigation measures would reduce these impacts to less than significant.

The Reduced Density Alternative would result in similar impacts as the proposed project because it would be located on the same project site and develop the project site with the same land uses and intensities. However, because the Reduced Density Alternative would introduce less overall development into the project site, wildfire risks would be reduced. Overall, impacts to wildfire would be slightly reduced compared to the proposed project.

Relationship to Project Objectives

The Reduced Density Alternative would meet some of the project objectives; however, it would not meet all the project objectives or achieve the objectives to the same degree as the proposed project. Specifically, the Reduced Density Alternative would not achieve the underlying purpose of the proposed project because it would not implement the SDSU Mission Valley campus, including a new Stadium, faculty/staff/student residences and homes, academic/office/innovative uses, hotel rooms, and commercial/retail uses to support SDSU's academic, educational and cultural mission through the demolition and redevelopment of the existing SDCCU Stadium. While this alternative would develop the campus, it would not provide sufficient size and scale to support SDSU's mission because it would severely constrain growth anticipated by the University.

Further, the Reduced Density Alternative would not enable CSU to expand SDSU's education, research, entrepreneurial, innovative technology, and athletic programs to accommodate increasing demand for higher

education within a new vibrant SDSU campus, innovative research center, and Stadium venue (Objective 1); provide a SDSU Mission Valley campus with up to 1.6 million square feet for academic, office, research and development and technology transfer uses (Objective 6); enhance transit ridership and transit connections to the existing MTS Trolley Station; and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line (Objective 8), provide up to 4,600 residences to support student, faculty, staff, workforce, and affordable housing near a vibrant university village setting and in proximity to trolley and other public transportation uses to reduce reliance on automobiles (Objective 9); and generate revenue to finance project elements and further support and benefit SDSU's academic and athletic programs for the benefit of the SDSU Mission Valley campus and the San Diego region (Objective 18).

The Reduced Density Alternative would provide for a River Park and other shared parks and open space (Objective 2); and demolish the existing SDCCU Stadium (Objective 7). The Reduced Density Alternative would achieve Objective 4 (establish a sustainable, walkable, and transit-oriented SDSU campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development); Objective 10 (provide neighborhood-serving retail uses); Objective 11 (provide hotel/hospitality services); Objective 12 (provide employment opportunities); and Objective 13 (encourage on-campus learning, research, and internship opportunities for students, faculty, and staff through public-private partnerships); however, not to the same extent as the proposed project.

Lastly, the Reduced Density Alternative may facilitate Objective 15 (reflect SDSU and Mission Valley's heritage through campus planning, architecture, landscape, signage and wayfinding, and cultural and artistic design elements); Objective 16 (create a "sense of place" within the campus open space, trails, pathways, streets, walkways, and outdoor "space," which form the campus landscape); and Objective 17 (bring together diverse groups of people for intellectual, social, and recreational exchange; foster learning, creativity, collegiality, collaboration, and innovation; facilitate student, faculty, and staff activities with innovative businesses in the community; and create a sense of community derived from actively shared park and recreation space).

Feasibility

The Reduced Density Alternative would implement the same land uses as anticipated by SDMC Section 22.0908 and the Final draft Mission Valley Community Plan Update; however, the land development costs, including grading and infrastructure improvements, associated with such a project would be significant, and the future campus uses would not cover the expected costs of demolishing the existing SDCCU Stadium and the extensive grading, improvements, and landscaping required to develop this alternative.

6.4.4 Stadium and River Park Only Alternative

Description of the Stadium and River Park Only Alternative

The Stadium and River Park Only Alternative would include development of a new 35,000-seat multipurpose Stadium, demolition of the existing SDCCU Stadium, surface parking lot containing approximately 6,050 parking spaces, and revitalization and restoration of the River Park, like the proposed project. This alternative would not develop any of the other land uses proposed by the project (i.e., housing, neighborhood commercial, campus/office, or hotel). The proposed Stadium and River Park Only Alternative would be located in the same location as the proposed project and have the same design as contemplated by the proposed project, as shown in Figure 6-5, Stadium and River Park Only Alternative. This alternative would forgo development of approximately 1.6 million square feet of campus office, innovation, and research uses; up to approximately 4,600 residential units in 15

buildings; two hotels with up to approximately 400 rooms; up to approximately 95,000 square feet of commercial/retail uses; and additional open space, parks, and recreation, which were contemplated by the proposed project including the multi-use fields/tailgate park, and campus green, mall and courtyard areas. Rather, these areas would remain sheet graded and used as surface parking for the Stadium with approximately 6,050 parking spaces.

Comparison of Impacts to the Proposed Project

The Stadium and River Park Only Alternative would not result in development of any of the uses proposed by the project except for the proposed 35,000-capacity multipurpose Stadium, surface parking, and revitalization and restoration of the River Park. Therefore, impacts associated with construction and operation of this alternative would generally be reduced compared to the proposed project. This alternative would have reduced impacts related to aesthetics and visual quality, air quality and GHG emissions, biological resources, energy, hazards and hazardous materials, noise, population and housing, public services and recreation, and transportation.

Evaluation of Significant Impacts

Under the Stadium and River Park Only Alternative, the SDCCU Stadium would be demolished and a new 35,000-capacity multipurpose Stadium would be constructed. Additionally, this alternative would involve revitalization and restoration of River Park. As outlined below, this alternative would avoid potentially significant impacts associated with development of approximately 1.6 million square feet of campus office, innovation, and research uses; approximately 4,600 residential units in 15 buildings; two hotels with approximately 400 rooms; up to 95,000 square feet of commercial/retail uses; and 49.4 acres of open space, parks, and recreation, which were contemplated by the proposed project.

Aesthetics and Visual Quality

CEQA states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” The proposed project includes residential and employment opportunities, is located on an infill site, and is within a TPA as identified by the City of San Diego (City of San Diego 2019). As such, any aesthetics impact the proposed project may produce cannot be considered a significant impact on the environment. In addition and as demonstrated in Section 4.1.4, construction and operation of the proposed project would not result in significant impacts to existing views, visual quality and character, or substantial conflicts with zoning and other regulations governing scenic quality. Therefore, it was determined that the proposed project would not result in significant impacts to scenic views or vistas, scenic resources within a state highway, and scenic quality, or create new sources of substantial light and glare.

The Stadium and River Park Only Alternative would develop of the same site as the proposed project. Therefore, the exemption for projects within a TPA would still apply, and no potentially significant aesthetics impacts would occur under the Stadium and River Park Only Alternative. Overall, impacts to aesthetics and visual quality would be reduced under this alternative due to the reduction in buildings on the project site and relatively similar visual character of the project site (Stadium with surface parking) compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Construction and operational activities associated with the proposed project would result in an increase in the emission of criteria pollutants and GHGs. Impacts related to project emissions of VOC, NO_x, CO, PM_{2.5}, and PM₁₀ would remain significant and unavoidable based on a comparison of the project's construction and operational emissions to the SDAPCD thresholds. Further, the proposed project would result in significant, unavoidable impacts regarding conformity with the applicable air quality plan. The proposed project was determined not to result in significant impacts related to GHG emissions.

Under the Stadium and River Park Only Alternative, no land uses proposed by the project would be constructed other than the proposed 35,000-capacity Stadium, surface parking, and River Park. The existing SDCCU Stadium would be demolished, and a majority of the project site would be graded to construct the stadium and surface parking lot. However, air quality and GHG emissions associated with construction and operation of office, innovation, and research uses, residential buildings, hotels, and commercial/retail uses would not occur. Significant, unavoidable impacts associated with construction and operational emissions and conformity with the applicable air quality plan would be avoided or reduced to less than significant. The Stadium and River Park Only Alternative would not be consistent with the City's CAP, which establishes transit priority areas, such as the project site, and directs the development of these sites to include a mix of land uses at densities and intensities that support adjacent transit. Overall, air quality and GHG emissions would be reduced under the Stadium and River Park Only Alternative compared to the proposed project.

Biological Resources

The proposed project would result in significant impacts to special-status species, sensitive vegetation communities, federally and state-regulated wetlands/riparian areas, and native habitat. Proposed mitigation measures would reduce the potential for direct and indirect impacts on special-status plant and wildlife species, sensitive natural communities, jurisdictional waters, and wildlife corridors by ensuring that special-status resources would be avoided to the extent possible and compensatory mitigation provided to address significant impacts.

The Stadium and River Park Only Alternative would develop less of the project site compared to the proposed project's development footprint. Because this alternative would not develop office, innovation, and research uses, residential buildings, hotels, and commercial/retail uses as contemplated by the proposed project, it would result in reduced impacts related to an increase in human activity, bird strike hazards from reflective building windows, and noise, dust, and other project construction and operation activities. Overall, impacts to biological resources would be slightly reduced compared to the proposed project.

Cultural and Tribal Cultural Resources

The proposed project would result in potentially significant impacts to cultural resources, including significant and unavoidable impacts to historic resources as a result of the demolition of SDCCU Stadium. Impacts to archeological resources and human remains would be reduced to less than significant through implementation of mitigation measures.

Under the Stadium and River Park Only Alternative, impacts to cultural resources, including impacts to historical resources, archeological resources and human remains would be the same as the proposed project. The SDCCU Stadium would be demolished under this alternative so that significant and avoidable impacts to historical resources would remain the same as the proposed project. Impacts to archeological resources and human remains

would be reduced to less than significant through implementation of mitigation measures. Overall, impacts to cultural and Tribal Cultural resources would be similar compared to the proposed project.

Energy

The proposed project would result in less-than-significant impacts related to an increase in demand for energy resources because the proposed project's energy usage would not be considered wasteful or unnecessary and efficiencies are gained on a per-service population basis.

The Stadium and River Park Only Alternative would involve demolition of the existing SDCCU Stadium and construction of a new stadium. It would forgo development of office, innovation, and research uses, residential buildings, hotels, and commercial/retail uses. Therefore, it would result in less energy use than the proposed project, because fewer buildings would be constructed resulting in a reduction in energy needed to power construction equipment and vehicles, and buildings during operation. Overall, impacts related to an increase in energy demand would be reduced compared to the proposed project.

Geology/Soils

Construction of the proposed project would result in potentially significant impacts related to liquefiable, corrosive, and unstable soils, and paleontological resources. Compliance with mitigation measures **MM-GEO-1** and **MM-GEO-2** would ensure impacts would be reduced to less-than-significant levels.

Under the Stadium and River Park Only Alternative, the existing SDCCU Stadium would be demolished and a new stadium and surface parking would be developed along with restoration of River Park. Generally, development of the same project site would occur; therefore, impacts would be similar, and the same mitigation measures would be required as compared to the proposed project. Overall, impacts would be reduced compared to the proposed project because the Stadium and River Park Only alternative would result in less vertical construction.

Hazards and Hazardous Materials

The proposed project would result in impacts related to the routine transport or disposal of hazardous materials due to the potential to encounter asbestos, ACM, LBP, and PCBs during the demolition process. Compliance with mitigation measures would ensure impacts would be reduced to less than significant. Other significant impacts include impacts from existing groundwater monitoring and remediation wells on the project site that could be damaged or destroyed during construction releasing hazardous materials to the environment, potential to expose future residential buildings to cumulative carcinogenic risks, and potential exceedances of applicable FAA regulations and safety hazards. Compliance with mitigation measures would reduce identified impacts to less than significant.

The Stadium and River Park Only Alternative would result in similar impacts as the proposed project, as demolition of the existing stadium and construction of a new Stadium would still be required. However, because this alternative would not develop residential uses contemplated in the proposed project, it would not result in impacts from the potential to expose future residences to carcinogenic risks, vapor intrusion, groundwater contamination, or aircraft noise hazards. Overall, impacts to hazards and hazardous materials would be reduced compared to the proposed project.

Hydrology and Water Quality

The proposed project was designed to accommodate future flooding of portions of the project site while providing for water quality treatment in compliance with all state and local requirements, including implementation of permit

requirements and NPDES permit requirements. The proposed project also converts approximately half of the project site from an impervious parking lot area into parks, recreation, and open space areas, which would reduce the amount of impervious area and runoff. The proposed project would not violate any water quality standards, interfere with groundwater recharge, alter the existing drainage pattern of the project site, increase the rate or amount of surface runoff, or exceed the capacity of existing or planned stormwater drainage systems. All impacts related to hydrology and water quality are considered less than significant.

The Stadium and River Park Only Alternative would result in similar impacts from soil disturbance, because a similar amount of the project site would be disturbed as the proposed project. Under this alternative, only the new Stadium would be constructed; the existing SDCCU Stadium would be demolished; and River Park would be revitalized and restored. However, the introduction of a large surface parking lot would increase the amount of impervious area compared to the proposed project. The Stadium and River Park Alternative would be required to comply with all state and local requirements and the same water quality treatment requirements as the proposed project; therefore, impacts to hydrology and water quality would be less than significant, similar to the proposed project. Overall, due to the increase in impervious surface area and the additional runoff resulting from the increase in impervious area, impacts to hydrology and water quality would increase slightly compared to the proposed project.

Land Use and Planning

Impacts related to land use and planning would be less than significant because the proposed project would not divide an established community or result in a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Stadium and River Park Only Alternative would result in the same impacts to land use and planning as the proposed project. The existing SDCCU Stadium would be demolished and a new 35,000-capacity Stadium constructed, as contemplated by the proposed project. The River Park would be restored consistent with the land use designation included in the 1984 Mission Valley Community Plan. However, this alternative does not propose development of any other uses on the project site; therefore, it would be inconsistent with the draft Final Mission Valley Community Plan Update (2019) and SDMC Section 22.0908, which call for campus development of the project site. In addition, this alternative would not be consistent with the City of San Diego's CAP requirements for development in TPAs. Therefore, impacts to land use and planning would increase under the Stadium and River Park Only Alternative compared to the proposed project.

Mineral Resources

The proposed project would not impact mineral resources because the project site does not contain known mineral resources that would be of value to the region and the residents of the state, per the City of San Diego's General Plan. The project site is not delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site.

The Stadium and River Park Only Alternative would result in similar impacts to mineral resources because this alternative would be constructed on the same project site. Overall, impacts to mineral resources would be the same compared to the proposed project.

Noise

The proposed project would result in significant impacts related to short-term temporary and ambient noise levels and generation of groundborne vibration associated with construction activities. Noise impacts would be mitigated to a less-than-significant level with the exception of noise from nighttime construction activities, off-site roadway and utility improvements, and permanent operation-related noise impacts at the nearest noise sensitive land uses to the northwest of the project site. There is no feasible mitigation available, and these impacts remain significant and unavoidable.

The Stadium and River Park Only Alternative would result in similar noise impacts as the proposed project because the existing SDCCU Stadium would be demolished and a new Stadium constructed, as contemplated by the proposed project. However, noise impacts from construction of campus office, innovation, and research uses, residential buildings, hotels, and commercial/retail uses would be reduced under this alternative. Because residential uses would not be constructed under this alternative, on-site impacts to noise sensitive land uses would not occur. Further, under the Stadium and River Park Only Alternative, less traffic would be generated on a daily basis, and therefore, off-site traffic noise impacts would be reduced to less than significant. Stadium-generated noise impacts would be greater compared to the proposed project because there would be no surrounding buildings with residential or hotel uses that would serve as noise barriers to surrounding noise sensitive land uses, particularly to the north of the Stadium. Overall, noise impacts under the Stadium and River Park Only Alternative would be reduced compared to the proposed project.

Population and Housing

The proposed project would result in growth due to the future residents and employees that would result from the proposed project. At a cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects in the area, would result in a significant increase in the amount of projected growth anticipated in the Mission Valley area by both SANDAG and draft Final Mission Valley Community Plan Update estimates. Therefore, the proposed project would result in a cumulatively considerable impact to population and housing that would be significant and unavoidable.

The Stadium and River Park Only Alternative would not involve development of residential uses. This would reduce the population increase estimated to occur under the proposed project from on-site residents, and the cumulative significant and unavoidable impact would be reduced to less than significant. Additionally, this alternative would not include construction and operation of office, innovation, and research uses, hotels, and commercial/retail uses. As a result, this alternative would not result in a permanent new population and would decrease the number of employees than under the proposed project. The Stadium and River Park Only Alternative would not assist the City of San Diego with meeting RHNA requirements because it would not provide for up to approximately 460 affordable units. Overall, impacts to population and housing would be reduced compared to the proposed project.

Public Services and Recreation

Direct impacts to public services and recreation would be less than significant with mitigation. However, cumulative impacts related to fire services, schools, emergency medical services, and recreation facilities would remain significant and unavoidable.

The Stadium and River Park Only Alternative does not include a new permanent residential population and there would be fewer employees compared to the proposed project; therefore, demand for fire services, schools,

emergency medical services, and recreational facilities would be decreased. Cumulative impacts to public services would be reduced to less than significant under this alternative. Overall, impacts to public services and recreation under the Stadium and River Park Only Alternative would be reduced compared to the proposed project.

Transportation

The proposed project would result in significant traffic impacts at local intersections, roadway segments, and freeway segments by promoting an increase in traffic in the project vicinity. Compliance with mitigation measures would reduce transportation impacts; however, because many of the identified mitigation measures are outside the control of the CSU to implement, **Impacts TR-1 through TR-32** would remain significant and unavoidable.

The Stadium and River Park Only Alternative would result in reduced traffic impacts because it would not develop campus land uses contemplated by the proposed project, with the exception of the new 35,000-capacity Stadium and River Park. This would reduce the amount of vehicle trips traveling to and from the project site, and thereby reduce traffic impacts at local intersections, roadway segments, and freeway segments. **Impact TR-1** would remain significant and unavoidable. Impacts to transportation would be reduced under the Stadium and River Park Only Alternative compared to the proposed project.

Utilities and Service Systems

Significant impacts would result from construction of off-site infrastructure improvements and generation of significant amounts of construction waste by the proposed project. Construction of off-site utilities would result in noise impacts that would remain significant and unavoidable even with implementation of mitigation measures.

The Stadium and River Park Only Alternative would result in similar impacts as the proposed project because it would result in similar off-site infrastructure improvements and generate significant amounts of construction waste due to demolition of the existing stadium and construction of a new stadium. Because this alternative would not include construction of campus office, innovation, and research uses, hotels, and commercial/retail uses the amount of solid waste generated would be less than the proposed project. This alternative would reduce demand on local utilities and service systems because it would involve less development as compared to the proposed project. Overall, impacts to utilities and service systems under the Stadium and River Park Only Alternative would be reduced compared to the proposed project.

Wildfire

The very northern and southern portions of the project site are located within VHFHSZs as mapped by CAL FIRE and SDFD. It was determined that the proposed project would result in significant impacts related to emergency response, emergency call volumes, and on-site evacuation and that the proposed project could exacerbate wildfire risks. Proposed mitigation measures would reduce these impacts to less than significant.

The Stadium and River Park Only Alternative would result in similar impacts as the proposed project because it would be located on the same project site and would be subject to the same requirements as the proposed project. However, because the Stadium and River Park Only Alternative does not include permanent residents and would reduce the number of employees on the project site, impacts related to emergency response, emergency call volumes, and on-site evacuation would be reduced compared to the proposed project.

Relationship to Project Objectives

The Stadium and River Park Only Alternative would meet some of the project objectives; however, it would not meet all the project objectives or achieve the objectives to the same degree as the proposed project. Specifically, the Stadium and River Park Only Alternative would not achieve the underlying purpose of the proposed project because it would not implement the SDSU Mission Valley campus, including a new Stadium, faculty/staff/student residences and homes, academic/office/innovative uses, hotel rooms, and commercial/retail uses to support SDSU's academic, educational and cultural mission through the demolition and redevelopment of the existing SDCCU Stadium.

The Stadium and River Park Only Alternative would not enable CSU to expand SDSU's education, research, entrepreneurial, innovative technology, and athletic programs to accommodate a growing student body within a vibrant university campus, innovative research center, and Stadium venue proximate to SDSU's main campus (Objective 1); provide an SDSU Mission Valley campus with up to 1.6 million square feet for academic, office, research and development and technology transfer uses (Objective 6); enhance transit ridership and transit connections to the existing MTS Trolley Station; and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line (Objective 8); provide up to 4,600 residences with a mix of housing, including student, faculty, staff, workforce, and affordable housing near a vibrant university village atmosphere and in proximity to trolley and other public transportation uses to reduce reliance on automobiles (Objective 9); provide neighborhood-serving retail uses (Objective 10); provide hotel/hospitality services (Objective 11); provide employment opportunities at the same level as the proposed project (Objective 12); encourage on-campus learning, research, and internship opportunities for students, faculty, and staff through public-private partnerships (Objective 13); and generate revenue to finance project elements and further support and benefit SDSU's academic and athletic programs for the SDSU Mission Valley campus and the San Diego region (Objective 18).

The Stadium and Park Only Alternative would also not establish a sustainable, walkable, and transit-oriented SDSU campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development (Objective 4); reflect SDSU and Mission Valley's heritage through campus planning, architecture, landscape, signage and wayfinding, and cultural and artistic design elements (Objective 15); or bring together diverse groups of people for intellectual, social, and recreational exchange; foster learning, creativity, collegiality, collaboration, and innovation; facilitate student, faculty, and staff activities with innovative businesses in the community; and create a sense of community derived from actively shared park and recreation space (Objective 17).

The Stadium and River Park Only Alternative would provide for a River Park and other shared parks and open space (Objective 2); demolish the existing stadium (Objective 7); and would help achieve a "sense of place" within the campus open space, trails, pathways, streets, walkways, and outdoor "space," which form the campus landscape (Objective 16), but not to the same degree as the proposed project.

Feasibility

The Stadium and River Park Only Alternative would be consistent with the 1984 Mission Valley Community Plan and include uses permitted under the draft Final Mission Valley Community Plan Update. However, the Stadium and River Park Alternative would conflict with SDMC Section 22.0908 because it would not develop the following uses:

- Facilities for educational, research, entrepreneurial, and technology programs within a vibrant campus village and research park, constructed in phases and to include:
 - Academic and administrative buildings and classrooms;
 - Commercial, technology, and office space;
 - Retail uses serving neighborhood residents and businesses;
 - Hotels;
 - Faculty and staff housing;
 - Graduate and undergraduate student housing;
 - Apartment-style homes for the local community;
 - Other market-rate, workforce, and affordable homes; and
 - Trolley and other public transportation uses and improvements.

Further, similar to the Reduced Density Alternative, the land development costs, including grading and infrastructure improvements, associated with such a project would be significant, and the future use as a Stadium would not cover the expected costs of demolishing the existing SDCCU Stadium and the extensive grading, improvements, and landscaping required to develop this alternative. Similar to the All Park Alternative considered and rejected, to finance the Stadium and River Park Only Alternative, a bond measure may be put on a future ballot for the residents of the City of San Diego to vote on; or fundraising or other financing measures including sale(s) of other city-owned property or collection of significantly increased parks development impacts fees may be used in combination to fund such improvements.

6.4.5 Alternative Stadium Location Alternative

Description of the Alternative Stadium Location Alternative

The Alternative Stadium Location Alternative entails construction of the 35,000-capacity Stadium on SDSU's existing main campus, east of College Avenue, south of I-8. The SDSU Mission Valley campus proposed project's non-Stadium land uses would be developed at the Mission Valley campus project site, including 4,600 residential units, approximately 1,565,000 square feet of office space, approximately 95,000 square feet of commercial/retail, up to 400 hotel rooms, and approximately 86 acres of parks, recreation and open space. To accommodate such land uses, the existing SDCCU Stadium would be demolished (see Figure 6-6A). To accommodate the Stadium in this location an existing parking lot would be removed, Figure 6-6B depicts the location of the Stadium under this alternative. Accordingly, all event traffic associated with the proposed project would instead occur around the existing SDSU campus rather than the SDSU Mission Valley campus project site.

Comparison of Impacts to the Proposed Project

The Alternative Stadium Location Alternative would produce similar changes to the project site as the proposed project, with the exception of constructing a new Stadium at the existing SDSU campus rather than at the project site. Construction and operational activities under this alternative would result in criteria air pollutant and GHG emissions, although these emissions would still be generated at the existing SDSU campus without construction of a new Stadium on-site. Impacts to special-status species, sensitive vegetation communities, federally and state-regulated wetlands/riparian areas, and native habitat would still occur under this alternative. As this alternative would largely occur on the same project site, significant impacts related to liquefiable, corrosive, and unstable soils, and paleontological resources would still occur. Impacts related to the potential to encounter asbestos, ACM, LBP, and PCBs during the demolition process would occur under this alternative because the existing SDCCU Stadium would be demolished. This alternative would also result in noise impacts associated with construction activities, and would introduce construction noise in a new location at the existing SDSU campus compared to the proposed project. The alternative would result in growth due to an increase in future residents and employees that would result from the proposed project. This alternative would still result in significant traffic impacts at local intersections, roadway segments, and freeway segments by promoting an increase in traffic in the project area, and result in additional traffic at off-site roadways and intersections near the existing SDSU campus due to the operation of a new, 35,000-capacity stadium east of College Boulevard. Additionally, new impacts would result from off-site infrastructure improvements. Overall, project impacts would not be avoided under the Alternative Stadium Location Alternative and may increase compared to the proposed project.

Evaluation of Significant Impacts

Aesthetics and Visual Quality

CEQA states that “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project within a transit priority area shall not be considered significant impacts on the environment.” The proposed project includes residential, and employment opportunities; is located on an infill site; and is within a TPA as identified by the City of San Diego (City of San Diego 2019). As such, any aesthetics impact the proposed project may produce cannot be considered a significant impact on the environment. In addition and as demonstrated in Section 4.1.4, construction and operation of the proposed project would not result in significant impacts to existing views, visual quality and character, or substantial conflicts with zoning and other regulations governing scenic quality. Therefore, it was determined that the proposed project would not result in significant impacts to scenic views or vistas, scenic resources within a state highway, scenic quality, and new sources of substantial light and glare.

Under the Alternative Stadium Location Alternative, a similar level of development would occur; however, it would be spread across two sites: the project site and the SDSU campus. The visual impacts at the project site would be slightly reduced with the absence of a new, 35,000-capacity Stadium, which would allow for less intense vertical development under this alternative compared to the proposed project. However, the introduction of a new, 35,000-capacity Stadium within the existing SDSU campus east of College Avenue, south of I-8 would result in new aesthetic and visual quality impacts in an area not affected by the proposed project. Therefore, aesthetics and visual impacts would be slightly greater under the Alternative Stadium Location Alternative compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Construction and operational activities associated with the proposed project would result in an increase in the emission of criteria pollutants and GHGs. Impacts related to project emissions of VOC, NO_x, CO, PM_{2.5}, and PM₁₀

would remain significant and unavoidable based on a comparison of the proposed project's construction and operational emissions to the SDAPCD thresholds. Further, the proposed project would result in significant, unavoidable impacts regarding conformity with the applicable air quality plan. The proposed project was determined not to result in significant impacts related to GHG emissions.

Under the Alternative Stadium Location Alternative, a similar level of development would occur; however, it would be spread across two sites: the project site and the SDSU campus. The air quality impacts at the project site associated with construction and operation would be slightly reduced compared to the proposed project due to the absence of a new, 35,000-capacity Stadium. However, the introduction of a new, 35,000-capacity Stadium within the existing SDSU campus would result in new air quality impacts in an area not affected by the proposed project. This would result in removal of an existing parking lot, site grading, and construction of a stadium that would result in an increase in construction emissions. Therefore, construction impacts on air quality would be greater under the Alternative Stadium Location Alternative compared to the proposed project, and the significant and unavoidable construction and operational impacts would still occur under this alternative. Because the operational uses would be similar under the proposed project and the Alternative Stadium Location Alternative, operational impacts to air quality and GHGs would be similar under this alternative compared to the proposed project. Overall, air quality and GHG emissions impacts would be slightly greater under the Alternative Stadium Location Alternative compared to the proposed project.

Biological Resources

The proposed project would result in significant impacts to special-status species, sensitive vegetation communities, federally and state-regulated wetlands/riparian areas, and native habitat. Proposed mitigation measures would reduce the potential for direct and indirect impacts on special-status plant and wildlife species, sensitive natural communities, jurisdictional waters, and wildlife corridors by ensuring that special-status resources would be avoided to the extent possible and compensatory mitigation provided to address unavoidable significant impacts.

The Alternative Stadium Location Alternative would result in the same impacts to biological resources as the proposed project at the project site. Temporary impacts during project construction would be slightly reduced under the Alternative Stadium Location Alternative because there would not be construction of a new Stadium on the project site. Operational impacts to biological resources, mostly in the form of bird strike impacts, would be slightly reduced compared to the proposed project because vertical development would be less intense at the project site. However, the off-site Stadium on the SDSU campus would result in potentially new biological impacts compared to the proposed project due to the construction of a new 35,000-capacity Stadium on the SDSU campus. Overall, impacts to biological resources would be similar compared to the proposed project.

Cultural and Tribal Cultural Resources

The proposed project would result in potentially significant impacts to cultural resources, including significant and unavoidable impacts to historic resources as a result of demolition of SDCCU Stadium. Impacts to archeological resources and human remains would be reduced to less than significant through implementation of mitigation measures.

Under the Alternative Stadium Location Alternative, impacts to cultural resources, including impacts to historic resources, archeological resources, and human remains would be the same as the proposed project because the existing SDCCU Stadium would be demolished, and generally the project site would be disturbed. Implementation of mitigation measures would reduce impacts to archeological resources and human remains; however, impacts to historic resources associated with demolishing the SDCCU Stadium would still occur. Construction of the stadium

on the SDSU campus could result in additional potentially significant impacts to cultural resources compared to the proposed project due to disturbance in a new area. Overall, impacts to cultural and Tribal Cultural resources would be similar compared to the proposed project

Energy

The proposed project would result in a less-than-significant impact related to the increased demand for energy resources because energy use associated with implementation of the proposed project is not determined to be wasteful or unnecessary, and efficiencies are gained on a per-service population basis due to compliance with new building codes that require energy efficiency.

Under the Alternative Stadium Location, a similar level of development would occur; however, it would be spread across two sites: the project site and the SDSU campus. The increase in energy demand associated with new development on the project site under this alternative would be slightly reduced compared to the proposed project due to the absence of a new, 35,000-capacity Stadium. However, the introduction of a new, 35,000-capacity Stadium within the existing SDSU campus would result in an increase in energy demand on the campus. This would also result in removal of an existing parking lot, site grading and construction activities in a new area, resulting in increased construction emissions. Therefore, energy impacts associated with construction activities would be greater under this alternative compared to the proposed project. Because operational uses would be similar under the proposed project and the Alternative Stadium Location Alternative, operational impacts would be similar. Overall, impacts to energy would be slightly greater under the Alternative Stadium Location Alternative compared to the proposed project.

Geology/Soils

Potentially significant impacts related to liquefiable, corrosive, and unstable soils, and paleontological resources, associated with construction of the proposed project would be fully mitigated to less-than-significant levels by mitigation measures outlined in Section 4.6.6 of this EIR.

The Alternative Stadium Location Alternative would result in the same impacts to geology and soils as the proposed project for development at the project site. Temporary impacts during project construction would be slightly reduced under this alternative because a new Stadium would not be constructed on the project site. However, construction of the Stadium on the SDSU campus could result in additional impacts to geology and soils and paleontological resources compared to the proposed project due to development in a new area. The Alternative Stadium Location site would be subject to the same mitigation as the proposed project to reduce impacts to less than significant. Overall, impacts to geology and soils would be slightly increased compared to the proposed project.

Hazards and Hazardous Materials

The proposed project would result in impacts related to the routine transport or disposal of hazardous materials due to the potential to encounter asbestos, ACM, LBP, and PCBs during the demolition process. Furthermore, the proposed project has the potential to create a significant hazard to the public or the environment through exposure to contaminated groundwater, disturbance to existing groundwater monitoring and remediation wells on the project site, potential to expose future residences to cumulative carcinogenic risks, and potential exceedances of applicable FAA regulations and safety hazards. Compliance with mitigation measures would reduce identified impacts to less than significant.

Development of the project site would result in the same impacts to hazards and hazardous materials, and the same mitigation measures would apply to reduce impacts to less than significant. The Alternative Stadium Location Alternative could result in potentially new impacts to hazards and hazardous materials due to construction of a new, 35,000-capacity Stadium on the existing SDSU campus and removal of an existing parking lot. Overall, impacts related to hazards and hazardous materials would be slightly increased compared to the proposed project.

Hydrology and Water Quality

The proposed project considered the hydrology of the project site and was designed to accommodate future flooding of portions of the project site while providing for water quality treatment in compliance with all requirements, including implementation of the MS4 permit requirements and NPDES permit requirements. The proposed project also converts approximately half of the project site from an impervious parking lot area into parks, recreation, and open space areas, which would reduce the amount of impervious area and runoff. The project's proposed drainage and stormwater treatment improvements would ensure impacts related to hydrology and water quality remain less than significant.

The Alternative Stadium Location Alternative would result in similar impacts at the project site compared to the proposed project because it would result in a similar amount of site development and creation of impervious surface area and would implement the same water quality treatment measures and best management practices. However, construction of the Stadium on the SDSU campus could result in additional impacts to hydrology and water quality compared to the proposed project due to an increase in stormwater runoff and capacity of existing stormwater infrastructure on the campus. The Alternative Stadium Location site would be subject to the same permit requirements as the proposed project to reduce impacts to less than significant. Overall, impacts to hydrology and water quality would be slightly increased compared to the proposed project.

Land Use and Planning

Impacts related to land use and planning would be less than significant because the proposed project would not divide an established community or result in a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As analyzed in Section 4.10, the proposed project would be consistent with SDMC Section 22.0908 and not conflict with the Final Draft of the Mission Valley Community Plan Update, the San Diego River Park Master Plan, or the City's CAP.

The Alternative Stadium Location Alternative would not result in impacts to land use and planning associated with developing the project site because development of this site is consistent with existing land use and zoning regulations, and would not conflict with the Final Draft of the Mission Valley Community Plan Update, the San Diego River Park Master Plan, or the City's CAP, the same as the proposed project. However, the Alternative Stadium Location Alternative would conflict with SDMC Section 22.0908(j), which provides that "Such sale shall result in the demolition, dismantling, and removal of the Existing Stadium and *construction of a new Joint Use Stadium*" (emphasis added). Under this alternative the existing SDCCU Stadium would be demolished, but a new Stadium would be constructed on the SDSU campus, not on the project site as specified in SDMC Section 22.0908. Constructing a new Stadium on the SDSU campus would require an amendment to the SDSU Campus Master Plan. Accordingly, impacts to land use and planning would be slightly greater compared to the proposed project.

Mineral Resources

The proposed project would not impact mineral resources because the project site does not contain known mineral resources that would be of value to the region and the residents of the state, per the City of San Diego's General Plan. In addition, the project site is not delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site.

The Alternative Stadium Location Alternative would result in similar impacts to mineral resources because this alternative would develop the project site. Impacts to mineral resources at the Stadium on the SDSU campus are also anticipated to be less than significant because the campus does not contain mineral resources that would be of value to the region or the state. Therefore, impacts would be similar compared to the proposed project.

Noise

The proposed project would result in significant impacts related to short-term temporary and ambient noise levels and generation of groundborne vibration associated with construction and operation. Noise impacts would be mitigated to a less-than-significant level with the exception of noise from nighttime construction activities, off-site roadway and utility improvements, and permanent operation-related noise impacts at the nearest noise sensitive land uses located northwest of the project site.

The Alternative Stadium Location Alternative would result in similar impacts as the proposed project because it would demolish the existing SDCCU Stadium and develop the same land uses and intensities as the proposed project, with the exception of construction of a new Stadium. Noise associated with nighttime construction activities and off-site road and utility improvements would be the same under this alternative, and the impacts would remain significant and unavoidable. Not including a Stadium on the project site would also reduce operational noise levels for adjacent land uses during stadium events, and these impacts due to stadium events after 10:00 p.m. would be avoided at the project site. Noise levels resulting from construction and operation of a 35,000-capacity Stadium on the SDSU campus would be greater than the proposed project because it would introduce more traffic and event-related noise to the campus, which could exceed acceptable thresholds. Overall, noise impacts would be slightly increased compared to the proposed project.

Population and Housing

The proposed project would result in an increase in growth due to future residents and employees that would result from the project. At a cumulative level, the proposed project, in conjunction with other proposed residential and mixed-use projects in the area, would result in a significant increase in the amount of projected growth anticipated in the Mission Valley area by both SANDAG and draft Final Mission Valley Community Plan Update estimates. Therefore, the proposed project would result in a cumulatively considerable impact to population and housing that would be significant and unavoidable.

The Alternative Stadium Location Alternative would result in the same impacts as the proposed project because it would involve development of the same land uses and intensities as the proposed project, and would result in the same increase in a permanent population and generally the same number of new employees. Impacts to population and housing would be similar compared to the proposed project.

Public Services and Recreation

Direct impacts to public services and recreation due to implementation of the proposed project would be less than significant with mitigation. However, cumulative impacts related to the proposed project's increase in demand for fire services, schools, emergency medical services, and recreation facilities would remain significant and unavoidable.

The Alternative Stadium Location Alternative would result in the generally the same impacts as the proposed project because it would involve development of the same land uses and intensities as the proposed project and would result in the same population increase and demand for public services and recreation. The cumulative impact associated with increased demand for services and the potential for construction of new facilities would remain significant and unavoidable the same as the proposed project. However, because the new Stadium would be located on the SDSU campus, access to emergency facilities and response to the new Stadium may be increased compared to the proposed project. Therefore, impacts to public services and recreation could be slightly increased compared to the proposed project.

Transportation

The proposed project would result in significant traffic impacts at local intersections, roadway segments, and freeway segments by promoting an increase in traffic in the project vicinity. Compliance with mitigation measures would reduce transportation impacts; however, because many of the identified mitigation measures are outside the control of the CSU to implement, **Impacts TR-1 through TR-32** would remain significant and unavoidable.

The Alternative Stadium Location Alternative would result in similar impacts on non-event days as the proposed project as it proposes development of the same land uses and intensities as the proposed project. Transportation impacts on event-days would be reduced on the project site (**Impacts TR-1, TR-28A through TR-28Q, TR-29A through TR-29R, TR-30A through TR-30D, and TR-31**); however, these impacts would increase around the off-site Stadium. Because this alternative would introduce traffic impacts in an area that would not otherwise experience new traffic as a result of the proposed project, transportation impacts would be greater under the Alternative Stadium Location Alternative.

Utilities and Service Systems

Construction activities under the proposed project would result in significant impacts associated with off-site infrastructure improvements and generation of significant amounts of construction waste and need for adequate landfill capacity. Construction of off-site utilities would result in noise impacts that would remain significant and unavoidable even with implementation of mitigation measures.

The Alternative Stadium Location Alternative would result in generally the same impacts as the proposed project because it would require demolition of the existing SDCCU Stadium and development of the same land uses and intensities as the proposed project generating the same amount of solid waste. Under this alternative the same population increase and demand for utilities and service systems would occur; however, because the new Stadium would be located on the SDSU campus, the increase in demand for water supply, wastewater capacity, and stormwater facilities to serve the new Stadium could result in impacts compared to the proposed project. Construction of off-site utilities would still be required under this alternative resulting in noise impacts that would remain significant and unavoidable, the same as the proposed project. Therefore, impacts to utilities and service systems would be slightly increased compared to the proposed project.

Wildfire

The very northern and southern portions of the project site are located within VHFHSZs as mapped by CAL FIRE and SDFD. It was determined that the proposed project would result in significant impacts related to emergency response, emergency call volumes, and on-site evacuation, and that the proposed project could exacerbate wildfire risks. Proposed mitigation measures would reduce these impacts to less than significant.

The Alternative Stadium Location Alternative would result in similar impacts as the proposed project because a majority of the land uses would be located on the same project site. Impacts related to emergency response, emergency call volumes, and on-site evacuation, including for the Stadium located on the SDSU campus, could be mitigated to less than significant, the same as the proposed project. Impacts would be similar compared to the proposed project.

Relationship to Project Objectives

The Alternative Stadium Location Alternative would meet some of the project objectives; however, it would not meet all the project objectives or achieve the objectives to the same degree as the proposed project. Specifically, the Alternative Stadium Location Alternative would not achieve the underlying purpose of the proposed project because it would not implement the SDSU Mission Valley campus, including a new Stadium, faculty/staff/student residences and homes, academic/office/innovative uses, hotel rooms, and commercial/retail uses to support SDSU's academic, educational and cultural mission through the demolition and redevelopment of the existing SDCCU Stadium. While this alternative would develop the SDSU Mission Valley campus, it would not provide the new Stadium on the project site.

Further, the Alternative Stadium Location Alternative would not enable the CSU to expand SDSU's education, research, entrepreneurial, innovative technology, and athletic programs to accommodate increasing demand for higher education within a new vibrant SDSU campus, innovative district, *and stadium venue* (Objective 1).

The Alternative Stadium Location Alternative would provide an SDSU Mission Valley campus with up to 1.6 million square feet for academic, office, research and development, and technology transfer uses (Objective 6); enhance transit ridership and transit connections to the existing MTS Trolley Station; and accommodate the future alignment for the potential future construction of the MTS Trolley Purple Line (Objective 8); provide up to 4,600 residences with a mix of housing, including student, faculty, staff, workforce, and affordable housing near a vibrant university village atmosphere and in proximity to trolley and other public transportation uses to reduce reliance on automobiles (Objective 9); generate revenue to finance project elements and further support and benefit SDSU's academic and athletic programs for the SDSU Mission Valley campus and the San Diego region (Objective 18); provide for a River Park and other shared parks and open space (Objective 2); and demolish the existing SDCCU Stadium (Objective 7). The Alternative Stadium Location Alternative would achieve Objective 4 (establish a sustainable, walkable, and transit-oriented SDSU Mission Valley campus with enriched pedestrian spaces, walking paths and trails, and active and passive open space and recreation areas, including a pedestrian-scale, vibrant mix of campus uses and development); Objective 10 (provide neighborhood-serving retail uses), Objective 11 (provide hotel/hospitality services); Objective 12 (provide employment opportunities), and Objective 13 (encourage on-campus learning, research, and internship opportunities for students, faculty, and staff through public-private partnerships); however, not to the same degree as the proposed project.

Lastly, the Alternative Stadium Location Alternative would facilitate Objective 15 (reflect SDSU and Mission Valley's heritage through campus planning, architecture, landscape, signage and wayfinding, and cultural and artistic

design elements), Objective 16 (create a “sense of place” within the campus open space, trails, pathways, streets, walkways, and outdoor “space,” which form the campus landscape), and Objective 17 (bring together diverse groups of people for intellectual, social, and recreational exchange; foster learning, creativity, collegiality, collaboration, and innovation; facilitate student, faculty, and staff activities with innovative businesses in the community; and create a sense of community derived from actively shared park and recreation space).

Feasibility

The Alternative Stadium Location Alternative would conflict with SDMC Section 22.0908, because it would not develop the new Stadium on the project site. Rather, this alternative would provide a new, 35,000-capacity Stadium on the existing SDSU campus, increasing impacts associated with traffic, noise, air emissions, biological and cultural resources, geology and soils, and visual resources at a new, off-site location. Furthermore, this alternative would not achieve all of the project objectives, nor meet the objectives to the same degree as the proposed project.

6.5 Environmentally Superior Alternative

The Environmentally Superior Alternative is the No Project Alternative. In accordance with CEQA, if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative among the other alternatives (Section 15126(e)(2)). Table 6-1 provides a summary comparison of the significant impacts attributable to each of the alternatives relative to the proposed project.

Based on the analysis presented in this chapter and summarized in Table 6-1, the Stadium and River Park Alternative is considered the Environmentally Superior Alternative.

Table 6-1. Comparison of Proposed Project's Significant Impacts to Alternatives

Environmental Impacts	Proposed Project	No Project	Stadium Re-Use Alternative	Reduce Density Alternative	Stadium and River Park Alternative	Alternative Stadium Location Alternative
Aesthetics	Less than Significant Project-level and Cumulative Impacts	Less than proposed project; No Impact.	Greater than proposed project; remains less than significant.	Less than proposed project; remains less than significant.	Less than proposed project; remains less than significant.	Slightly greater than proposed project; remains less than significant.
Air Quality	Significant And Unavoidable Project-level and Cumulative Impacts	Less than proposed project; No Impact.	Similar to proposed project; remains significant and unavoidable.	Less than proposed project; remains significant and unavoidable.	Less than proposed project; remains significant and unavoidable.	Slightly greater than proposed project remains significant and unavoidable.
Biological Resources	Less than Significant with Mitigation	Less than proposed project; No Impact.	Similar to proposed project; remains significant but mitigable.	Slightly less than proposed project; remains significant but mitigable.	Slightly less than proposed project; remains significant but mitigable.	Similar to proposed project; remains significant but mitigable.
Cultural Resources	Less than Significant with Mitigation	Less than proposed project; No Impact.	Less than proposed project; reduced to less than significant.	Similar to proposed project; remains significant but mitigable.	Similar to proposed project; remains significant but mitigable.	Similar to proposed project; remains significant but mitigable.
Energy	Less than Significant Project-level and Cumulative Impacts.	Less than proposed project; No Impact.	Slightly greater than proposed project; remains less than significant.	Less than proposed project; remains less than significant.	Less than proposed project; remains less than significant.	Slightly greater than proposed project; remains less than significant.
Geology and Soils	Less than Significant with Mitigation	Less than proposed project; No Impact.	Similar to proposed project; remains significant but mitigable.	Similar to proposed project; remains significant but mitigable.	Less than proposed project; remains significant but mitigable.	Slightly greater than proposed project; remains significant but mitigable.
Greenhouse Gas Emissions	Less than Significant Project-level and Cumulative Impacts	Less than proposed project; No Impact.	Similar to the proposed project; remains less than significant.	Less than proposed project; remains less than significant.	Less than proposed project; remains less than significant.	Slightly greater than proposed project; remains significant but mitigable.
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less than proposed project; No Impact	Similar to proposed project; remains significant but mitigable	Slightly less than proposed project; remains significant but mitigable.	Less than proposed project; remains significant but mitigable.	Slightly greater than proposed project; remains significant but mitigable.

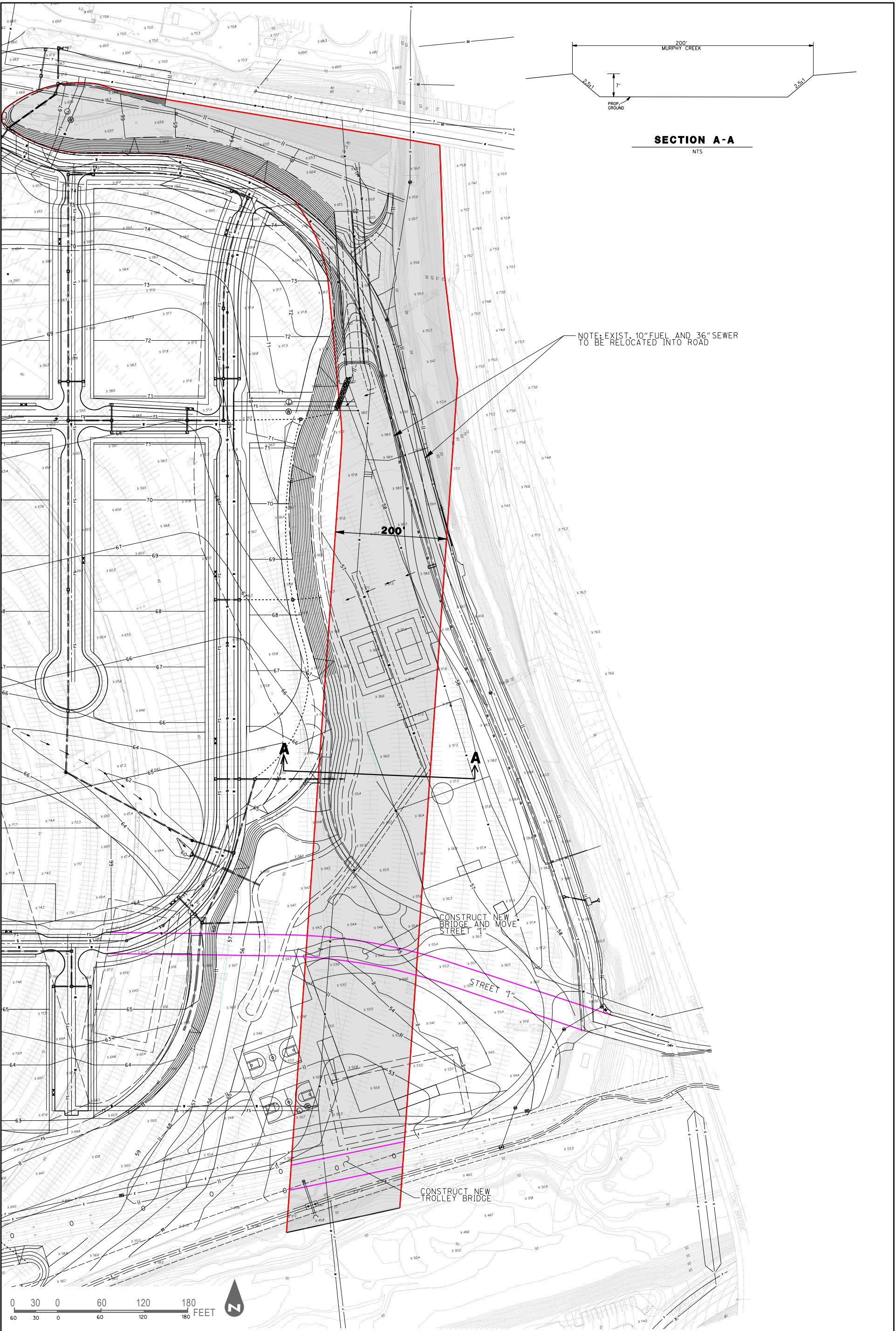
Table 6-1. Comparison of Proposed Project's Significant Impacts to Alternatives

Environmental Impacts	Proposed Project	No Project	Stadium Re-Use Alternative	Reduce Density Alternative	Stadium and River Park Alternative	Alternative Stadium Location Alternative
Hydrology and Water Quality	Less than Significant Project-level and Cumulative Impacts	Greater than proposed project; less than significant	Similar to proposed project; remains less than significant.	Similar to proposed project; remains less than significant.	Slightly greater than proposed project; remains less than significant.	Slightly greater than proposed project; remains less than significant.
Land Use and Planning	Less than Significant Project-level and Cumulative Impacts	Greater than proposed project; less than significant	Slightly greater than proposed project; remains less than significant.	Slightly greater than proposed project; remains less than significant.	Greater than proposed project; remains less than significant.	Slightly greater than proposed project; remains less than significant.
Mineral Resources	Less than Significant Project-level and Cumulative Impacts	Less than proposed project; No Impact	Similar to proposed project; remains less than significant.	Similar to proposed project; remains less than significant.	Similar to proposed project; remains less than significant.	Similar to proposed project; remains less than significant.
Noise	Significant and Unavoidable Project-level and Cumulative Impacts	Less than proposed project; No Impact	Less than proposed project; remains significant and unavoidable	Less than proposed project; remains significant and unavoidable.	Less than proposed project; remains significant and unavoidable.	Slightly greater than proposed project; remains significant and unavoidable.
Population and Housing	Significant and Unavoidable Cumulative Impacts	Less than proposed project; No Impact	Similar to proposed project; remains significant and unavoidable	Less than proposed project; remains significant and unavoidable.	Less than proposed project; less than significant impact.	Similar to proposed project; remains significant and unavoidable.
Public Services and Recreation	Significant and Unavoidable Cumulative Impacts	Less than proposed project; No Impact	Similar to proposed project; remains significant and unavoidable	Less than proposed project; less than significant impact.	Less than proposed project; less than significant impact.	Slightly greater than proposed project; remains significant and unavoidable.
Transportation and Traffic	Significant and Unavoidable Project-level and Cumulative Impacts	Less than proposed project; No Impact	Similar to the proposed project; remains significant and unavoidable	Less than proposed project; remains significant and unavoidable.	Less than proposed project; significant but mitigable impact.	Greater than proposed project; remains significant and unavoidable.
Tribal Cultural Resources	Less than Significant with Mitigation	Less than proposed project; No Impact	Similar to proposed project; remains significant but mitigable	Similar to proposed project; remains significant but mitigable.	Similar to proposed project; remains significant mitigable.	Similar to proposed project; remains significant but mitigable.

Table 6-1. Comparison of Proposed Project's Significant Impacts to Alternatives

Environmental Impacts	Proposed Project	No Project	Stadium Re-Use Alternative	Reduce Density Alternative	Stadium and River Park Alternative	Alternative Stadium Location Alternative
Utilities and Services Systems	Less than Significant with Mitigation	Less than proposed project; No Impact	Similar to proposed project; remains significant but mitigable.	Less than proposed project; remains significant but mitigable.	Less than proposed project; remains significant but mitigable.	Slightly greater than proposed project; remains significant but mitigable.
Wildfire	Less than Significant Project-level and Cumulative Impacts	Less than proposed project; No Impact	Similar to proposed project; remains less than significant.	Slightly less than proposed project; remains less than significant.	Less than proposed project; remains less than significant.	Similar to proposed project; remains less than significant.

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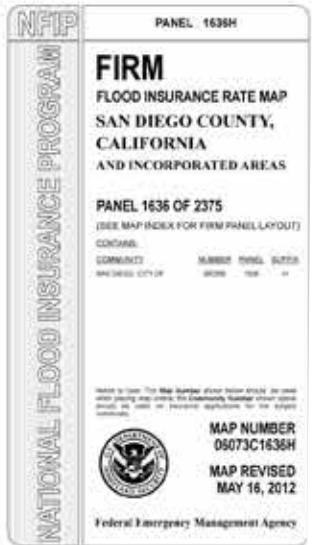
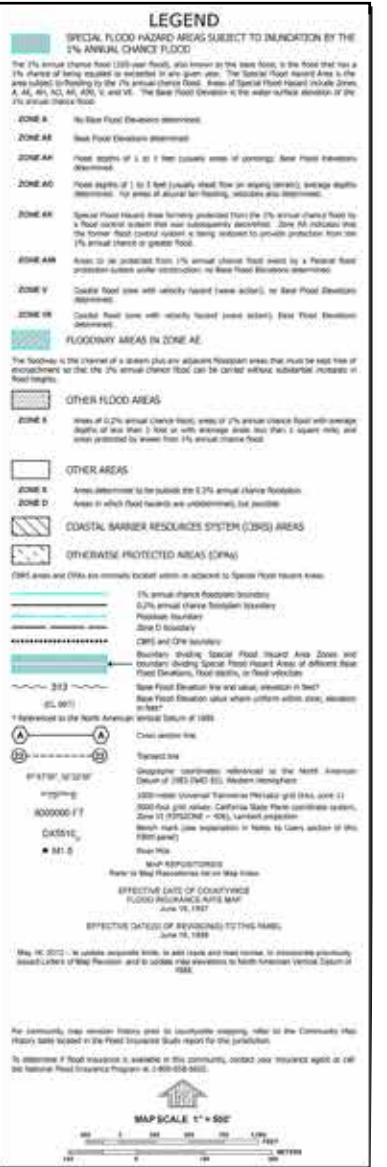
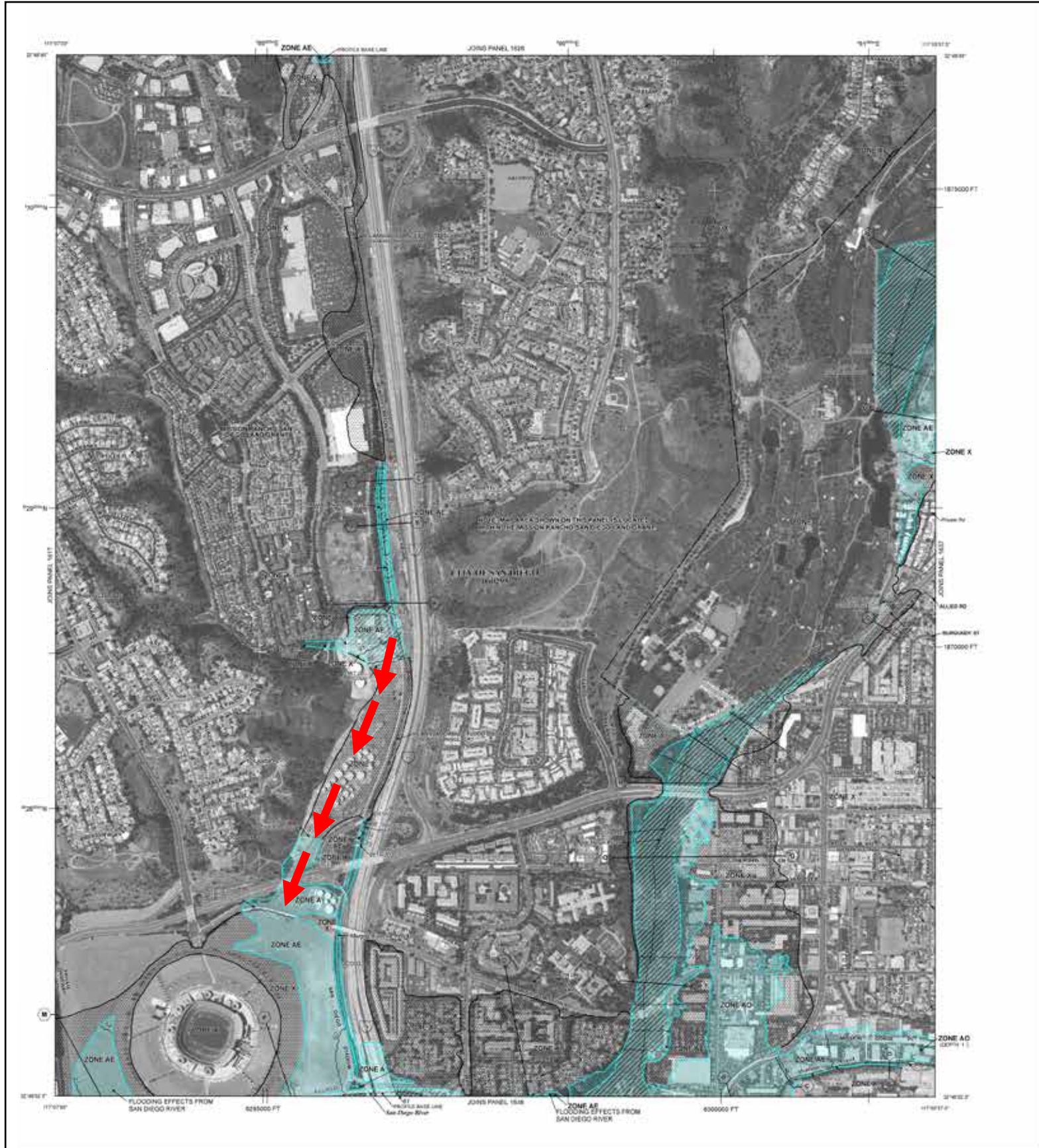
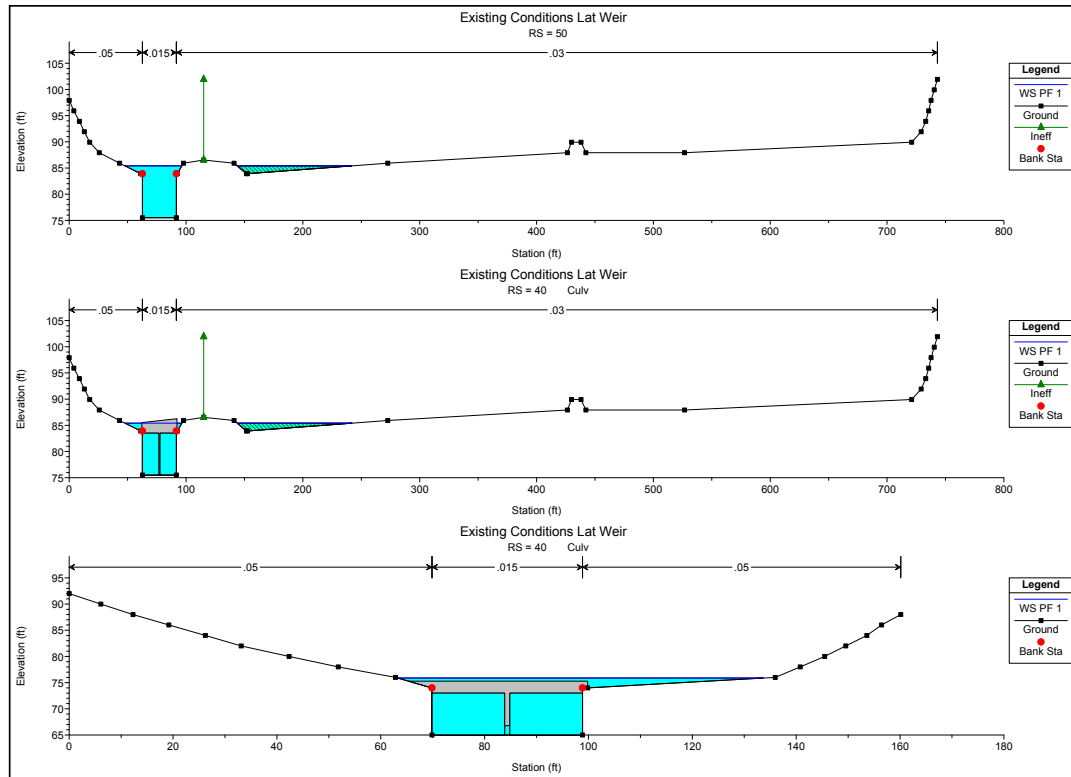
SOURCE: RICK ENGINEERING 7/22/2019

SDSU Mission Valley Campus Master Plan EIR



Figure 6-1A
Murphy Canyon Creek Single Channel Alternative

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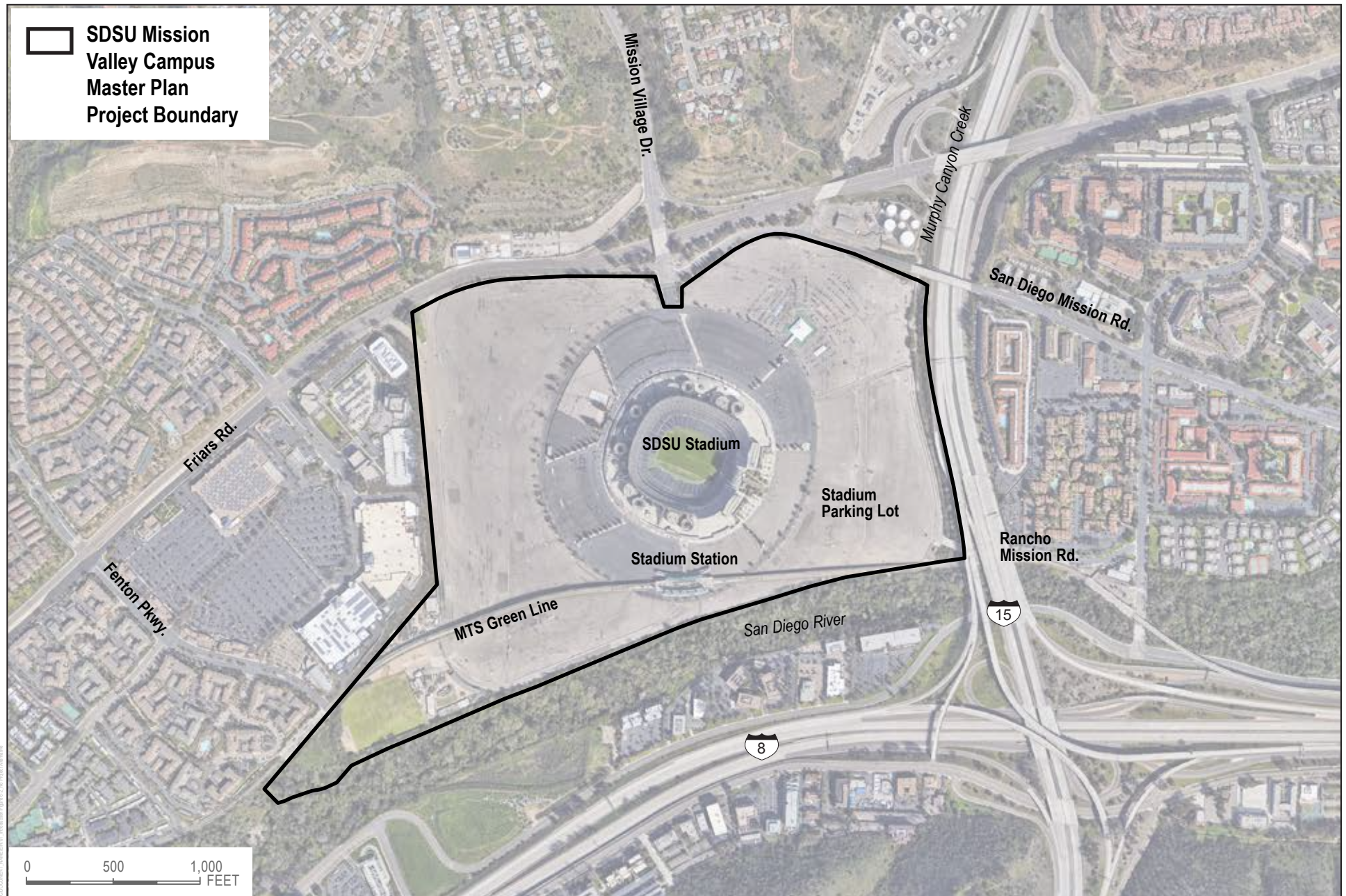
SOURCE: NATIONAL FLOOD INSURANCE PROGRAM 5/16/2019

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Figure 6-1B
Murphy Canyon Creek Single Channel Alternative Offsite Flooding

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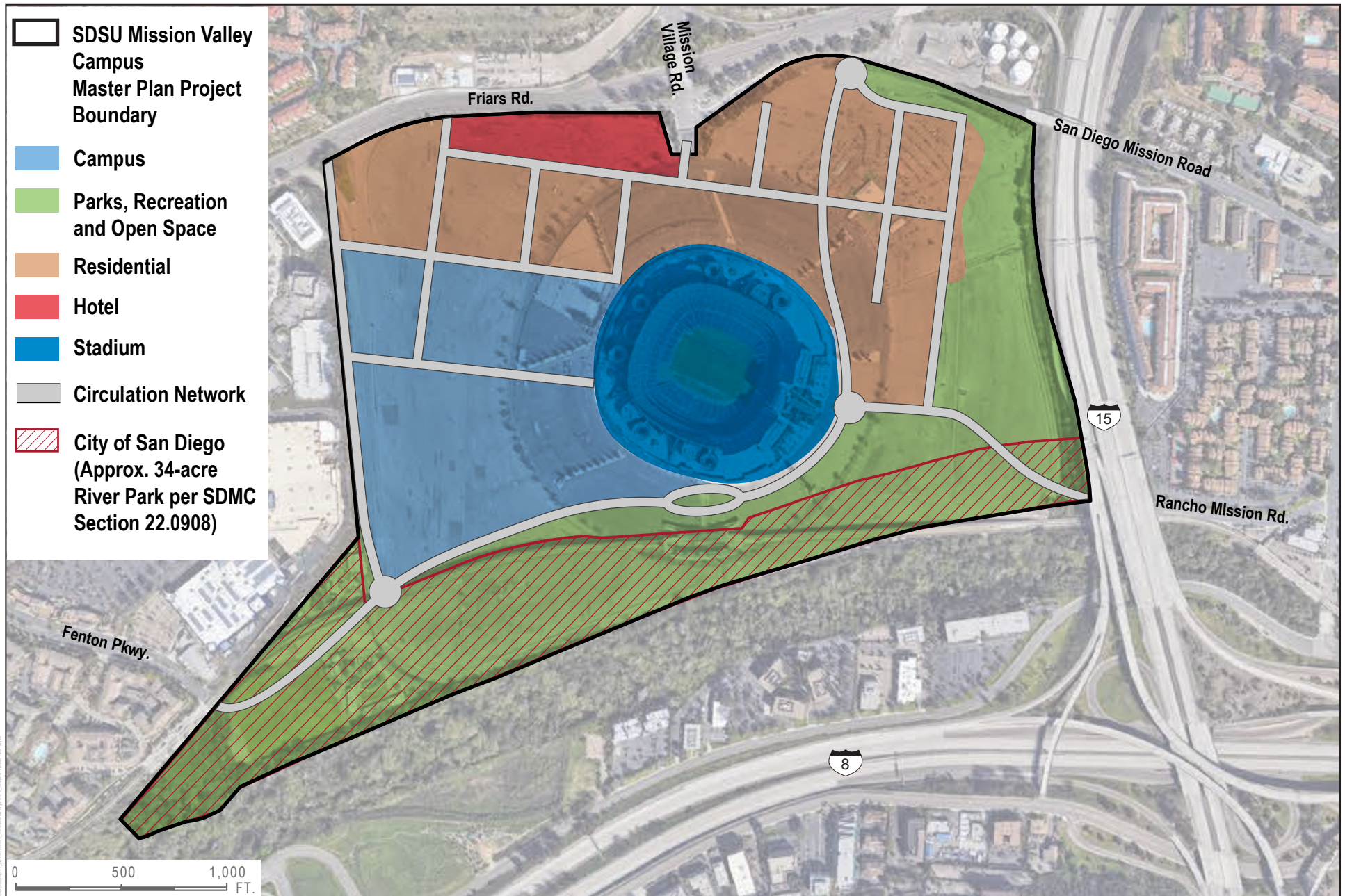
SOURCE: GOOGLE EARTH

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Figure 6-2
No Project Alternative

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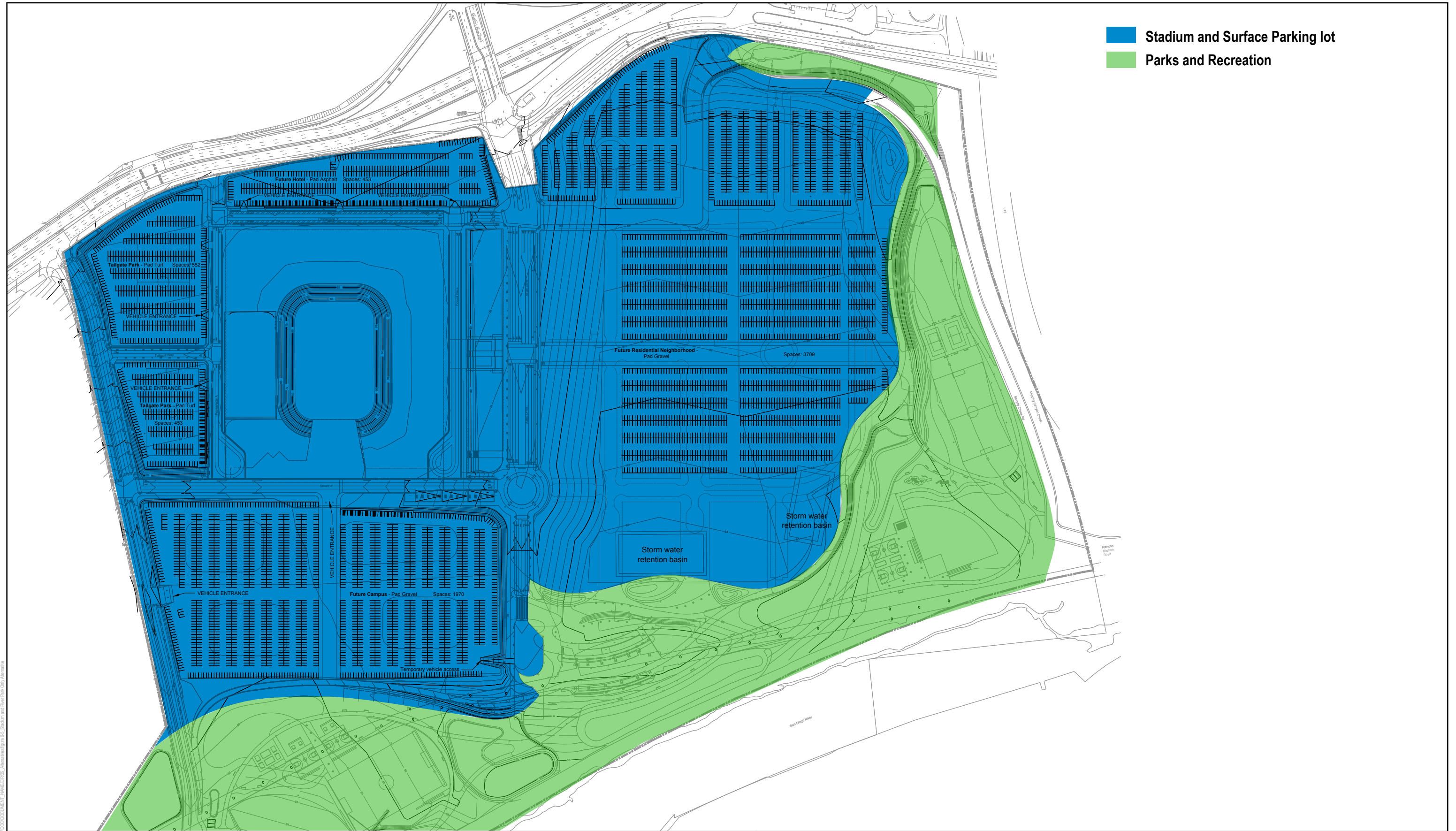


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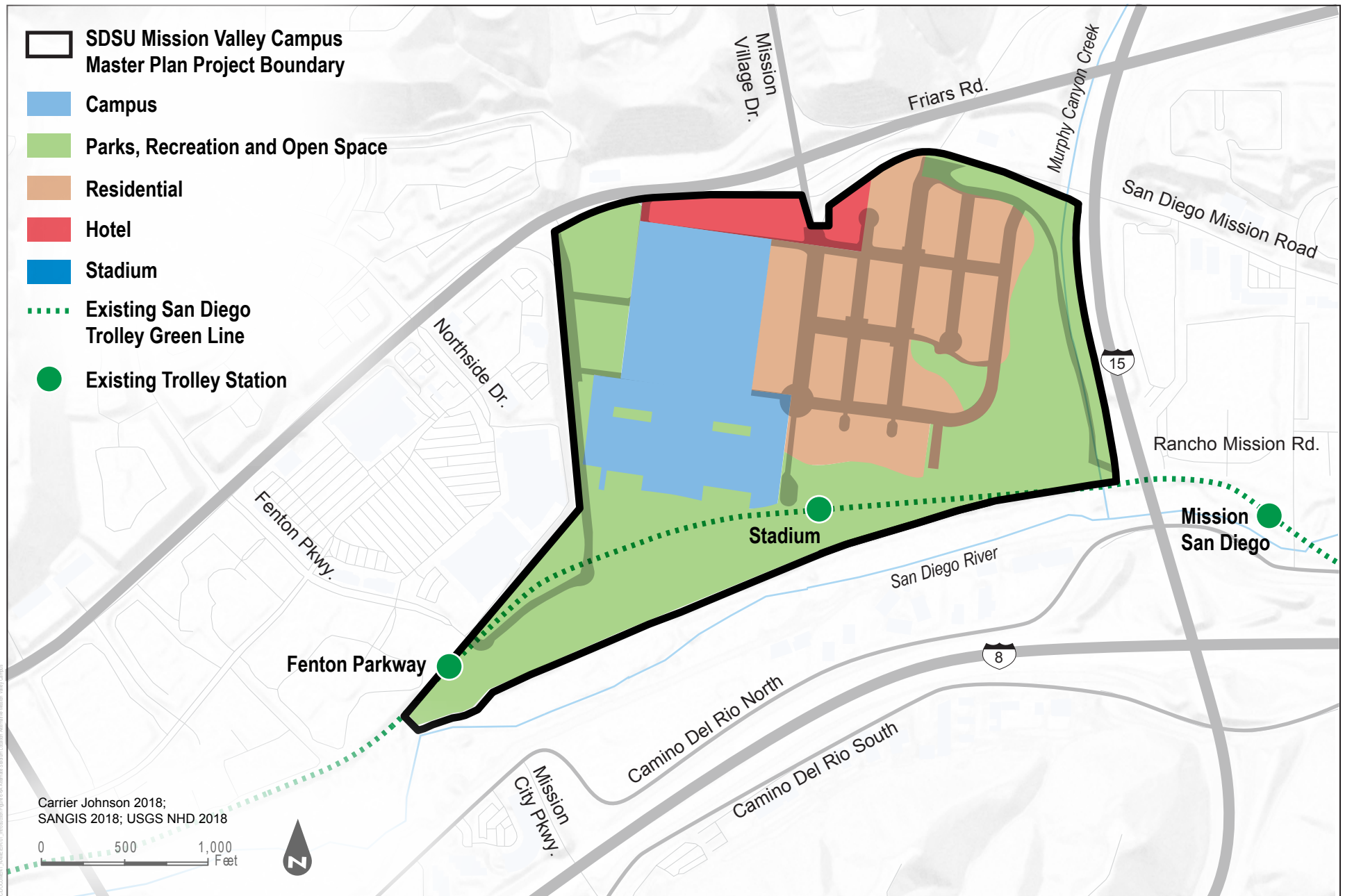
SOURCE: CARRIER JOHNSON 3/4/19

SDSU Mission Valley Campus Master Plan EIR



Figure 6-5
Stadium and River Park Only Alternative

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7 References

Executive Summary

There are no references cited in this chapter.

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