California State University
SAN MARCOS

Final
Initial Study/Proposed Mitigated
Negative Declaration for the

California State University San Marcos

Integrated Science and Engineering Building Project

September 2024

Final
Initial Study/Proposed Mitigated Negative Declaration for the

California State University San Marcos Integrated Science and Engineering Building Project

Prepared for:

California State University San Marcos
Planning, Design, and Construction
333 Twin Oaks Valley Road
San Marcos, CA 92096

Contact:

Michelle Alves
Campus Planner
760.750.4643

Prepared by:

Ascent
1230 Columbia St, Suite 440
San Diego, CA 92101

Contact:

Eric Ruby
Principal
619.219.8000

September 2024

20230068.06

TABLE OF CONTENTS

Section			Page
ACRONYMS AND ABBREVIATIONS			vi
1	INTRODUCTION		1-1
	1.1	Introduction and Regulatory Guidance	1-1
	1.2	Why this Document?	1-1
	1.3	Summary of Findings	1-2
	1.4	Environmental Permits	1-2
	1.5	Document Organization	1-2
2	PROJECT DESCRIPTION		2-1
	2.1	Project Location	2-1
	2.2	Existing Facilities	2-1
	2.3	Project Background	2-1
	2.4	Description of the Proposed Project	2-4
	2.5	Operation and Maintenance	2-5
3	ENVIRONMENTAL CHECKLIST		3-1
	3.1	Aesthetics	3-4
	3.2	Agriculture and Forest Resources	3-7
	3.3	Air Quality	3-10
	3.4	Biological Resources	3-19
	3.5	Cultural Resources	3-27
	3.6	Energy	3-29
	3.7	Geology and Soils	3-34
	3.8	Greenhouse Gas Emissions	3-39
	3.9	Hazards and Hazardous Materials	3-43
	3.10	Hydrology and Water Quality	3-47
	3.11	Land Use and Planning	3-53
	3.12	Mineral Resources	3-55
	3.13	Noise	3-57
	3.14	Population and Housing	3-67
	3.15	Public Services	3-68
	3.16	Recreation	3-71
	3.17	Transportation	3-72
	3.18	Tribal Cultural Resources	3-79
	3.19	Utilities and Service Systems	3-83
	3.20	Wildfire	3-88
	3.21	Mandatory Findings of Significance	3-91
4	REFERENCES		4-1
5	REPORT PREPARERS		5-1

Appendices

Appendix A – Air Quality, Greenhouse Gas Emissions, and Energy Calculations

Appendix B – Special-Status Species Lists

Appendix C – Archaeological Survey Report

Appendix D – Noise Modeling Calculations

Figures

Figure 2-1 CSUSM Campus Master Plan 2-3
Figure 2-2 Regional Location 2-5
Figure 2-3 Project Vicinity 2-6
Figure 2-4 Project Site 2-7
Figure 2-5 Site Plan 2-9
Figure 3.4-1 Biological Resources 3-21

Tables

Table 3.3-1 Sources and Health Effects of Criteria Air Pollutants 3-11
Table 3.3-2 Ambient Air Quality Standards and Current SDAB Attainment Status 3-12
Table 3.3-3 San Diego Air Pollution Control District Pollutant Trigger Levels 3-15
Table 3.3-4 Maximum Daily Estimated Criteria Air Pollutants and Precursors Emissions Associated with Project Construction 3-16
Table 3.3-5 Maximum Daily Estimated Criteria Air Pollutants and Precursors Emissions Associated with Project Operation in 2028 3-17
Table 3.4-1 Vegetation Communities and Land Cover Types in the Study Area 3-20
Table 3.4-2 Impacts to Sensitive Vegetation Communities on the Project Site 3-24
Table 3.6-1 Operational Annual Transportation Fuel Consumption 3-32
Table 3.8-1 Estimate of Greenhouse Gas Emissions During Construction 3-41
Table 3.8-2 Estimate of Greenhouse Gas Emissions During Operations at Opening Year 3-41
Table 3.13-1 Ground-Borne Vibration Impact Criteria for General Assessment for Human Response 3-59
Table 3.13-2 FTA Construction Damage Vibration Criteria 3-59
Table 3.13-3 Federal Interagency Committee on Noise Recommended Criteria for Evaluation of Increases in Ambient Noise Levels 3-59
Table 3.13-4 Noise and Land Use Compatibility Guidelines for Transportation-Related Noise (CNEL) 3-60
Table 3.13-5 Exterior Noise Standards for Single-Family Residential Zones 3-62
Table 3.13-6 Noise Emission Levels from Construction Equipment 3-64
Table 3.13-7 Construction Noise Model Results Summary 3-64
Table 3.13-8 Summary of Modeled Existing Plus Campus View Drive Traffic Noise Levels 3-65

ACRONYMS AND ABBREVIATIONS

°C	Celsius
AB	Assembly Bill
ADT	average daily trips
AFY	acre-feet per year
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
ASM	ASM Affiliates, Inc.
BMPs	best management practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	corporate average fuel economy
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
CHRIS	California Historical Resources Information System
CNEL	noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CSTEM	College of Science, Technology, Engineering, and Mathematics
CSU	California State University
CSUSM	California State University, San Marcos
dB	decibels
dBA	A-weighted decibels
DTSC	California Department of Toxic Substances Control
EO	Executive Order
EOP	Emergency Operations Plan

FHSZ	Fire Hazard Severity Zone
FICON	Federal Interagency Committee on Noise
FTA	Federal Transit Administration
FTES	full-time equivalent students
GHG	greenhouse gas
GWP	global warming potential
HHI	health hazard index
I-15	Interstate 15
in/sec	inches per second
IS&E	Integrated Science and Engineering
IS/Proposed MND	Initial Study/Proposed Mitigated Negative Declaration
kWh	kilowatt hours
L_{eq}	Equivalent Continuous Sound Level
L_{eq}	noise level as an hourly average
LID	low impact development
L_{max}	Maximum Sound Level
LRA	local responsibility area
MGD	million gallons per day
MHCP	Multiple Habitat Conservation Program
MICR	maximum individual cancer risk
$MMTCO_2e$	million metric tons of CO_2e
Mph	miles per hour
MRZ-3	Aggregate Mineral Resource Classification Zone Category 3
MT	metric ton
$MTCO_2e$	metric tons of CO_2e
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCTD	North County Transit District
NHTSA	National Highway Traffic and Safety Administration
NO_2	lead, nitrogen dioxide
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
OMWD	Olivenhain Municipal Water District
OPR	California Governor's Office of Planning and Research

P-I	Public-Institutional
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter
PPV	Peak Particle Velocity
PRC	Public Resources Code
RAQS	San Diego Regional Air Quality Strategy
RPS	Renewables Portfolio Standard
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCIC	South Coastal Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas and Electric Company
SIP	California State Implementation Plan
SMFD	City of San Marcos Fire Department
SO_2	sulfur dioxide
SO_X	oxides of sulfur
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
T-BACT	Toxics Best Available Control Technology
TISM	*Transportation Impact Study Manual*
TPA	transit priority area
UWMP	Urban Water Management Plan
VdB	Vibration Decibels
VMT	vehicle miles traveled
VOC	volatile organic compounds
VWD	Vallecitos Water District
WDR	Waste Discharge Requirement

This page intentionally left blank.

1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study/Proposed Mitigated Negative Declaration (IS/Proposed MND) has been prepared by the California State University, San Marcos (CSUSM) to evaluate potential environmental effects resulting from the Integrated Science and Engineering (IS&E) Building (proposed project). Section 2 "Project Description" presents the detailed project information.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). An initial study is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. In accordance with State CEQA Guidelines Section 15070, a "public agency shall prepare…a proposed negative declaration or mitigated negative declaration…when: (a) The Initial Study shows that there is no substantial evidence…that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level." In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the project would not have a significant effect on the environment and, therefore, does not require the preparation of an Environmental Impact Report (EIR). By contrast, an EIR is required when the project may have a significant environmental impact that cannot clearly be reduced to a less than significant effect by adoption of mitigation or by revisions in the project design.

1.2 WHY THIS DOCUMENT?

As described in the environmental checklist (Chapter 3), the proposed project would not result in any unmitigated significant environmental impacts. Therefore, an IS/Proposed MND is the appropriate document for compliance with the requirements of CEQA. This IS/Proposed MND conforms to these requirements and to the content requirements of State CEQA Guidelines Section 15071.

Under CEQA, the lead agency is the public agency with primary responsibility over approval of the project. The California State University (CSU) Board of Trustees is the CEQA lead agency because it is responsible for discretionary approval of the proposed project. The purpose of this document is to present to decision-makers and the public information about the environmental consequences of implementing the project. This disclosure document is being made available to the public for review and comment. This IS/Proposed MND will be available for a 30-day public review period from July 17, 2024 to August 16, 2024.

Supporting documentation referenced in this document is available for review during regular business hours at:

CSUSM Office of Planning, Design & Construction
441 La Moree Road
San Marcos, CA 92078

Written comments may be sent to the following address or email address:

Michelle Alves, Campus Planner
Planning, Design, and Construction
California State University, San Marcos
333 Twin Oaks Valley Road
San Marcos, CA 92096
malves@csusm.edu

If you have questions regarding the IS/Proposed MND, please email Michelle Alves at: malves@csusm.edu. If you wish to send written comments (including via e-mail), they must be postmarked by August 16, 2024. After comments are received from the public and reviewing agencies, the CSU Board of Trustees may (1) certify the MND and approve the project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is approved and funded, CSUSM may proceed with the project.

1.3 SUMMARY OF FINDINGS

Chapter 3 of this document contains the analysis and discussion of potential environmental impacts of the project. Based on the issues evaluated in that chapter, it was determined that the project would have either no impact or a less than significant impact with respect to most of the issue areas in the Environmental Checklist, included as Appendix G of the State CEQA Guidelines. These include the following issue areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- 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
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Potentially significant impacts were identified for biological resources, cultural resources, and tribal cultural resources; however, mitigation measures included in the IS/MND would reduce all impacts to a less than significant level.

1.4 ENVIRONMENTAL PERMITS

In addition to CSUSM approval of the proposed project and adoption of the MND, the project would require permits and approvals from the CSU Office of Fire Safety, San Diego County Air Pollution Control District, San Diego Gas & Electric, State Water Resources Control Board, Vallecitos Water District, and the San Diego County Department of Environmental Health. These permits and approvals are described in Chapter 2 "Project Description."

1.5 DOCUMENT ORGANIZATION

This IS/Proposed MND is organized as follows:

- Chapter 1: Introduction. This chapter provides an introduction to the environmental review process. It describes the purpose and organization of this document as well as presents a summary of findings.
- Chapter 2: Project Description. This chapter provides a project background and overview, describes the project location and setting, and, and provides a detailed description of the project elements.
- Chapter 3: Environmental Checklist. This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if project actions would result in no impact, a less than significant impact, a less than significant impact with mitigation incorporated, or a potentially significant impact. If any impacts were determined to be potentially significant, an EIR would be required. For this project, however, none of the impacts were determined to be significant after implementation of mitigation measures.
- Chapter 4: References. This chapter lists the references used in preparation of this IS/Proposed MND.
- Chapter 5: List of Preparers. This chapter identifies report preparers.

2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND AND OVERVIEW

California State University, San Marcos (CSUSM) was founded in 1989 as the twentieth California State University (CSU) campus. The current CSUSM Master Plan was adopted in March 1988. The currently adopted Campus Master Plan depicts the campus facilities that were envisioned to accommodate an anticipated capacity of 25,000 full-time equivalent students (FTES) by 2030 (CSUSM 2018a). As of the Fall 2023 semester, total campus enrollment was 13,386 FTES.

CSUSM is proposing to construct two Integrated Science and Engineering (IS&E) buildings with a combined 125,000 square feet on a 2.46-acre site and an off-site utility tunnel on an additional 0.17 acre within the existing campus (proposed project). Each building would be constructed in a separate phase. Once operational, the buildings would provide state of the art facilities for teaching, learning, and research, featuring integrative innovative technology and flexible configurations for classrooms and laboratories.

As shown in Figure 2-1, the project site was initially envisioned as a single Classroom/Lab/Office Building (Building 36) in the current adopted CSUSM Master Plan (CSUSM 2018a). However, CSUSM is now proposing a minor master plan revision to allow for the development of two buildings (Buildings 36A and 38B) to address changing programmatic needs at the campus in support of new College of Science, Technology, Engineering, and Mathematics (CSTEM) programs on campus.

2.2 PROJECT LOCATION AND SETTING

The CSUSM campus is located in the central portion of the City of San Marcos, in San Diego County, California (Figure 2-2). As shown on Figure 2-3, the proposed project would be constructed on a 2.46-acre site (project site) in the eastern portion of the 306-acre campus. An off-site utility tunnel would be constructed on an additional 0.17 acre within the campus, extending for approximately 750 feet from the proposed IS&E buildings to Markstein Hall (Figure 2-4). The project site is situated north and east of Markstein Hall, east of University Hall, and south of the Arts Building. Other CSUSM campus buildings and surface parking lots are located further north, west, and south of the project site. A steep undeveloped hillside with native vegetation (predominantly coastal sage scrub and chaparral) and cultivated avocado groves forms the eastern boundary of the project site. An off-campus single-family residential subdivision is located Easton the other side of the hill along La Moree Road, approximately 1,120 feet from the project site.

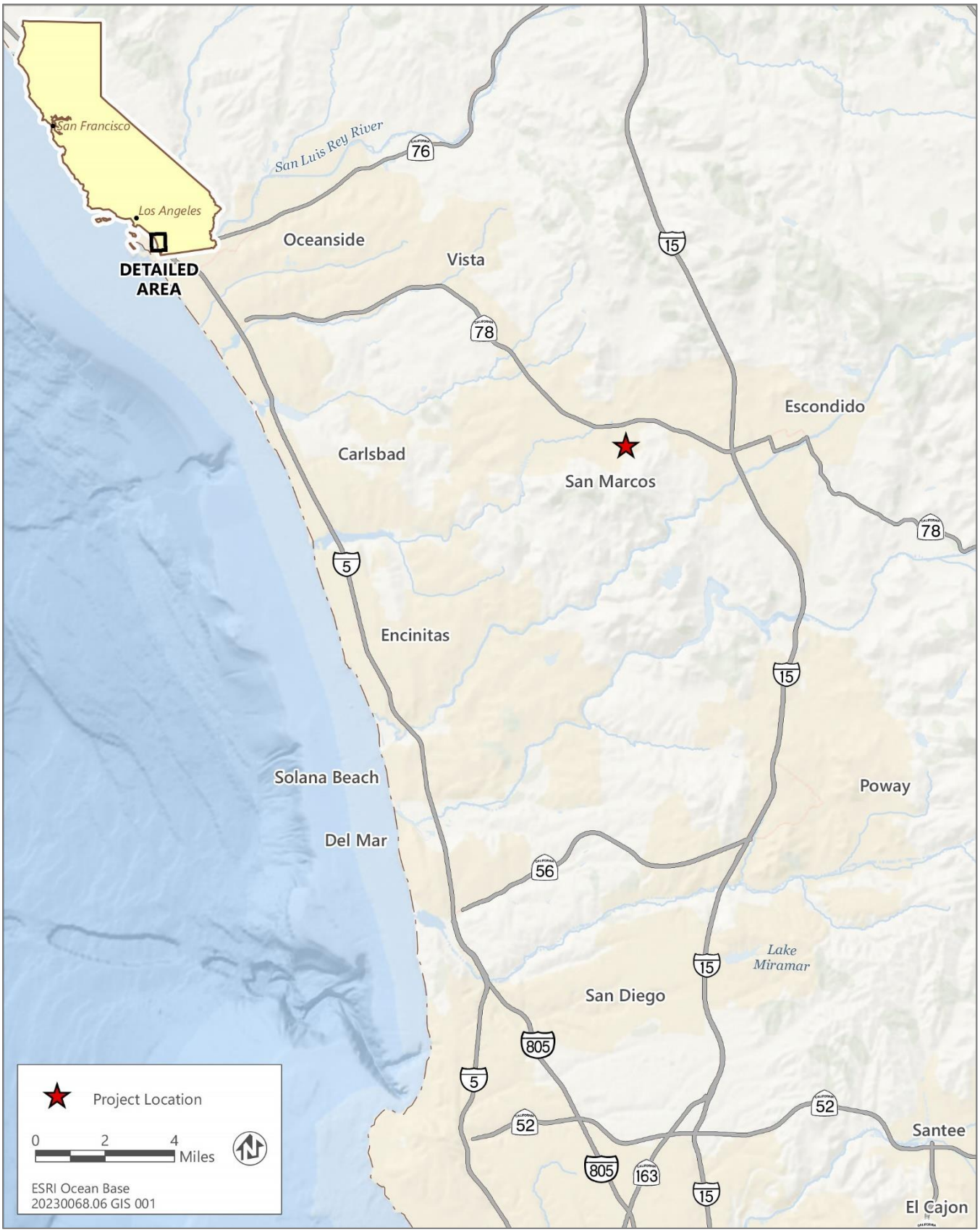
The project site is generally vacant and disturbed and presently contains portable custodial trailers, storage containers, and small piles of rock and discarded construction materials. Although the surface of the project site consists of gravel and compacted bare ground, the project site is generally impervious due to shallow underlying granite bedrock. The topography of the project site is generally flat, with on-site elevations ranging from 725 to 735 feet above mean sea level; the hillside to the east rises approximately 200 feet above the site. The project site drains toward existing storm drain infrastructure northwest and downslope of the project site that discharges to San Marcos Creek.

The project site contains a service lane that travels north-south along the western project site boundary. This service road provides "back-of-house" vehicular access for fire drills, refuse, and maintenance vehicles to University Hall and the Arts Building. A two-lane unnamed service road with a separated bicycle lane bisects the project site in an east-west direction. Regional access to the project site is provided from State Route 78 and Interstate 15. Local access to the project site is provided via Craven Drive/Palm Canyon Drive or La Moree Road, which connect to the existing service road that traverses the project site.

This page intentionally left blank.

Source: CSUSM 2018b.

Figure 2-1 CSUSM Campus Master Plan



Source: Ascent 2024.

Figure 2-2 Regional Location

Source: Ascent 2024.

Figure 2-3 Project Vicinity

Source: Ascent 2024.

Figure 2-4 Project Site

The on-site temporary trailers are served by a domestic water line and a campus-owned electrical power line within the existing service road. An existing groundwater well is located approximately 110 feet south of the project site, located adjacent to the hillside across from Markstein Hall.

Vegetation on the project site is comprised of scattered shrubs and ruderal grasses. The hillside immediately east of the project site contains stands of coastal sage scrub and mixed chaparral. The project site is within an area designated by the California Department of Forestry and Fire Protection as a very high fire hazard severity zone in a local responsibility area (CAL FIRE 2009).

2.3 PROJECT ELEMENTS

2.3.1 Building and Site Design

A preliminary site plan is shown on Figure 2-5. The proposed IS&E buildings would provide a total of 125,000 square feet of space for academic classrooms, laboratories, administration, and storage. The proposed IS&E buildings would be compatible with the existing modern architectural style of the existing campus buildings. The external building façade may consist of cement plaster, glass fiberglass reinforced concrete panels, cement board panels, and/or metal panels.

Building 36A, a building of 70,000 gross square feet, would be constructed in the southwestern portion of the project site as part of Phase 1A (Figure 2-5). The building would be three stories with a building height of approximately 50 feet. The building would include approximately 14,104 square feet of office space, 21,700 square feet of teaching lab and support space, 6,380 square feet of research lab and support space, 3,696 square feet of lecture and share space, 990 square feet of storage space, and an 800-square-foot café. Outdoor spaces would be located on the first and second floors. The building would be utilized for degree programs in Electrical Engineering, Software Engineering, and Computer Science Engineering.

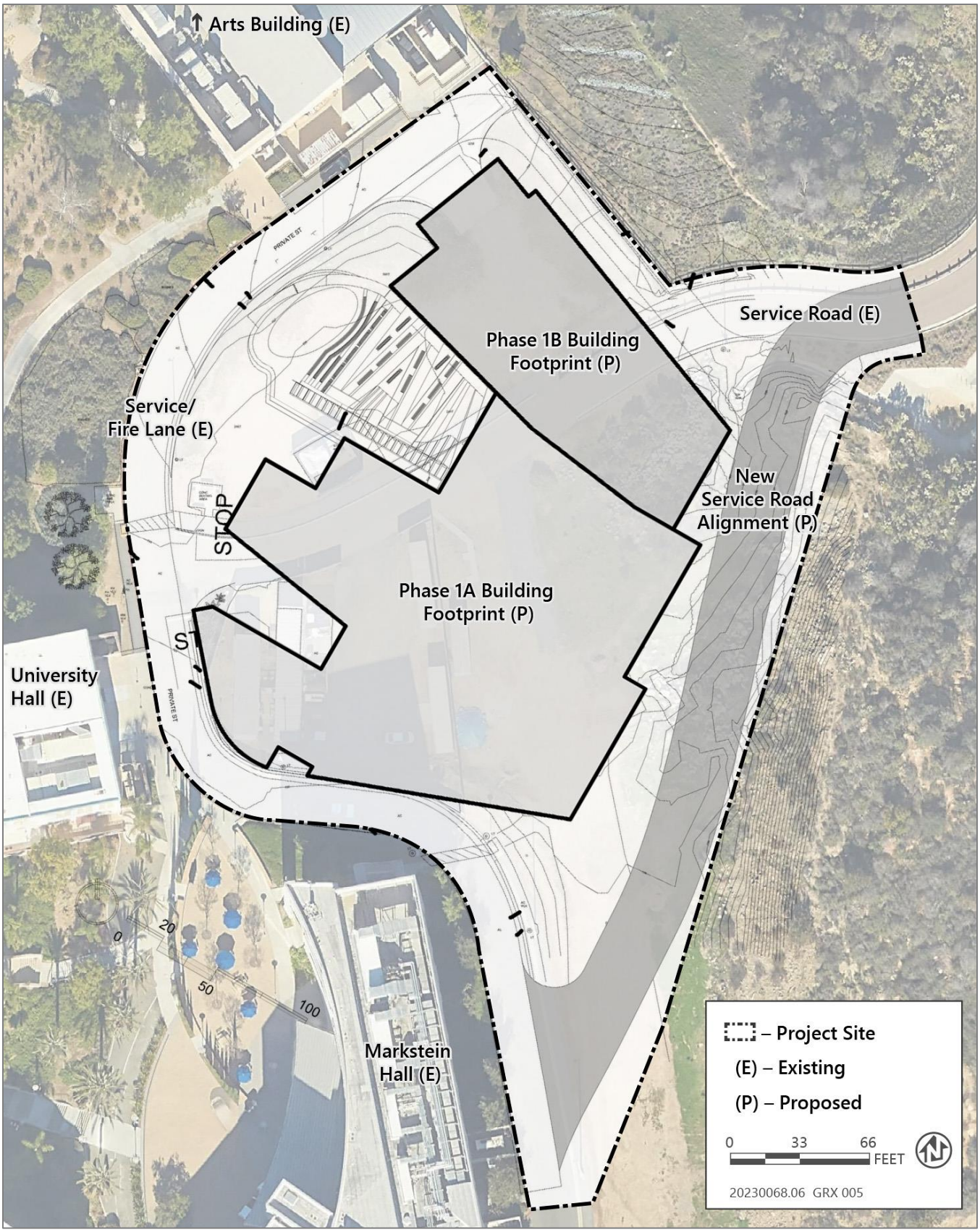
Building 36B would be constructed during Phase 1B in the northeastern portion of the project site (Figure 2-5). The building would be four stories with a building height of approximately 70 feet. The building would provide 55,000 gross square feet of space to support degree programs in Physics and Industrial Engineering. The building is anticipated to include teaching and research laboratories, learning areas, offices, and building support spaces (i.e., mechanical, electrical, and telecommunications infrastructure). The design would incorporate interior and exterior gathering spaces on the ground floor and potentially on the top floor. Implementation of Phase 1B is contingent upon donor funding and further exploration of programming for Phase 1B would occur upon receipt of funding.

The proposed project would include a loading dock and freight elevator. Other on-site improvements would include landscaping, exterior lighting, building and wayfinding signage, fire lane access, fire hydrants, and access for trash collection. Exterior lighting would be provided for security, vehicular access, egress, landscape accents, and building exterior illumination. All project lighting would adhere to the CSU Outdoor Lighting Design Guide (CSU 2018).

The existing east-west service road, bicycle lane, and any underground utilities would be re-routed along the eastern project site boundary. The project design would include adequate provisions for fire protection service. Vehicular access on the existing north-south service lane would be maintained.

The proposed project would include new domestic and fire water, sanitary sewer, storm drain, mechanical hydronic piping, electrical power, natural gas, and telecommunications connections that would tie in to existing utility lines at the southern end of Markstein Hall, approximately 600 feet south of the project site. The proposed project would include an approximately 750-foot-long utility tunnel, consisting of an approximately 10-foot-wide and 9-foot-deep cast-in-place or precast concrete structure. The proposed project may also utilize groundwater from the existing on-site well for landscaping.

Approximately 90% of the project site would be covered with buildings, hardscaping, and roadways. The remaining 10% of the project site would be landscaped with native and drought-tolerant plants. Because the project site is within a very high fire hazard severity zone, landscaping would be required to comply with the fuel and vegetation management requirements contained in Chapter 7A of the California Building Code and Chapter 49 of the California Fire Code.



Source: Ascent 2024.

Figure 2-5 Site Plan

2.3.2 Construction

Project construction is planned to occur in phases for a total duration of approximately 25 months. Phase 1A is assumed to begin in July 2025 and end in May 2027 (approximately 23 months). Funding for Phase 1B is contingent upon donor funding, and the timing for this phase is currently unknown. For the purposes of conducting a conservative evaluation of the most intensive environmental impact scenario, construction of Phase 1B is assumed to begin in August 2025 and end in July 2027 (approximately 23 months). Construction of the utility tunnel is assumed to begin in June 2025 and end in October 2025.

Following site mobilization, construction activities would be divided into the following stages: (1) site demolition and bedrock/granite removal, (2) grading, (3) foundation, utilities, and slab-on-grade construction, (3) building construction, (4) architectural finishes, and (5) paving. During the initial site demolition stage, the existing east-west service road would be relocated to the eastern boundary of the project site. Any utility lines below the existing roadway would be removed and relocated under the re-routed service road prior to roadway construction. Construction of the utility tunnel would involve removing existing pavement, excavating the underlying granite, placing a reinforced concrete tunnel in the trench, and backfilling and repaving the disturbed area.

Construction activities would be completed with typical construction equipment for this project type and scale. Demolition, site preparation, and grading activities would require loaders, excavators, dozers, scrapers, and water trucks. Granite removal would also require sonic drill rigs and a mobile crushing plant, with no blasting anticipated. Building and utility tunnel construction would require lifts, air compressors, welders, concrete pumps and saws, generators, loaders, and sweepers/scrubbers. Paving activities would require pavers, loaders, rollers, and pumps. Construction traffic is expected to utilize the service road via La Moree Road to minimize campus disruptions. All construction staging would take place within the Phase 1B portion of the project site.

Overall, construction of the proposed project is anticipated to result in up to 2.46 acres of ground disturbance for on-site improvements and an additional 0.17 acre of ground disturbance for the utility tunnel. Approximately 268 tons of trash and 54 tons of demolition debris would be hauled off-site to the Miramar Landfill, located 25 miles from the project site. Approximately 5,065 cubic yards of granite would be extracted, crushed on-site, and used as either landscape cover or structural backfill material. If the crushed granite is not used as structural backfill material, up to 5,065 cubic yards of soil would be imported to the project site and used as backfill. Excavation is anticipated to occur to an approximate depth of 6 feet below the ground surface for the building structure and 8 to 10 feet for the gravity-fed utility systems.

Construction activities would occur Monday through Friday, between the hours of 7:00 am and 4:00 pm. No nighttime construction would occur.

2.3.3 Operations

The proposed project is anticipated to begin operations as early as 2028. As noted above, the proposed IS&E buildings would consist of academic classrooms, laboratories, administration, and storage in support of new CSTEM undergraduate programs on campus. The proposed project is anticipated to result in approximately 350 new students (i.e., students not currently enrolled) and 33 new staff and faculty (23 staff and faculty for Building 36A and 10 staff and faculty for Building 36B) in the opening year.

In accordance with the Sustainability Master Plan (CSUSM 2018b), the project would be designed to attain LEED certification. The proposed project would receive solar energy from either on-site solar panels or from a separate solar project proposed at parking lots B and C. A water source heat pump would complement the heating needs for the buildings. No natural gas would be used in laboratory operations in Building 36A, but would be used in Building 36B. Each building would be equipped with new heating, ventilation, and air conditioning equipment and an emergency back-up generator.

2.4 REQUIRED PERMITS AND APPROVALS

The CSU Board of Trustees is the CEQA lead agency for the proposed project. The CSU Board of Trustees will be responsible for adopting the Mitigated Negative Declaration and approving the proposed project. As noted in Section 2.1, "Project Background and Overview," the project site was initially envisioned as a future Building (Building 36) in the currently adopted CSUSM Master Plan (CSUSM 2018a). Because the proposed project is inconsistent with the CSUSM Master Plan, a minor master plan revision would be required.

Other required permits and approvals would include:

- CSU Office of Fire Safety Permit
- San Diego County Air Pollution Control District: Authority to Construct and Permit to Operate
- San Diego Gas & Electric: New Construction Application
- State Water Resources Control Board: National Pollution Discharge Elimination System Construction General Permit (Order 2022-0057-DWQ)
- Vallecitos Water District: Private Construction Development Application
- San Diego County Department of Environmental Health: Public Health Permit

2.5 CALIFORNIA STATE UNIVERSITY AUTONOMY

CSUSM is an entity of the CSU system, which is a statutorily and legislatively created constitutionally authorized entity of the State of California and is therefore not subject to local government planning and land use plans, policies, or regulations. Although there is no formal mechanism for joint planning or the exchange of ideas, CSUSM may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate. The proposed project would be subject to the State and federal regulations described herein but would not be bound by local or regional planning regulations or documents such as the City of San Marcos's or San Diego County's General Plans or municipal codes.

CSUSM seeks to maintain an ongoing exchange of ideas and information and to pursue mutually acceptable solutions for issues that affect both the campus and the surrounding community. To foster this process, CSUSM participates in, and communicates with the City of San Marcos, San Diego County, and community organizations. CSUSM sponsors various meetings and briefings to keep local organizations, associations, and elected representatives apprised of ongoing planning effort and consider community input.

This page intentionally left blank.

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1. **Project Title**: Integrated Science and Engineering (IS&E) Building Project

2. **Lead Agency Name and Address**: The Board of Trustees of the California State University (CSU)
401 Golden Shore
Long Beach, CA 90802

3. **Contact Person and Phone Number**: Michelle Alves, Campus Planner
(760) 750-4643

4. **Project Location**: The proposed project is located in the eastern portion of the California State University (CSUSM) campus (herein referred to as "project site").

5. **Project Sponsor's Name and Address**: California State University, San Marcos
Planning, Design, and Construction
333 Twin Oaks Valley Road
San Marcos, CA 92096

6. **General Plan Designation and Zoning**:

   As a constitutionally authorized State entity, CSU is not subject to local governments' regulations, such as City or County General Plans or land use ordinances, on property owned or controlled by CSU and used in furtherance of CSU's mission. Although there is no formal mechanism for joint planning, the CSU may consider, for coordination purposes, aspects of local plans and policies when it is appropriate and feasible. Campuses generally seek to maintain an ongoing exchange of ideas and information, and to pursue mutually acceptable solutions for issues that confront both the campuses and their surrounding communities. Land use on the CSUSM campus is governed by the most recent Campus Master Plan, which was adopted in March 1988 and subsequently amended in 1990, 1992, 2003, and 2018. The project site was initially envisioned as a single Classroom/Lab/Office Building (Building 36) in the currently adopted CSUSM Master Plan (CSUSM 2018a).

7. **Description of Project**:

   CSUSM is proposing to construct two IS&E buildings (Buildings 36A and 36B) totaling a combined 125,000 square feet on a 2.46-acre site and an approximately 750-foot-long off-site utility tunnel on an additional 0.17 acre, both within the existing campus (proposed project). The buildings would provide state of the art facilities for teaching, learning, and research, featuring integrative innovative technology and flexible configurations for classrooms and laboratories. The proposed project would require re-routing an existing service road and underground utilities. Other on-site improvements would include a loading dock and freight elevator, landscaping, exterior lighting, building and wayfinding signage, fire lane access, fire hydrants, and access for trash collection. The proposed project would be constructed in two phases—Building 36A would be constructed as part of Phase 1A and Building 36B would be constructed as part of Phase 1B.

   Once operational, the proposed project would support new College of Science, Technology, Engineering, and Mathematics undergraduate programs on campus. In the opening year, the proposed project is anticipated to result in approximately 350 new students (i.e., students not currently enrolled) and 33 new staff and faculty.

8. Surrounding Land Uses and Setting:
   The project site is situated north and east of Markstein Hall, east of University Hall, and south of the Arts Building. Other CSUSM campus buildings and surface parking lots are located further north, west, and south of the project site. An undeveloped, vegetated hillside; avocado groves; and a single family residential subdivision are located east of the project site.

9. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement) The following permits and approvals would be required for the proposed project:
   - CSU Office of Fire Safety Permit
   - San Diego County Air Pollution Control District: Authority to Construct and Permit to Operate
   - San Diego Gas & Electric: New Construction Application
   - State Water Resources Control Board: National Pollution Discharge Elimination System Construction General Permit (Order 2022-0057-DWQ)
   - Vallecitos Water District: Private Construction Development Application
   - San Diego County Department of Environmental Health: Public Health Permit

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?
    As described further in Section 3.18, "Tribal Cultural Resources," the Native American Heritage Commission (NAHC) provided a list of 29 tribal contacts that may have more information regarding the project site. In accordance with Assembly Bill (AB) 52 and Public Resources Code (PRC) Section 21080.3.1, CSUSM sent formal notification letters of the proposed project on April 1, 2023. The following tribes responded to CSUSM's notification letter and requested to engage in formal government-to-government consultation under CEQA: Campo Band of Mission Indians, Rincon Band of Luiseño Indians, San Pasqual Band of Mission Indians, and San Luis Rey Band of Mission Indians. CSUSM hosted separate consultation meetings with each tribe and concluded formal consultation with the Rincon Band of Luiseño Indians on May 23, 2024, and the San Pasqual Band of Mission Indians on May 28, 2024. Consultation with the Campo Band of Mission Indians and San Luis Rey Band of Mission Indians is ongoing. Refer to Section 3.18, "Tribal Cultural Resources," of this Initial Study for additional information.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Where noted below with a "Y" for yes, the topic with a potentially significant impact will be addressed in an environmental impact report.

- ☒ Aesthetics
- ☐ Agriculture and Forest Resources
- ☐ Air Quality
- ☐ Biological Resources
- ☐ Cultural Resources
- ☐ Energy
- ☐ Geology / Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards / Hazardous Materials
- ☐ Hydrology / Water Quality
- ☐ Land Use / Planning
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population / Housing
- ☐ Public Services
- ☐ Recreation
- ☐ Transportation
- ☐ Tribal Cultural Resources
- ☐ Utilities / Service Systems
- ☐ Wildfire
- ☐ Mandatory Findings of Significance
- ☐ None
- ☒ None with Mitigation Incorporated

DETERMINATION

On the basis of this initial evaluation:

No I find that the proposed project could not have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

Yes I find that although the proposed project COULD have a significant effect on the environment, there WILL NOT be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

No I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

No I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

No I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

Printed Name Title

Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, 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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Environmental Setting

As discussed in Section 2.2, "Project Location and Setting," the project site is located on a generally vacant and disturbed site in the eastern portion of the CSUSM campus. The project site contains areas of bare ground with scattered shrubs and ruderal grasses, paved service roads, portable custodial trailers and storage containers, and small piles of rock and discarded construction materials. Other campus buildings and associated landscaping are visible from the project site, including Markstein Hall to the south, University Hall to the southwest, and the Arts Building to the north. A surface parking lot is visible to the south and an undeveloped, vegetated hillside is visible to the east of the project site.

No officially designated scenic resources are located within the CSUSM campus. The closest identified scenic resource to the project site is a ridgeline near South Lake, approximately 1.13 miles southwest of the project site (City of San Marcos 2012).

The nearest officially designated state scenic highway is a segment of State Route 52, approximately 20 miles southeast of the project site. The nearest eligible state scenic highways are State Route 5, located approximately 9 miles west of the project site, and State Route 76, located approximately 10 miles north of the project site (Caltrans 2024).

The project vicinity includes levels of lighting that are characteristic of an urban environment. Existing light sources in the project vicinity include interior and exterior building lighting and wayfinding lighting along campus pathways from adjacent CSUSM buildings, parking lots, and service roads.

3.1.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

No impact. Scenic vistas generally refer to views of expansive open space areas or other natural features, such as mountains, undeveloped hillsides, large natural water bodies, or coastlines. As described in Section 3.1.1, there are no officially designated scenic resources within the CSUSM campus, and the nearest scenic resource is a ridgeline located approximately 1.13 miles southwest of the project site. Due to intervening topography and campus development, the project site is not part of a scenic vista from a designated vantagepoint and does not itself offer views toward scenic resources. Views from the project site are limited to surrounding urban development, including CSUSM buildings and associated landscaping, service roadways and a surface parking lot, and the adjacent hillside.

The proposed project would result in the development of two 3- to 4-story, 50-feet-tall buildings and associated landscaping and hardscaping on a predominately vacant and disturbed site. The new buildings would be of similar massing and height to the existing buildings directly to the north, west, and south of the project site. Consequently, the proposed project would not result in a noticeable change to existing viewsheds. Based on the above discussion, the proposed project would not have a substantial adverse effect on a scenic vista. No impact would occur, and no mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No impact. As discussed in Section 3.1.1, the project site is approximately 9 miles west of State Route 5, the nearest eligible state scenic highway, and approximately 20 miles north of State Route 52, the nearest officially designated state scenic highway. The project site is not within the viewsheds of these highways due to the distance of the project site from these highways and the intervening topography and urban development in the project vicinity. All project development would occur within the CSUSM campus and would not encroach onto a state scenic highway or damage scenic resources. Therefore, the proposed project would not substantially damage scenic resources within a state scenic highway. No impact would occur, and no mitigation is required.

c) In non-urbanized areas, 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 points.) 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. The project site is on the CSUSM campus within an urbanized area. As discussed in Section 2.5, "California State University Autonomy," CSUSM is an entity of the State of California, and the proposed project is not subject to local zoning and other land use regulations. Rather, development on the CSUSM campus is governed by CSUSM's campus building standards.

The project site is generally vacant and disturbed and is surrounded by campus development to the north, west, and south, and an undeveloped hillside to the east. Construction equipment and personnel would be present at the project site during construction activities. As discussed in Section 2.3.2, "Construction," project construction is planned to occur in two phases for a total duration of approximately 25 months. Temporary fencing would be installed around the construction site that would obscure views of construction activities from ground level vantage points. Furthermore, visual effects from construction activities would be temporary and short-term.

Project implementation would involve realigning an existing service road and constructing two IS&E buildings and associated landscaping, hardscape, and utility infrastructure. As discussed in Section 3.1.2(a), the two IS&E buildings would be 3- to 4-stories with a maximum building height of 50 feet. The new buildings would be of similar massing and height to the existing CSUSM buildings directly to the north, west, and south of the project site. In addition, the proposed IS&E buildings would be compatible with the existing modern architectural style of the existing campus buildings. The external building façade may consist of cement plaster, glass fiberglass reinforced concrete panels,

cement board panels, and/or metal panels. Further, landscaping would conform to the landscaping requirements in Section 02900 of the Campus Building Standards (CSUSM 2013) and lighting would conform to the CSU Outdoor Lighting Design Guide (CSU Office of the Chancellor 2018). The CSUSM Office of Planning, Design and Construction would review and approve project plans prior to construction to ensure that the proposed project complies with campus standards governing scenic quality, including standards related to building materials, landscaping, and lighting.

Based on the above discussion, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality. The impact would be less than significant, and no mitigation is required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than significant impact. The project site is in a generally well illuminated area, characteristic of a typical urban environment. Existing light sources within the project site and surrounding area include streetlights along roadways, interior and exterior building lights on nearby campus buildings, and surface parking lot lighting. Existing sources of glare include the windows of neighboring campus buildings and vehicles in the project vicinity.

Construction activities would occur Monday through Friday, between the hours of 7:00 am and 4:00 pm. Because no nighttime construction would occur, artificial light sources would not be required during construction activities. As noted in Section 3.1.2, temporary fencing would be installed around the construction site, which would obscure views of construction activities at ground level and reduce the amount of glare reflected onto adjacent land uses from construction equipment and vehicles. Therefore, construction activities would not create new sources of light or glare that would adversely affect views in the surrounding area.

Once operational, exterior lighting would be provided on the proposed buildings for security, vehicular access, egress, landscape accents, and building exterior illumination. Project lighting would be consistent with the CSU Outdoor Lighting Design Guide, which includes lighting design strategies to ensure compliance with applicable State codes, reduce light pollution, minimize light trespass (i.e., nuisance glare), and maintain lighting uniformity across the campus. Specifically, the proposed project would be required to comply with the maximum requirements for outdoor lighting power allowances and mandatory lighting controls specified in the California Energy Code and California Green Building Standards Code (CALGreen). Additionally, exterior lighting would be shielded and downcast to prevent light spillover onto adjacent land uses and wildlife areas. Further, external building surfaces would be non-reflective to reduce glare, consistent with California Building Code (CBC) Title 24 requirements. Therefore, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. The impact would be less than significant, and no mitigation is required.

3.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Environmental Setting

The project site is located in the eastern portion of the CSUSM campus, which is identified as urban and built-up land by the California Department of Conservation's Farmland Mapping and Monitoring Program (DOC 2024a). The project site does not contain any land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

(Important Farmland). The nearest land designated as Important Farmland is approximately 0.6 mile west of the project site. The project site is generally vacant and disturbed and no agricultural land uses or operations are located on or adjacent to the project site. No portion of the project site or adjacent parcels are held under Williamson Act contracts (DOC 2024b).

As a State entity, CSUSM is not subject to local government planning and land use plans, policies, or regulations. Regardless, the project site is designated for Institutional/Public Land uses in the City's General Plan and is zoned as Public-Institutional (P-I) by the City (City of San Marcos 2024). There are no areas either within or adjacent to the project site that are zoned for agricultural use, forest land, or timberland production (City of San Marcos 2024).

3.2.2 Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. As discussed in Section 3.2.1, the project site is generally vacant and disturbed. No agricultural resources or operations are present within the project site or on adjacent parcels. The project site is mapped as urban and built-up land and does not contain any land designated as Important Farmland (DOC 2024a). Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. No impact would occur, and no mitigation is required.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. As discussed in Section 3.2.1, the project site is not subject to local government planning and land use plans, policies, or regulations. Regardless, the project site is zoned as Public-Institutional (P-I) by the City and is not zoned for agricultural uses (City of San Marcos 2024). In addition, no portion of the project site or adjacent parcels are held under Williamson Act contracts (DOC 2024b). Therefore, the proposed project would not conflict with existing agricultural zoning or a Williamson Act contract. No impact would occur, and no mitigation is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. As discussed in Section 3.2.1, the project site is not subject to local government planning and land use plans, policies, or regulations. Regardless, the project site is zoned as Public-Institutional (P-I) by the City and is not zoned for forestland, timberland, or Timberland Production (City of San Marcos 2024). The project site is generally vacant and disturbed and no forest land or timberland resources are present on the project site or adjacent parcels. Therefore, the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No impact would occur, and no mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed in Section 3.2.1, the project site is generally vacant and disturbed and no forest land or timberland resources are present on the project site or on adjacent parcels. Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur, and no mitigation is required.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. As discussed in Section 3.2.1, no agricultural, forest, or timberland resources are present on the project site or adjacent parcels. Therefore, the proposed project would not result in changes in the existing environment that could result in the conversion of Important Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur, and no mitigation is required.

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Are significance criteria established by the applicable air district available to rely on for significance determinations? Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

The project site is located in the San Diego Air Basin (SDAB), which encompasses all of San Diego County and is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality and odor conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

AMBIENT AIR QUALITY

Criteria Air Pollutants

The US EPA has established National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants, which are known to be harmful to human health and the environment. These pollutants are: carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ozone, particulate matter with an aerodynamic diameter less than or equal to 10 microns in diameter (PM_{10}) and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter ($PM_{2.5}$), and sulfur dioxide (SO_2). The State of California has also established California Ambient Air Quality Standards (CAAQS) for these six pollutants, as well as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. NAAQS and CAAQS were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. A brief description of the source and health effects of criteria air pollutants is provided below in Table 3.3-1.

Table 3.3-1 Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Ozone	Secondary pollutant resulting from reaction of ROG and NO_X in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO_X results from the combustion of fuels	Increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	Permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	Incomplete combustion of fuels; motor vehicle exhaust	Reduced capacity to pump oxygenated blood; headache, dizziness, fatigue, nausea, vomiting, death	Permanent heart and brain damage
Nitrogen dioxide (NO_2)	Combustion devices (e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines), industrial processes, and fires	Coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; aggravation of existing heart disease leading to death	Chronic bronchitis, emphysema, decreased lung function
Sulfur dioxide (SO_2)	Combustion devices (e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines), industrial processes, and fires	Irritation of upper respiratory tract, increased asthma symptoms, aggravation of existing heart disease leading to death	Chronic bronchitis, emphysema
Respirable particulate matter (PM_{10}), Fine particulate matter ($PM_{2.5}$)	Fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO_2 and ROG	Breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	Alterations to the immune system, carcinogenesis
Lead	Metal processing, piston-engine aircraft or other vehicles operating on leaded fuel	Reproductive/developmental effects (fetuses and children)	Numerous effects including neurological, endocrine, and cardiovascular effects

Notes: NO_X = oxides of nitrogen; ROG = reactive organic gases, used interchangeably with volatile organic compounds (VOC) in CEQA documents.

[1] "Acute" refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

[2] "Chronic" refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

Source: US EPA 2019.

Attainment Area Designations

The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, nonattainment, or unclassified with respect to the NAAQS and CAAQS. Under the CAA and the CCAA, both the California Air Resources Board (CARB) and US EPA use ambient air quality monitoring data to designate the attainment status of an air basin relative to the CAAQS and NAAQS for each criteria air pollutant. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassified." "Unclassified" is used in an area that cannot be classified based on available information as meeting or not meeting the standards. The SDAB is currently classified as a Nonattainment Area with respect to the 1-hour ozone CAAQS and the 8-hour ozone CAAQS and NAAQS (SDAPCD 2024). Additionally, the SDAB is also classified as a Nonattainment Area with respect to the $PM_{2.5}$ and PM_{10} CAAQS. Attainment designations for the SDAB are shown in Table 3.3-2 for each criteria pollutant.

Table 3.3-2 Ambient Air Quality Standards and Current SDAB Attainment Status

Pollutant	Averaging Time	California (CAAQS)[a,b]		National (NAAQS)[c]	
		Standards	SDAB Attainment Status	Standards - Primary[b,d]	SDAB Attainment Status
Ozone	1-hour	0.090 ppm (180 µg/m^3)	Nonattainment	—	—
	8-hour	0.070 ppm (137 µg/m^3)	Nonattainment	0.070 ppm (137 µg/m^3)	Nonattainment
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
	8-hour	9 ppm[f] (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	Attainment	53 ppb (100 µg/m^3)	Attainment
	1-hour	0.18 ppm (339 µg/m^3)	Attainment	100 ppb (188 µg/m^3)	Attainment
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	Attainment	—	—
	3-hour	—	Attainment	—	—
	1-hour	0.25 ppm (655 µg/m^3)	Attainment	75 ppb (196 µg/m^3)	Attainment
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	Attainment	—	—
	24-hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified/Attainment
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	Nonattainment	12 µg/m^3	Unclassified/Attainment
	24-hour	—	—	35 µg/m^3	Unclassified/Attainment
Lead[e]	Calendar quarter	—	—	1.5 µg/m^3	Attainment
	30-Day average	1.5 µg/m^3	Attainment	—	—
	Rolling 3-Month Average	—	—	0.15 µg/m^3	Attainment
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	Unclassified	No national standards	
Sulfates	24-hour	25 µg/m^3	Attainment		
Vinyl chloride[e]	24-hour	0.01 ppm (26 µg/m^3)	Unclassified		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km	Unclassified		

Notes: µg/m^3 = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million (by volume).

[a] California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees 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.

[c] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years,

is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This allows for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: SDAPCD 2024.

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may pose a hazard to human health cause or contribute to an increased likelihood of serious illness or mortality. TACs are usually present in minute quantities in the ambient air; however, their high toxicity may pose a threat to public health even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage. Exposure to TACs may also result in short-term acute affects such as eye watering, respiratory irritation, coughing, running nose, throat pain, or headaches.

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter contained in diesel exhaust (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among these ten TACs mentioned. Based on receptor modeling techniques, CARB estimated the average statewide cancer risk associated with diesel PM concentrations to be 360 excess cancer cases per million people in the year 2020 (CARB 2000:15). Overall, statewide emissions of diesel PM are forecasted to decline by 71 percent between 2000 and 2035 (CARB 2013:3-8).

SENSITIVE RECEPTORS

Sensitive receptors include land uses where exposure to pollutants could result in health-related risks to individuals more susceptible to air pollution, such as children, the elderly, and individuals with pre-existing respiratory illness and/or cardiovascular disease. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and the potential for increased and prolonged exposure of individuals to pollutants.

The project site is located near the center of the campus and primarily surrounded by campus uses to the south, west, and north, and undeveloped open space to the south and east. The nearest sensitive receptors include the various single-family homes on Via Del Caballo, which are located approximately 0.21 mile (1,120 feet) east, the Center for Children and Families, located on campus approximately 0.33 mile (1,742 feet) to the northeast, as well as other single-family homes along South Twin Oaks Valley Road, approximately 0.34 mile (1,800 feet) southwest of the project site.

3.3.2 Regulatory Setting

CRITERIA AIR POLLUTANTS

SDAPCD attains and maintains air quality conditions in the SDAB through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SDAPCD includes the preparation of plans and programs for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. SDAPCD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA and Clean Air Act Amendments, and the CCAA.

The CCAA requires air districts to submit air quality plans for areas that do not meet CAAQS for ozone, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$. SDAPCD has attained all CAAQS with the exception of ozone, PM_{10}, and $PM_{2.5}$ (SDAPCD 2020a). The CCAA does not currently require attainment plans for PM_{10} and $PM_{2.5}$. Additionally, the SDAB has not attained the federal NAAQS for ozone. For the attainment and maintenance of ozone, in October of 2020, SDAPCD adopted its 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone (Attainment Plan), which examined air quality conditions and documents efforts made by SDAPCD to improve air quality (SDAPCD 2020b). The Attainment Plan demonstrates how the SDAB will further reduce air pollutant emissions, including ozone precursors volatile organic compounds (VOC) and oxides of nitrogen (NO_X), in order to attain and maintain the NAAQS and CAAQS for ozone, and includes the San Diego Regional Air Quality Strategy (RAQS), which addresses State requirements. The Attainment Plan is submitted to CARB for approval, and then to US EPA as a revision to the San Diego portion of the California State Implementation Plan (SIP) for attaining ozone standards.

Neither CSUSM, the City of San Marcos, nor the SDAPCD have adopted CEQA thresholds for significance for air quality. However, the SDAPCD does specify Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources (SDAPCD Rules 20.2 and 20.3). If these incremental levels for stationary sources are exceeded, an AQIA must be performed for the source.

SDAPCD Rule 20.2, which outlines these trigger levels states that any project that results in an emissions increase equal to or greater than any of these levels, must:

> "demonstrate through an AQIA … that the project will not (A) cause a violation of a State or national ambient air quality standard anywhere that does not already exceed such standard, nor (B) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, nor (C) cause additional violations of a State ambient air quality standard anywhere the standard is already being exceeded, nor (D) prevent or interfere with the attainment or maintenance of any State or national ambient air quality standard." (SDAPCD 2019)

For projects with stationary-source emissions that are below these criteria, no AQIA is typically required, and project level emissions are presumed to be less than significant. For CEQA purposes, these trigger levels are commonly used by San Diego agencies to determine whether a project's total emissions (e.g., stationary and fugitive emissions, as well as emissions from mobile sources) would result in a significant impact to air quality (Table 3.1-3; County of San Diego 2007). SDAPCD's trigger levels are tied to achieving or maintaining attainment designations with respect to the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health and public welfare.

Table 3.3-3 San Diego Air Pollution Control District Pollutant Trigger Levels

Pollutant	Emission Rate		
	lb/hr	lb/day	tons/yr
Carbon monoxide (CO)	100	550	100
Oxides of nitrogen (NO_X)	25	250	40
Particulate matter (PM_{10})	—	100	15

Pollutant	Emission Rate		
	lb/hr	lb/day	tons/yr
Particulate matter ($PM_{2.5}$)	—	55*	10*
Oxides of sulfur (SO_X)	25	250	40
Lead and lead compounds	—	3.2	0.6
Volatile organic compounds (VOC)	—	75**	13.7***

Notes: lb/hr = pounds per hour; lb/day = pounds per day; tons/yr = tons per year

According to the County of San Diego, the hourly and yearly levels are most appropriately used in situations when temporary emissions like emergency generators or other stationary sources are proposed as a part of a project. The daily levels are most appropriately used for the standard construction and operational emissions.

* US EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the South Coast Air Quality Management District.

** Threshold based on the threshold of significance threshold for volatile organic compounds (VOC) from the South Coast Air Quality Management District for the Coachella Valley.

*** 13.7 Tons Per Year threshold based on 75 lb/day multiplied by 365 days/year and divided by 2000 lb/ton.

Source: County of San Diego 2007.

TOXIC AIR CONTAMINANTS

Toxic air pollutants are regulated through SDAPCD Regulation XII. An increase in the maximum individual cancer risk (MICR) due to project-related TAC emissions that exceeds the SDAPCD threshold of one chance in one million without application of Toxics Best Available Control Technology (T-BACT), 10 chances in one million with application of T-BACT, or a chronic or acute health hazard index (HHI) greater than one, would pose an excessive health risk to nearby receptors and would thus be considered a significant impact (SDAPCD 2022).

3.3.3 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact. The SDAB is currently designated as nonattainment with respect to the NAAQS and CAAQS for ozone, and the CAAQS for PM_{10} and $PM_{2.5}$. Air quality planning for San Diego County is under the jurisdiction of SDAPCD, which adopts air quality plans that identify the pollution-control measures needed to expeditiously attain and maintain air quality standards. SDAPCD air quality plans include the San Diego Regional Air Quality Strategy (RAQS), addressing State requirements, and the San Diego portion of the California State Implementation Plan (SIP), addressing federal requirements. The most recent RAQS is the Draft 2022 RAQS, which was released in November 2023. The most recent plan for the San Diego portion of the SIP is the *2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County* (2020 Attainment Plan). Both the Draft 2022 RAQS and the 2020 Attainment Plan rely on emissions forecasts based on demographic and economic growth projections provided by city and county general plans. Projects whose growth is included in the projections used in the formulation of these air quality plans are consistent with these air quality plans and would not interfere with its implementation.

The project would construct two new buildings totaling 125,000 square feet to address changing programmatic needs at the campus in support of new CSTEM undergraduate programs on campus. The proposed project would result in approximately 350 new students and 33 new staff and faculty in the opening year. As discussed in Section 4.14, "Population and Housing," the projected growth is consistent with the adopted Campus Master Plan, which depicts the campus facilities that were envisioned to accommodate an anticipated capacity of 25,000 FTES by 2030 (CSUSM 2018). Moreover, it is anticipated that many of the new students would commute from the surrounding region and some of the new faculty and staff generated by the proposed project would be hired from the local population in the City and nearby areas. Therefore, the proposed project would not induce substantial unplanned population growth on or near the

CSUSM campus or the City of San Marcos. Thus, the project would be consistent with the growth projections assumed in the RAQS and Attainment Plan and would thus not conflict with or obstruct implementation of the applicable air quality plan. This impact would be less than significant, and no mitigation is required.

b) 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?

Less than significant impact. The SDAB is designated as a nonattainment area with respect to the NAAQS and CAAQS for ozone, and the CAAQS for $PM_{2.5}$ and PM_{10}. The levels of criteria air pollutants and precursors emitted during project construction and project operation are discussed separately below.

Construction

Project construction activities would result in emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from demolition, site preparation and grading building construction, the application of architectural coatings, and paving. Typical construction equipment would include dozers, excavators, loaders/backhoes, paving equipment, forklifts, and haul trucks, as well as other diesel-fueled equipment as necessary. Fugitive dust emissions of PM_{10} and $PM_{2.5}$ are associated primarily with demolition, site preparation, and grading and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and vehicles traveling on and off the site. Emissions of ozone precursors, ROG and NO_X, are associated primarily with construction equipment and on-road mobile exhaust. Paving and the application of architectural coatings result in off-gas emissions of ROG. PM_{10} and $PM_{2.5}$ are also contained in vehicle exhaust.

Construction-generated emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2022.1 (CAPCOA 2022). Modeling was based on project-specific information, where applicable, including phasing schedule, equipment number and types by phase, as well as truck and worker trips. Where project specific information was not available, reasonable assumptions using default values in CalEEMod were used.

Maximum daily construction emissions were conservatively estimated based on anticipated construction activities that would occur simultaneously. Table 3.3-4 summarizes the modeled maximum daily emissions from construction activities for all pollutants. For detailed assumptions and modeling inputs, refer to Appendix A.

Table 3.3-4 Maximum Daily Estimated Criteria Air Pollutants and Precursors Emissions Associated with Project Construction

Construction Year	Pounds Per Day					
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Year 1	19	146	118	16	8	<1
Year 2	6	23	33	2	1	<1
Year 3	8	24	33	5	1	<1
Threshold	75	250	550	100	55	250
Exceed Threshold?	No	No	No	No	No	No

Notes: VOC = volatile organic compounds; NO_X = Oxides of Nitrogen; CO = Carbon Monoxide; SO_X = Oxides of Sulfur; PM_{10} = Particulate Matter with a diameter < 10 micrometers; $PM_{2.5}$ = Particulate Matter with a diameter < 2.5 micrometers

Source: Modeling conducted by Ascent in 2024.

Emissions would be highest for all but ROG during the first year of construction, as numerous phases associated with construction of both Phase 1A and Phase 1B, as well as the off-site utility tunnel alignment, are expected to occur concurrently. Emissions during the last year would be highest for ROG, as this is when the majority of architectural coatings application (i.e., painting) would occur. However, as shown, emissions during construction would be below relevant thresholds during each year of construction. Therefore, project-related emissions would not result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is in nonattainment with the CAAQS and NAAQS. In addition, the project would not exacerbate or interfere with the region's ability to attain any health-based standards and would not cause adverse health impacts related to criteria air pollutant emissions. Therefore, this impact during construction would be less than significant, and no mitigation is required.

Operation

The proposed project would result in the generation of long-term operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ as a result of operations of the new buildings and associated increase in student enrollment as well as staff and faculty employment. Mobile-source emissions of criteria air pollutants and precursors would result from vehicle trips generated by additional students, faculty, and staff commute trips, and other associated vehicle trips (e.g., delivery of supplies, visitors). Area-wide sources would include the combustion of fuel associated with the use of landscaping equipment, the periodic application of architectural coatings, and generation of ROG from the use of consumer products. Additionally, natural gas would be used to provide fuel for the laboratory uses in Building 36B.

Table 3.3-5 summarizes the maximum daily emissions of criteria air pollutants and ozone precursors at opening year.

Table 3.3-5 Maximum Daily Estimated Criteria Air Pollutants and Precursors Emissions Associated with Project Operation in 2028

Source	Pounds Per Day					
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Mobile	1	1	9	2	1	<1
Area	4	<1	5	<1	<1	<1
Energy	<1	1	1	<1	<1	<1
Total Emissions	5	2	16	2	1	<1
Threshold	75	250	550	100	55	250
Exceed Threshold?	No	No	No	No	No	No

Notes: VOC = volatile organic compounds; NO_X = Oxides of Nitrogen; CO = Carbon Monoxide; SO_X = Oxides of Sulfur; PM_{10} = Particulate Matter with a diameter < 10 micrometers; $PM_{2.5}$ = Particulate Matter with a diameter < 2.5 micrometers

Source: Modeling conducted by Ascent in 2024.

As shown, emissions during operations in opening year would be minimal and well below thresholds. Therefore, project-related emissions would not result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is in nonattainment with the CAAQS and NAAQS. In addition, the proposed project would not exacerbate or interfere with the region's ability to attain any health-based standards and would not cause adverse health impacts related to criteria air pollutant emissions. Therefore, this impact during operations would be less than significant, and no mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact. The levels of CO and TAC emissions emitted during project construction and project operation are discussed separately below.

Toxic Air Contaminants

With respect to TACs, nearby sensitive receptors include the single-family homes on Via Del Caballo, which are located approximately 0.21 mile (1,120 feet) east of the project site and separated by a hill. Other sensitive receptors near the project site are the single-family homes along South Twin Oaks Valley Road, approximately 1,800 feet southwest of the project site.

The proposed project would be constructed in multiple phases over two years over the project site and off-site utility tunnel alignment. Construction activities would be sporadic in both duration and location over the two-year construction period, which is much shorter than the assumed 70-year exposure period used to estimate lifetime cancer risks. Construction activities associated with the proposed project would be sporadic (i.e., occurring in phases), transitory (i.e., occurring over different portions of the project site), and short-term in nature at any given location on-site. As such, construction of the proposed project alone is not anticipated to result in an elevated health risk to exposed persons because of the short-term nature of construction-related diesel exposure.

Long-term, the operation of the proposed project would not result in any new permitted stationary sources and would not result in new sources of stationary TACs. The additional buildings would increase passenger vehicle travel to the project site, but this would be minimal and limited to circulation routes. Thus, the emissions from operational TAC sources and the associated health risk to the surrounding community is expected to be minimal. Operation of the proposed project is not anticipated to result in elevated health risk exposure for sensitive receptors (e.g., nearby residences). Therefore, this impact would be less than significant, and no mitigation is required.

Carbon Monoxide

Elevated levels of CO concentrations are typically found in areas with significant traffic congestion. CO is a public health concern because at high enough concentrations, it can cause health problems such as fatigue, headache, confusion, dizziness, and even death. Ambient concentrations of CO have declined dramatically in California because of existing controls and programs. Most areas of the state, including the region in which the proposed project is located, meet the state and federal CO standards (CARB 2004).

Elevated CO concentrations are typically found at roadways and intersections with high vehicle activity and significant traffic congestion. For instance, the South Coast Air Quality Management District 2003 Air Quality Management Plan (AQMP), which is the most recent plan that addresses CO concentrations in the region, includes a CO hot spots analysis at four specified heavily traveled intersections in Los Angeles at the peak morning and afternoon time periods. These four intersection locations selected for CO modeling were considered to be the worst-case intersections that would likely experience the highest CO concentrations in the Southern California region. The CO hot spots analysis in the 2003 AQMP did not predict a violation of CO standards at the four intersections. Of these four intersections, the busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which was described as the most heavily congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day (SCAQMD 2003). The modeling for the 2003 AQMP is used here because no equivalent modeling exercise has been performed in the San Diego region.

Roadway volumes near the campus are much lower than 100,000 vehicles per day. The project would increase vehicle travel to the project area due to the increase in student enrollment as well as staff and faculty jobs, but the increase would be minimal and limited to 444 new average daily trips (ADT) at opening year of the project. This increase would be minimal and would not increase traffic at any intersection or roadway to levels that would see CO concentrations above CO standards. Therefore, this impact during operations would be less than significant, and no mitigation is required.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than significant impact. Construction activities would result in minor odors from the use of heavy-duty diesel equipment and haul trucks accessing the site. The nearest sensitive receptors to project related-construction activity are residential receptors in the single-family subdivision located approximately 1,120 feet east of the project site. Construction activities would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. Therefore, project construction is not anticipated to result in an odor-related impact to nearby residential receptors. The proposed project would not introduce a land use type that would be expected to result in substantial odors. The proposed project would not include the development of stationary odor sources typically associated with odor issues (e.g., wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing). Therefore, construction and operation of the proposed project would not be anticipated to result in exposure of a substantial number of people to objectionable odors. This impact would be less than significant, and no mitigation is required.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) 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 Wildlife or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒
d) 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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

3.4.1 Environmental Setting

BIOLOGICAL RESOURCE SURVEY AND DATABASE SEARCHES

Ascent conducted a reconnaissance and vegetation communities mapping survey on February 2, 2024. The survey was conducted within the project impact footprint and a 300-foot buffer (study area) in the morning hours between 9 and 11 am to increase the detectability of sensitive wildlife species potentially occurring in the study area. As part of the survey, Ascent inventoried plant species, observed and recorded wildlife and wildlife signs (e.g., vocalizations, burrows, tracks, prey remains, and scat), and categorized the potential for occurrence of listed or sensitive plant and wildlife species. Survey conditions were partly cloudy with some wind, with temperatures between 60 and 62 degrees Fahrenheit and intermittent rains in the second part of the survey. The presence and/or percent cover of indicator plant species were used to determine the vegetation community. Vegetation community and land use mapping was conducted by walking meandering transects throughout the study area. The vegetation community and land cover types classification follows

Holland (1986) and Oberbauer et al. (2008). Vegetation community acreages were mapped to the hundredth (0.01) of an acre. The boundaries of vegetation communities were then drawn onto a 200-feet-to-the-inch scaled aerial photograph and then digitized using Geographic Information System. A complete species inventory and site photos from the survey are included in Appendix B.

No special-status plant species were detected within the study area. One special-status plant species, Bottle liverwort (*Sphaerocarpos drewiae*), was determined to have moderate potential to occur within the study area (Appendix B).

One special-status wildlife species was incidentally detected within the study area during the reconnaissance survey: coastal California gnatcatcher (*Polioptila californica californica*), a federally threatened species. Seven other special-status wildlife species determined to have moderate potential to occur within the study area: Coast horned lizard (*Phrynosoma blainvillii*), Coast patch-nosed snake (*Salvadora hexalepis virgultea*), Coastal whiptail (*Aspidoscelis tigris stejnegeri*), Red-diamond rattlesnake (*Crotalus ruber*), Crotch's bumble bee (*Bombus crotchii*), San Diego desert woodrat (*Neotoma lepida intermedia*), and Western mastiff bat (*Eumops perotis californicus*) (Appendix B).

VEGETATION COMMUNITIES

The following eight vegetation communities and land cover types were mapped in the study area based on the field visit results: Diegan coastal sage scrub (including disturbed variety), southern mixed chaparral, tamarisk scrub, ornamental plantings, disturbed habitat, developed concrete-lined channel, and urban/developed land (Oberbauer et al. 2008; Holland 1986). Diegan coastal sage scrub (including disturbed variety) and southern mixed chaparral are considered sensitive vegetation communities by the California Department of Fish and Wildlife. The existing vegetation communities are depicted in Figure 3.4-1 and listed in Table 3.4-1.

Table 3.4-1 Vegetation Communities and Land Cover Types in the Study Area

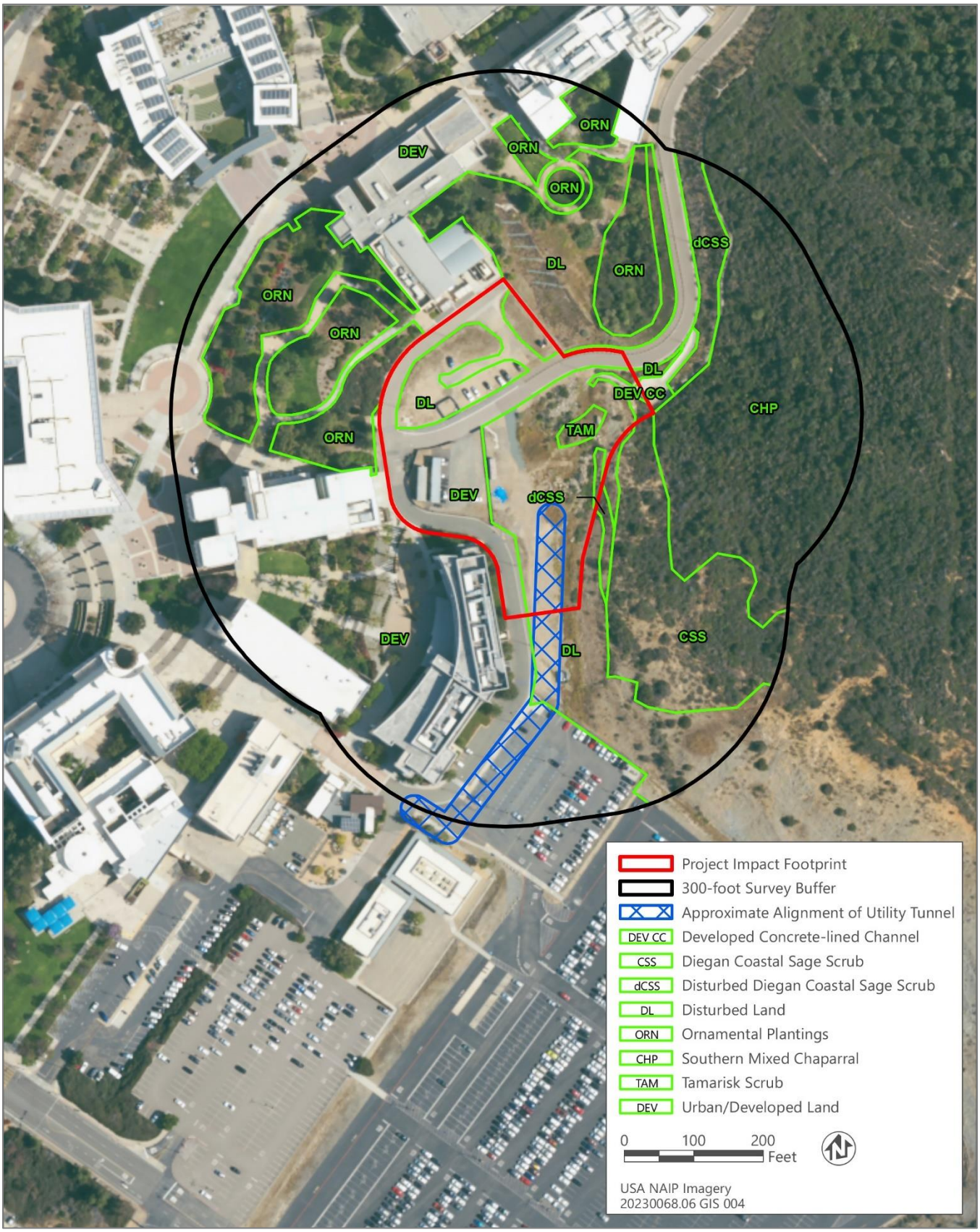
Vegetation Community	Study Area (Outside Project Site) (acres)	Project Site (acres)
Diegan Coastal Sage Scrub (32500)[1]	1.35	0.02
Diegan Coastal Sage Scrub (disturbed variety) (32500)[1]	0.34	0.02
Southern Mixed Chaparral (37120)[1]	2.64	0
Tamarisk scrub (63810)	0	0.05
Ornamental Plantings (11300)	2.16	0
Disturbed Habitat (11300)	2.11	1.41
Developed concrete-lined channel	0.06	0.02
Urban/Developed Land (12000)	7.35	1.32
Total	16.01	2.84

[1] Sensitive vegetation community under federal and state aquatic resource regulations

Diegan Coastal Sage Scrub (including disturbed variety) (32500)

Diegan coastal sage scrub is a native vegetation community that, according to Oberbauer et al. (2008), is composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species—such as coastal sagebrush (*Artemisia californica*), California buckwheat, and sages (*Salvia* spp.)—with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*).

Coastal sage scrub in the study area consists of coastal sagebrush, black sage (*Salvia mellifera*), California buckwheat, and laurel sumac. Coastal sage scrub is present on the eastern section of the study area and a small patch of coastal sage scrub (including disturbed variety) is within the project impact footprint. The disturbed coastal sage scrub is established within previously graded areas where both exotic, annual species, and perennial shrub species have recruited. The stands of coastal sage scrub are located east of the disturbed land within the project site and southern mixed chaparral habitat in the eastern most portion of the study area.



Source: Ascent 2024.

Figure 3.4-1 Biological Resources

Southern Mixed Chaparral (37120)

Southern mixed chaparral is a drought- and fire-adapted community of woody shrubs that is 1.5 to 3 meters (5 to 10 feet) tall, frequently forming dense, impenetrable stands. It develops primarily on mesic, north-facing slopes and in canyons and is characterized by crown- or stump-sprouting species that regenerate following burns or other ecological catastrophes. This vegetation community is typically a mixture of chamise (*Adenostenum fasciculatum*), bush-rue (*Cneoridium dumosum*), ceanothus (*Ceanothus* spp.), manzanita species (Eastwood's manzanita [*Arctostaphylos glandulosa*] and mission manzanita), Nuttall's scrub oak, laurel sumac, and black sage.

Southern mixed chaparral is present in a contiguous patch in the eastern portion of the study area and is dominated by chamise, spiny redberry (*Ramnus crocea*), and laurel sumac. This vegetation community is entirely outside of the project site.

Ornamental Plantings (11300)

Ornamental plantings refers to areas where non-native ornamental species and landscaping schemes have been installed and maintained, usually as part of commercial or residential property and is considered synonymous with disturbed habitat (11300) for purposes of this analysis. This habitat type supports myriad ornamental species, including hottentot fig (*Carpobrotus edulis*), Peruvian pepper tree (*Schinus molle*), Brazilian pepper tree (*Schinus terebinthifolius*), and red apple iceplant (*Aptenia cordifolia*) (Holland 1986).

This vegetation community is intermixed with the existing developed and disturbed habitat areas of the study area within the northern and western portions. There are scattered native species, such as blue elderberry (*Sambucus mexicana*) and laurel sumac (*Malosma laurinia*) within this community; however, they are not a significant percentage of the canopy (<1%) and therefore are not considered a separate vegetation community.

Disturbed Habitat (11300)

Disturbed lands are areas that have been subject to extensive physical anthropogenic disturbance and as a result cannot be identified as a native or naturalized vegetation association. However, these areas typically still have a recognizable soil substrate. The existing vegetation is typically composed of non-native ornamental or exotic species (Oberbauer et al. 2008).

Disturbed land comprises the rock stockpile storage areas in the center of the project site and previously graded areas along the utility trenching alignment in the center of the study area.

Urban/Developed Land (12000)

According to Oberbauer et al. 2008, urban/developed land represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping.

Within the study area and project site, urban/developed land consists of the existing university buildings, the associated paved roadways, and other human-made infrastructure.

HABITAT CONSERVATION PLANS

While the CSUSM campus is located within the boundaries of the City of San Marcos, North County Multiple Habitat Conservation Program (MHCP) and the Draft City of San Marcos Subarea Plan, the campus is not covered by these plans and CSUSM is not subject to these local policies or regulations.

3.4.2 Discussion

a) 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 Wildlife or the U.S. Fish and Wildlife Service?

Less than significant impact with mitigation incorporated. There is potential for migratory birds, raptors, or other avian species considered special-status by California Fish and Game Code Section 3503 and 3503.5 to occur within vegetation communities present within the study area and substantial adverse effects to these species could occur directly and indirectly as a result of implementation of the proposed project. Although no focused protocol surveys were conducted, it is assumed that the federally threatened coastal California gnatcatcher (*Polioptila californica*) would be present because suitable coastal sage scrub habitat is present within and adjacent to the project site and the species was incidentally detected during biological reconnaissance surveys on the project site.

Implementation of the proposed project would involve vegetation removal and ground-disturbing activities, including grading and excavation, and could result in substantial adverse direct and indirect effects to special-status species, including injury, mortality, habitat modification, and disturbance. As discussed further in Section 3.4.2, the proposed project would result in the removal of 0.04 acre of coastal sage scrub, which provides suitable habitat to the coastal California gnatcatcher. Because habitat removal would be limited to partially disturbed to disturbed habitat and the total size of the impact to coastal sage scrub would not exceed 0.1 acre, the proposed project would not result in habitat modifications with potential to result in a substantial adverse effect. However, construction activities may produce noise at levels that could indirectly impact special-status species that have a high or moderate to high potential to forage, roost, and nest in the study area. Therefore, the proposed project would have potential to result in injury, mortality, and disturbance, such that the proposed project could result in a substantial adverse effect on special-status avian species, including coastal California gnatcatcher.

Mitigation would be required to address any permanent, temporary, direct, indirect, and cumulative impacts to special-status avian species that would be considered significant under CEQA and federal and State law. Mitigation Measure BIO-1 specifies requirements that the construction contractor must follow during any clearing, grubbing, grading, or other construction activities that occur during the coastal California gnatcatcher breeding season (March 1 through August 15). Requirements include prohibiting construction activities within occupied coastal California gnatcatcher habitat, conducting a survey of areas where construction noise levels would potentially exceed 60 A-weighted decibels (dBA) hourly average, and implementing noise attenuation measures (e.g., berms, walls) at the edge of habitat occupied by the coastal California gnatcatcher where noise levels could exceed 60 dBA hourly average. Mitigation Measure BIO-2 requires that a qualified biologist complete a nesting bird survey prior to any grading or construction activities within the nesting season (February 1st to September 15th) and establish avoidance buffers around active nests. Implementation of Mitigation Measures BIO-1 and BIO-2 would ensure that injury, mortality, habitat modification, and disturbance to special-status birds, including coastal California gnatcatcher, would be avoided. The full text of Mitigation Measures BIO-1 and BIO-2 is provided in the "Required Mitigation Measures" section following Biological Resources impact analysis.

With implementation of Mitigation Measures BIO-1 and BIO-2, the proposed project would not 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 Wildlife or the US Fish and Wildlife Service. This impact would be less than significant with mitigation incorporated.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less than significant impact. Implementation of the proposed project would involve vegetation removal and ground-disturbing activities, including grading and excavation, and would result in substantial adverse direct and indirect effects

to sensitive natural communities consisting of Diegan coastal sage scrub (including disturbed variety). The acreage of impacts on sensitive vegetation communities are summarized in Table 3.4-2.

Table 3.4-2 Impacts to Sensitive Vegetation Communities on the Project Site

Vegetation Community	Impacts	Significance	Mitigation Ratio	Mitigation Acreage
Diegan coastal sage scrub[2]	0.02	Less than significant	0:1	0[1]
Diegan coastal sage scrub (disturbed)[2]	0.02	Less than significant	0:1	0[1]
Total	0.04	-	-	0

[1] Impacts to the sensitive upland vegetation community are less than 0.10-acre, therefore, would not require mitigation

[2] Considered a sensitive vegetation community

While the proposed project would result in adverse effects to the sensitive vegetation community area described in Table 3-6, the effects would be partially to disturbed habitat and the total size of the impact to Diegan coastal sage scrub (including disturbed variety) would not exceed 0.1 acre (0.04 acre total impact). Therefore, the adverse effects from the project would not be substantial and the impact would be less than significant.

c) 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?

No impact. Implementation of the proposed project would involve vegetation removal and ground-disturbing activities, including grading and excavation; however, these activities would not result in substantial adverse direct and indirect effects to wetlands. While tamarisk scrub and a developed concrete-lined channel are present within and adjacent to the project site, that vegetation community and land cover do not represent wetland or non-wetland water habitat because they were artificially established in historically upland habitats by previous construction activities consisting of material stockpiling and associated grading and concrete-ditch installment to collect sheet flows. Therefore, implementation of the proposed project would not cause substantial adverse direct and indirect effects to wetlands and no impact would occur.

d) 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?

Less than significant impact. Implementation of the proposed project would involve vegetation removal and ground-disturbing activities, including grading and excavation, and could result in direct and indirect impacts to wildlife movement within sensitive upland vegetation communities. While CSUSM is not beholden to the City of San Marcos's General Plan, the San Marcos General Plan does not identify a wildlife movement corridor within or adjacent to the project site. Given that the proposed project would occur primarily within or directly abutting areas previously disturbed or developed, the project would not substantially interfere with native wildlife movement and the impact would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No impact. Implementation of the proposed project would involve vegetation removal and ground-disturbing activities, including grading and excavation. As a State entity, CSUSM is not subject to local policies or regulations. Therefore, the proposed project would not conflict with any applicable local policies or ordinances protecting biological resources and no impact would occur.

f) 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. As stated in Response 3.4(e) above, as a State entity, CSUSM is not subject to municipal plans, policies, or regulations. Although the CSUSM campus is located within the boundaries of the North County Multiple Habitat Conservation Program (MHCP) and the Draft City of San Marcos Subarea Plan, the campus is not covered by these plans. Therefore, the proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan and no impact would occur.

Required Mitigation Measures

BIO-1: Requirements for Construction Activities During the Coastal California Gnatcatcher Breeding Season
No clearing, grubbing, grading, or other construction activities shall occur during the coastal California gnatcatcher breeding season (March 1 through August 15), until the following requirements have been met to the satisfaction of the CSUSM project manager:

- A Qualified Biologist (possessing a valid Endangered Species Act Section 10[a][1][a] Recovery Permit) shall survey those habitat areas that would be subject to construction noise levels exceeding 60 A-weighted decibels (dBA) hourly average for the presence of the coastal California gnatcatcher. Surveys for coastal California gnatcatcher shall be conducted pursuant to the protocol survey guidelines established by the US Fish and Wildlife Service within the breeding season prior to the commencement of any construction.
- If coastal California gnatcatchers are present, then the following conditions must be met:
  - March 1 through August 15, no clearing, grubbing, or grading of occupied coastal California gnatcatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; and
  - March 1 through August 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dBA hourly average at the edge of occupied coastal California gnatcatcher habitat. An analysis showing that noise generated by construction activities would not exceed 60 dBA hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by CSUSM at least 2 weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; or
  - At least 2 weeks prior to the commencement of construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities would not exceed 60 dBA hourly average at the edge of habitat occupied by the coastal California gnatcatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dBA hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (August 16). Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. If not, other measures shall be implemented in consultation with the biologist and the CSUSM project manager, as necessary, to reduce noise levels to below 60 dBA hourly average or to the ambient noise level if it already

exceeds 60 dBA hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

- If coastal California gnatcatchers are not detected during the protocol survey, the Qualified Biologist shall submit substantial evidence to CSUSM and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary from March 1 through August 15 within suitable habitat as follows:
  - If this evidence indicates that the potential is high for coastal California gnatcatcher to be present based on historical records or site conditions, then Condition 1(a) shall be adhered to as specified above.
  - If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

BIO-2: Requirements for Construction Activities within the Nesting Bird Season

Prior to initiating grading or construction activities within the nesting season (February 1st to September 15th), a nesting survey from a qualified biologist or other expert in the field must be submitted to the CSUSM project manager to verify there are no active nests on the project site. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum of a twenty-five (25) foot buffer and up to a maximum buffer of 300 feet for raptors, as determined by the project biologist, and shall be avoided until the nesting cycle is complete.

Mitigation for impacts to migratory bird and raptors shall occur by conducting a pre-construction survey by a qualified biologist within 72 hours of the onset of vegetation removal to determine if migratory bird and raptor nests occur. If no birds or raptors are nesting (which includes nest building or other breeding or nesting behavior) in project site, clearing shall be allowed to proceed. If birds or raptors are observed nesting, construction shall be postponed until a qualified biologist determines that all nesting (or breeding or nesting behavior) has ceased.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Substantially disturb human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

3.5.1 Environmental Setting

ASM Affiliates, Inc. (ASM) prepared an Archaeological Survey Report in February 2024 to assess potential impacts on cultural and historical resources as a result of the proposed project (ASM 2024). The archaeological inventory included a record search of the California Historical Resources Information System (CHRIS), a Sacred Lands File search with the Native American Heritage Commission (NAHC), Native American outreach, literature review, archival research, an archaeological pedestrian survey, and resource documentation. The Archaeological Survey Report is included in Appendix C of this Initial Study, and the findings are summarized herein.

A CHRIS records search request was conducted at the South Coastal Information Center (SCIC) at San Diego State University on February 22, 2024, in order to assess the presence or absence of cultural resources within the project site and a one-mile radius. The SCIC records search indicated that no cultural resources were previously recorded within the project site and 29 cultural resources were previously recorded within a one-mile radius of the project site. One historic address was previously recorded approximately one mile from the project site. ASM identified 72 studies that have been conducted within one mile of the project site, five of which intersect with a portion of the project site. No cultural resources were identified during the literature review.

ASM conducted an intensive-level pedestrian survey of the project site on February 9, 2024. As observed during the survey, the project site is extremely disturbed from past grading activities. The project site is surrounded by modern development, including university buildings, residential development at the top of the eastern hill, and surface parking lots. The hillside east of the project site, below the residential development, is undeveloped. No new cultural resources were identified during the survey.

3.5.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No Impact. "Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Sections 15064.5[a] and [b]). The project site is generally vacant and disturbed with portable custodial trailers, storage containers, and small piles of rock and discarded construction materials. As discussed in Section 3.5.1, no historical resources were identified within the project site during the records search, literature review, or pedestrian survey of the project site (ASM 2024).

Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource. No impact would occur, and no mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than significant impact with mitigation incorporated. As described in Section 3.5.1 above, the project site has been extensively graded and no archaeological resources were previously recorded at the project site. No indication of subsurface archaeological remains were present during an intensive pedestrian survey of the project site. Further, the project site is underlain with approximately 2 to 5 feet of undocumented fill that has been extensively graded, followed by granitic rock (Geocon, Inc. 2023). During project construction, excavation is anticipated to occur to a maximum depth of 6 feet below the ground surface for the building structure and 8 to 10 feet for the gravity fed utility systems. Because ground disturbance would not occur in native soils, buried archaeological resources are not expected to be encountered during project construction. Nevertheless, consultation with Native American Tribes identified concerns related to unanticipated discoveries (refer to Section 3.18, "Tribal Cultural Resources"). With implementation of Mitigation Measure CUL-1—which requires a cultural resource monitoring plan, archaeological monitors, and specific procedures in the event of unanticipated discoveries—the proposed project would not cause a substantial adverse change in the significance of an archaeological resource. This impact would be less than significant with mitigation incorporated.

CUL-1: Implement Tribal-Requested Measures.
Implement TCR-1 through TCR-4.

c) Substantially disturb human remains, including those interred outside of formal cemeteries?

Less than significant impact. As discussed in Section 3.5.2(b) above, the project site is underlain with approximately 2 to 5 feet of undocumented fill that has been extensively graded, followed by granitic rock (Geocon, Inc. 2023). During project construction, excavation is anticipated to occur to a maximum depth of 6 feet below the ground surface for the building structure and 8 to 10 feet for the gravity fed utility systems. Because ground disturbance would not occur in native soils, human remains are not expected to be encountered during project construction.

In the unlikely event that human remains or related cultural materials are encountered, Section 15064.5(e) of the CEQA Guidelines (as incorporated from PRC section 5097.98) and California 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 on the project 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 CSUSM for the excavation work, for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in PRC section 5097.98 (California Code of Regulations, Title 14; Chapter 3; Article 5; Section 15064.5(e)). If the human remains are not Native American, CSUSM shall notify the medical examiner of the historic context of the discovery and the medical examiner will determine the appropriate course of action.

Compliance with PRC section 5097 and California Health and Safety Code section 7050.5 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Therefore, the proposed project would not substantially disturb human remains. This impact would be less than significant, and no mitigation is required.

3.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

3.6.1 Environmental Setting

GENERAL SETTING

California relies on a regional power system composed of a diverse mix of natural gas, petroleum, renewable, hydroelectric, and nuclear generation resources.

Petroleum: Petroleum products (gasoline, diesel, jet fuel) are consumed almost exclusively by the transportation sector, and account for almost 99 percent of the energy used in California by the transportation sector, with the rest provided by ethanol, natural gas, and electricity (BTS 2023). Between 2015 and 2023, approximately 130.6 billion gallons of gasoline and diesel fuel were purchased in California (California State Board of Equalization 2024). Gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet specific formulations required by CARB (EIA 2023).

Natural Gas: Approximately 60 percent of California households use natural gas for home heating, and about 31 percent of California's utility-scale net electricity generation is fueled by natural gas (EIA 2023).

Electricity and Renewables: The California Energy Commission (CEC) estimates that the three investor-owned utilities expect to exceed their 2023 Renewables Portfolio Standard (RPS) compliance target and will have procured approximately 51 percent RPS by the end of 2023 (CEC 2023a).

Alternative Fuels: Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many alternative transportation fuels (e.g., biodiesel, hydrogen, electricity, and others). Use of alternative fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, AB 32 Scoping Plan).

ENERGY PROVIDER

Electric and natural gas services in San Diego County is provided by the San Diego Gas and Electric Company (SDG&E), a subsidiary of Sempra Energy. SDG&E operates electricity and natural gas infrastructure in the county, including power lines, power plants, pipelines, and substations. As of 2022, SDG&E procured 45 percent of its electricity from eligible renewable sources (CEC 2023b). This project site is currently served by SDG&E.

3.6.2 Regulatory Setting

FEDERAL REGULATIONS

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Under this act, the National Highway Traffic and Safety Administration (NHTSA), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards. The Corporate Average Fuel Economy program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Three Energy Policy Acts have been passed, in 1992, 2005, and 2007, to reduce dependence on foreign petroleum, provide tax incentives for alternative fuels, and support energy conservation.

STATE REGULATIONS

Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the CEC. The creation of the act occurred as a response to the State legislature's review of studies projecting an increase in statewide energy demand, which would potentially encourage the development of power plants in environmentally sensitive areas. The act introduced State policy for siting power plants to reduce potential environmental impacts, and additionally sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings that ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code), which have been updated regularly and remain in effect today. The act additionally directed CEC to cooperate with the Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all environmental impact reports required on local projects.

State of California Energy Action Plan

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 California Energy Action Plan (2008 update). The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

California Energy Efficiency Action Plan

Additionally, the CEC's Energy Efficiency Action Plan (CEC 2019) focuses on energy efficiency savings in new and existing buildings and reducing greenhouse gas (GHG) emissions and provides strategy recommendations for realizing these goals. The 2019 Energy Efficiency Action Plan is separated into three goals that drive energy efficiency: doubling energy efficiency savings by 2030, removing and reducing barriers to energy efficiency in low-income and disadvantaged communities, and reducing GHG emissions from the buildings sector.

Transportation-Related Regulations

US EPA and NHTSA have issued rules to reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register [FR] 62624). NHSTA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal

programs and the standards of California and other states. The purpose of this program is to increase fuel economy and limit vehicle emissions, including carbon dioxide (CO_2) emissions, of cars and light-duty trucks (77 FR 62630).

Various regulatory and planning efforts are aimed at reducing dependency on fossil fuels, increasing the use of alternative fuels, and improving California's vehicle fleet. Senate Bill (SB) 375 aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. CARB, in consultation with the metropolitan planning organizations, provides each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035.

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and CARB prepared and adopted a joint agency report in 2003, Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003).

AB 1007 (Chapter 371, Statues of 2005) required CEC to prepare the State Alternative Fuels Plan to increase the use of alternative fuels in California.

Renewable Energy Regulations

The State has passed legislation requiring the increasing use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (Senate Bill X1-2 of 2011); 52 percent by 2027 (SB 100 of 2018); 60 percent by 2030 (also SB 100 of 2018); and 100 percent by 2045 (also SB 100 of 2018).

CSU Sustainability Policy

The CSU Sustainability Policy aims to reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. The latest GHG emissions reduction target of the policy includes 80 percent below 1990 levels by 2040. This goal would be achieved through implementation of various sustainability strategies including water conservation, the elimination of natural gas use, and electric vehicle parking consistent with CALGreen Tier 2 standards.

CSUSM Sustainability Master Plan

CSUSM drafted its Sustainability Master Plan in December 2018. The Sustainability Master Plan is intended as a road map to continually engage the campus community and to ensure sustainability is aligned with student success, academic support, the University Strategic Plan, the CSU Systemwide Sustainability Policy, and other CSU wide initiatives such as the graduation initiative and the basic needs initiative.

3.6.3 Discussion

a) 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. The project would result in energy consumption during both construction and operation. Thresholds that define when energy consumption is considered wasteful, inefficient, or unnecessary have not been established in federal or state law or in the State CEQA Guidelines. Compliance with the California Energy Code would result in an energy-efficient building. However, compliance with building codes alone does not adequately address all potential energy impacts during construction and operation.

Construction

Energy would be consumed during project construction (i.e., gasoline and diesel fuel consumption) to operate and maintain construction equipment, haul trucks required to transport construction materials, and vehicle trips associated with commute trips by construction workers. Construction-related fuel consumption was calculated using equipment assumptions consistent with the California Emissions Estimator Model (CalEEMod) Version 2022.1 and fuel

consumption factors derived from California emission factor model, known as EMFAC. Based on modeling, construction of the project is estimated to require consumption of approximately 81,400 gallons of diesel by off-road construction equipment and construction-related truck trips, and approximately 25,820 gallons of gasoline associated with construction workers commuting to and from the construction site. The energy expenditure required for project construction activities would be temporary and non-recoverable. However, energy efficiency would be maximized through the enforcement of idling requirements and state fuel efficiency standards. Thus, the energy consumption associated with project construction would not occur in a wasteful, inefficient, and unnecessary manner when compared to other construction activity in the region.

Operation

Building Energy

Project-generated energy use would be typical for university buildings including lighting, heating, and cooling. Indirect energy use would include electricity associated with pumping and treatment of indoor and outdoor water consumption for landscaping, electricity associated with wastewater treatment, and fuel consumption associated with solid waste removal. Energy consumption would be minimal. Additionally, in accordance with the Sustainability Master Plan (CSUSM 2018b), the project would be designed to attain LEED certification. The proposed project would receive solar energy from either on-site solar panels or from a separate solar project proposed at parking lots B and C. A water source heat pump would complement the heating needs for the buildings. No natural gas would be used in laboratory operations in Building 36A, but would be used in Building 36B. Each building would be equipped with new heating, ventilation, and air conditioning equipment and an emergency back-up generator.

Transportation Energy

Transportation-related energy consumption associated with project operation would result from vehicle trips generated by students, staff, and faculty accessing the project site. The project's estimated annual VMT is approximately 1.1 million per year at full buildout. Annual fuel demand of gasoline and diesel associated with project-generated VMT is presented Table 3.6-1. These fuel calculations are based on fuel economy and consumption rates during the expected first year of operation. State and federal regulations regarding fuel efficiency standards for vehicles in California are designed to reduce wasteful, inefficient and unnecessary use of energy for transportation. Over time, these regulations and efficiency standards will reduce fuel consumption from fossil fuels.

Table 3.6-1 Operational Annual Transportation Fuel Consumption

Fuel Type	Gallons of Fuel
Gasoline	38,871
Diesel	10,671

Source: Calculations by Ascent in 2024.

Conclusion

The proposed project would result in increased energy demand during construction activities (e.g., related to fuel consumption associated with vehicle use and material transport). However, construction activities would be temporary and would not increase long-term energy or fuel demand. Construction activities would consume the necessary amount of fuel and energy to complete work in an efficient and timely manner. The new buildings would be energy efficient and would be designed to meet the California Energy Code in effect at the time of construction, resulting in a more energy efficient project compared to development of the project under a less stringent energy code. Project energy consumption for construction, building operation, and transportation would not be considered wasteful, inefficient, or unnecessary. This impact would be less than significant, and no mitigation would be required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Less than significant impact. As discussed in criterion (a) above, although the proposed project would increase energy consumption, the proposed project would ensure use of cleaner energy sources through use of renewable energy and energy efficient design. As discussed in Section 3.8, "Greenhouse Gas Emissions," the proposed project would be consistent with the CSU Sustainability Policy as well as the 2022 Scoping Plan through the implementation of LEED design, use of renewable energy, and energy efficient design. Thus, the project would not conflict with or obstruct a local plan for renewable energy or energy efficiency. This impact would be less than significant, and no mitigation is required.

3.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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 to California Geological Survey Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) 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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.7.1 Environmental Setting

The geologic setting information in this section was obtained, in part, from a geotechnical study that evaluated geologic conditions for most of the project site, but excluded the eastern and southernmost extent of the project site. The geotechnical study was based on a preliminary project design that considered construction of only one IS&E building on a smaller footprint than that of the proposed project (Geocon, Inc. 2023). Nevertheless, similar geologic and soil conditions are expected for the southern/eastern portions of the project site based on proximity to the northern/western portions of the project site that were surveyed.

GEOLOGY AND SOILS

The northern/western part of the project site is underlain by 2 to 5 feet of undocumented fill over granitic rock. The undocumented fill generally consists of medium dense, damp, silty, fine to coarse sand with gravel and some angular rock fragments, generally ranging from 3-inches to 6-inches in size. The granitic rock, on the other hand, generally consists of moderately weathered, moderately strong rock with angular rock fragments present (Geocon, Inc. 2023). Based on proximity, it is expected that geologic conditions and soils within the southern/eastern portions of the project site that were not surveyed would have similar characteristics.

GEOLOGIC HAZARDS

The potential for geologic hazards to occur at the project site is summarized below.

Seismic Ground Shaking

The project site is located in seismically active southern California and is likely to be subjected to moderate to strong seismic ground shaking (Geocon, Inc. 2023). Seismic shaking at the project site could be generated by events on any number of known active and potentially active faults in the region, including the Rose Canyon, Newport-Inglewood (offshore), Elsinore, Coronado Bank, Earthquake Valley, San Jacinto, Palos Verdes, or Whittier fault zones. Faulting in the region generally comprises a number of northwest-trending, predominantly right-lateral strike-slip faults at the boundary between the Pacific and North American tectonic plates. An earthquake along any of these known active or potentially active fault zones could result in severe ground shaking and consequently cause injury and/or property damage in the project vicinity. This could potentially result in substantial damage to proposed facilities within the project site, depending on factors such as event duration, motion frequency, and underlying soil/geologic conditions.

Surface Rupture

Surface rupture is the visible offset of the ground surface when an earthquake rupture along a fault affects the Earth's surface. The northern/western part of the project site is not within an Alquist-Priolo earthquake fault zone. Therefore, the potential for surface rupture on this part of the project site is considered low (Geocon, Inc. 2023). Based on proximity, it is expected that the potential for surface rupture within the rest of the project site would also be considered low.

Liquefaction

Liquefaction is the loss of soil strength or stiffness due to a buildup of pore-water pressure during severe ground shaking. Liquefaction is associated primarily with loose (low density), saturated, fine- to medium-grained, cohesionless soils. Effects of severe liquefaction can include sand boils, excessive settlement, bearing capacity failures, and lateral spreading. Due to the relatively dense nature of the granitic rock beneath the northern/western part of the project site, the potential for liquefaction is considered very low (Geocon, Inc. 2023). Based on proximity, it is expected that the potential for liquefaction within the rest of the project site would also be considered very low.

Landslides

No landslides were encountered during previous site investigations or grading activities on the northern/western part of the project site, and none are known to exist on the CSUSM campus or at a location that would affect the proposed development (Geocon, Inc. 2023). Therefore, the potential for landslides on the northern/western portion of the project site is considered low. Based on proximity, it is expected that the potential for landslides within the rest of the project site also would be considered low.

Settlement

Seismically induced settlement consists of dry dynamic settlement (above groundwater) and liquefaction-induced settlement (below groundwater). These settlements occur primarily within loose to moderately dense sandy soil due to reduction in volume during and shortly after an earthquake event. The potential for seismically induced settlement on the northern/western part of the project site is considered low due to the relatively dense nature of the granitic rock

beneath the project site (Geocon, Inc. 2023). Based on proximity, it is expected that the potential for seismically induced settlement within the rest of the project site also would be considered low.

Lateral Spreading

Lateral spreading is the finite, lateral movement of gently to steeply sloping, saturated soil deposits caused by earthquake-induced liquefaction. The potential for lateral spreading to occur is considered low due to the low potential for liquefaction on the northern/western part of project site (Geocon, Inc. 2023). Based on proximity, it is expected that the potential for lateral spreading within the rest of the project site also would be considered low.

Subsidence

Regional ground subsidence generally occurs due to rapid and intensive removal of subterranean fluids, such as water or oil. The proposed project would not involve the removal of water or oil at the project site, so the potential for ground subsidence is low.

Expansive Soils

Expansive soils contain large amounts of clay particles that swell considerably when wetted and shrink with the loss of water. Foundations and structures constructed on these soils can be subject to uplifting forces caused by swelling, potentially resulting in heaving and cracking of both building foundations and slabs-on-grade. According to the geotechnical study, soils on the western/northern part of the project site were determined to have very low expansion potential (Geocon, Inc. 2023). Based on proximity, it is expected that soils within the rest of the project site would have a similar expansion potential.

PALEONTOLOGICAL RESOURCES

Paleontological resources include any paleontological or fossil remains that reflect the geological history of a region. As noted under "Geology and Soils" above, the project site is underlain by 2 to 5 feet of undocumented fill over granitic rock. The undocumented fill was placed during previous grading activities and is heavily disturbed and unlikely to contain paleontological resources. Granitic rocks are unlikely to contain paleontological resources because these rocks are formed when molten rocks are cooled deep within the earth and are exposed on the surface due to the later uplift and erosion of the Peninsular Mountain Range. As a result, no paleontological resources are expected to be present on the project site.

3.7.2 Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) 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 to California Geological Survey Special Publication 42.)

Less than significant impact. As discussed in Section 3.7.1, the project site is not within an Alquist-Priolo earthquake fault zone and the potential for surface fault rupture to occur on the northern/western part of the project site is low. Based on proximity, it is expected that the potential for surface rupture within the rest of the project site would also be considered low. Therefore, the proposed project would not cause substantial adverse effects from rupture of a known earthquake fault. The impact would be less than significant impact, and no mitigation is required.

ii) Strong seismic ground shaking?

Less than significant impact. As discussed in Section 3.7.1, the project site is not within an active fault zone; however, the project site is near several active faults that may cause strong seismic ground shaking in the event of an earthquake. The proposed project would involve the construction of two new IS&E buildings on a generally vacant and disturbed parcel on the eastern part of the CSUSM campus. The project design would be subject to seismic standards and codes, including Title 24 of the CBC. The CSUSM Office of Planning, Design and Construction would review and approve the proposed project plans to ensure compliance with the latest version of the CBC. Compliance with the CBC and review and approval by the CSUSM Office of Planning, Design and Construction would ensure that the proposed project is designed, constructed, and operated to minimize risks associated with strong seismic ground shaking to the extent feasible. Therefore, the proposed project would not cause substantial adverse effects from strong seismic ground shaking. This impact would be less than significant, and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. As discussed in Section 3.7.1, the potential for liquefaction and seismically induced settlement is considered low due to the relatively dense nature of the granitic rock beneath the northern/western part of the project site (Geocon, Inc. 2023). Based on proximity, it is expected that the potential for liquefaction and seismically induced settlement within the rest of the project site would also be considered very low. Furthermore, the proposed project would be subject to CBC requirements and review and approval by the CSUSM Office of Planning, Design and Construction, which would ensure that the proposed project would be designed, constructed, and operated to minimize risks associated with seismic-related ground failure to the extent feasible. Therefore, the proposed project would not cause substantial adverse effects from seismic-related ground failure. This impact would be less than significant, and no mitigation is required.

iv) Landslides?

Less than significant impact. As discussed in Section 3.7.1, no landslides were encountered during previous site investigations or grading activities on the northern/western part of the project site, and none are known to exist on the CSUSM campus or at a location that would affect the proposed project (Geocon, Inc. 2023). Therefore, the potential for landslides on the northern/western portion of the project site is considered low. Based on proximity, it is expected that the potential for landslides within the rest of the project site also would be considered low. Therefore, the proposed project would not cause substantial adverse effects from landslides. This impact would be less than significant, and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. Project construction would involve ground disturbing activities on approximately 2.63 acres of land that is generally disturbed and vacant. On-site soils would be particularly prone to erosion during excavation and site development, especially if construction activities were to coincide with heavy rains. As discussed further in Section 3.10, "Hydrology and Water Quality," the potential for erosion would be minimized through implementation of best management practices (BMPs) for stormwater, such as temporary catchment basins and/or sandbags, which would control runoff and contain sediment transport within the project site during construction. Because the proposed project would involve the disturbance of more than one acre of soil, the proposed project would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Order 2022-0057-DWQ). The Construction General Permit requires the construction contractor to prepare and implement a storm water pollution prevention plan (SWPPP). SWPPPs must include erosion control measures, such as covering exposed soil stockpiles and working slopes, lining the perimeter of the construction site with sediment barriers, and protecting storm drain inlets. Therefore, substantial sedimentation and erosion would not occur during construction. During operations, the project site would be covered with buildings, pavement, landscaping, and appropriate drainage infrastructure, which would reduce the potential for on-site erosion. Therefore, substantial sedimentation and erosion would not occur during operations. Based on the above discussion, the proposed project would not result in substantial soil erosion or the loss of topsoil. This impact would be less than significant, and no mitigation is required.

c) 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?

Less than significant impact. As discussed in Section 3.7.1, the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse to occur on the western/northern part of the project site is considered low. Based on proximity, it is expected that the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse to occur on the rest of the project site would also be considered low. A geotechnical analysis would be completed for the entire project site prior to construction activities, which would provide additional design recommendations based on site-specific conditions. The proposed project would be subject to CBC requirements and review and approval by the CSUSM Office of Planning, Design and Construction, which would ensure that the proposed project would be designed, constructed, and operated to minimize risks associated with geologic hazards to the extent feasible. For these reasons, the proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed project, and potentially result in landslide, lateral spreading, subsidence, liquefaction, or collapse. This impact would be less than significant, and no mitigation is required.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Less than significant impact. As discussed in Section 3.7.1, soils on the western/northern part of the project site were determined to have very low expansion potential (Geocon, Inc. 2023). Based on proximity, it is expected that soils within the rest of the project site would also have low expansion potential. A geotechnical analysis would be completed for the entire project site prior to construction activities to confirm soil conditions for the entire site, including the potential for soil expansion. The proposed project would incorporate standard engineering and earthwork construction practices, such as proper foundation design and proper moisture conditioning of earthen fills. In addition, the project design would incorporate the recommendations outlined in the geotechnical analysis, which would minimize any potential effects associated with expansive soils. Therefore, the proposed project would not create substantial risks to life or property from expansive soils. This impact would be less than significant, and no mitigation is required.

e) 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. The proposed project would not involve the use of septic tanks or alternative wastewater disposal systems. Therefore, the proposed project would have no impact related to soils incapable of supporting these systems, and no mitigation is required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact. No known or unknown paleontological resources are expected to be present on the project site. As described in Section 3.7.1, the project site is underlain by undocumented fill and granitic rock. The undocumented fill was placed during previous grading activities and is heavily disturbed and unlikely to contain paleontological resources. Granitic rocks are unlikely to contain paleontological resources because these rocks are formed when molten rocks are cooled deep within the earth and are exposed on the surface due to the later uplift and erosion of the Peninsular Mountain Range. As a result, paleontological resources are unlikely to be present on the project site. Therefore, the proposed project would not destroy a unique paleontological resource or site or unique geologic feature. This impact would be less than significant, and no mitigation is required.

3.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.8.1 Environmental Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing, electricity generation by utilities and consumption by end users, residential and commercial on-site fuel usage, and agriculture and forestry. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing together (IPCC 2014:5).

Climate change is a global problem. GHGs are global pollutants because even local GHG emissions contribute to global impacts. GHGs have long atmospheric lifetimes (one to several thousand years) and persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration (IPCC 2013:467). The three primary GHGs discussed when quantifying GHG emissions in the context of climate change include CO_2, CH_4, and N_2O. Emissions of these gases are converted to a comparable unit by multiplying each non-CO_2 gas by their global warming potential (GWP), reporting emissions in terms of carbon dioxide equivalent (CO_2e). These equivalencies are typically represented as million metric tons of CO_2e ($MMTCO_2e$) and metric tons of CO_2e ($MTCO_2e$). CH_4, for example, with a GWP of 25, can trap 25 times as much heat in the atmosphere as the same quantity of CO_2; thus, the heat trapped in the atmosphere by one metric ton (MT) of CH_4 is equivalent to that trapped by 25 metric tons of CO_2 or 25 $MTCO_2e$. This conversion to CO_2e allows consideration of all gases in comparable terms and makes it easier to communicate how various sources and types of GHG emissions contribute to global climate change.

GHG inventories provide a detailed accounting of the sources and quantities of GHG emissions generated from activities. For example, at the State level, CARB prepares regular GHG inventory updates for a defined set of gases that contribute to climate change. In 2021, the statewide total quantity of GHGs emitted was 381.3 $MMTCO_2e$ (CARB 2023). At the local level, San Diego County generated 2.9 $MMTCO_2e$ in 2019 (County of San Diego 2023).

3.8.2 Regulatory Setting

STATE

Statewide GHG Emission Targets and the Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the State government for approximately two decades. GHG emission targets established by the State legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. EO B-55-18 calls for California to achieve carbon neutrality no later than 2045 and achieve and maintain net negative GHG emissions thereafter. These targets align with the scientifically established levels needed globally to limit the rise in global temperature to no more than 2 degrees Celsius (°C), the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected. These targets also align with efforts to limit the temperature increase even further to 1.5°C (UN 2015:3).

The 2022 Climate Change Scoping Plan (2022 Scoping Plan) focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities. The 2022 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, traces the pathway for the State to achieve its carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045 using a combined top down/bottom up approach using various scenarios. The State has also passed more detailed legislation addressing GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption.

LOCAL

City of San Marcos Climate Action Plan

In December 2020, the City of San Marcos adopted an updated Climate Action Plan (CAP), aligning its GHG emissions targets for 2020 and 2030 with statewide objectives outlined in AB 32, Executive Order S-03-05, and SB 32. The City's CAP encompasses comprehensive measures addressing transportation, land use, energy, water management, wastewater, and solid waste, aiming to reduce GHG emissions by 4 percent below 2012 levels by 2020 and 42 percent below by 2030. The City's CAP does not directly account for CSUSM's emissions, but the CAP does include various measures to coordinate and assist with CSUSM efforts to reduce emissions (City of San Marcos 2020).

The CAP includes three methodological options for evaluating GHG impacts of proposed development projects in CEQA documents. The first option includes screening out projects deemed too small to significantly impact climate change (i.e., projects that result in annual GHG emissions below 500 $MTCO_2e$ per year). The second option is to evaluate whether projects incorporate applicable GHG reduction measures outlined in the CAP, facilitated by a CAP Consistency Checklist. Lastly, the CAP accommodates projects unable to use the Checklist by allowing them to demonstrate consistency through project-specific GHG reduction measures, comparing emissions to a numerical threshold of 2.1 $MTCO_2e$ per year per service population (i.e., sum of number of residents and jobs anticipated to be generated by a project).

CSUSM Sustainability Plan

CSUSM drafted its Sustainability Master Plan in December 2018. The Sustainability Master Plan is intended as a road map to continually engage the campus community and to ensure sustainability is aligned with student success, academic support, the University Strategic Plan, the CSU Systemwide Sustainability Policy, and other CSU-wide initiatives.

3.8.3 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than significant impact. The issue of global warming and climate change is inherently a cumulative issue because the GHG emissions associated with an individual project cannot be shown to have a material effect on global climate. Thus, the quantity of GHG emissions associated with construction of the project is addressed as a cumulative impact.

Construction

Project-related construction activities would result in the generation of GHG emissions from the use of heavy-duty off-road construction equipment, delivery trucks associated with materials transport, and vehicle use during worker commute during both phases of construction. Table 3.8-1 provides a summary of the total construction-related emissions that would occur. The project construction spans over three calendar years.

Table 3.8-1 Estimate of Greenhouse Gas Emissions During Construction

Construction Year	$MTCO_2e$ per Year
2025	662
2026	598
2027	198

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent

Source: Modeling conducted by Ascent in 2024.

Operation

Operation of the project would result in mobile-source GHG emissions from vehicle trips (i.e., project-generated VMT), area-source emissions from the operation of landscape maintenance equipment, energy use emissions from consumption of electricity, water-related energy consumption associated with water use and the conveyance and treatment of wastewater, and waste-generated emissions from the transport and disposal of solid waste. Table 3.8-2 below summarizes the project's operational emissions at opening year 2028. As shown, operational emissions are estimated to be 623 $MTCO_2e$ per year at opening year 2028.

Table 3.8-2 Estimate of Greenhouse Gas Emissions During Operations at Opening Year

Source	$MTCO_2e$ per Year
Mobile	406
Area	2
Energy	206
Water	2
Solid Waste	7
Refrigerants	<1
Total Emissions	623
Service Population (students + faculty + staff)	383
GHG per Service Population	1.63

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent

Source: Modeling conducted by Ascent in 2024.

With respect to building-related energy use, no natural gas would be used in laboratory operations in Building 36A, but would be used in Building 36B. Development of the project site, as part of implementation of CSU Sustainability Policy, is required to support zero emissions vehicles to help achieve 2022 Scoping Plan reduction targets. Moreover, in accordance with the Sustainability Master Plan (CSUSM 2018b), the project would be designed to attain LEED certification and would

receive solar energy from either on-site solar panels or from a separate solar project proposed at parking lots B and C. With respect to VMT, as discussed in Section 3.17, "Transportation," the proposed project would be located in a transit priority area (TPA), as the campus is within vicinity to the NCTD SPRINTER station. Therefore, it can be presumed that the proposed project would not generate a substantial increase in VMT.

The project would be energy and VMT efficient. The CSU Sustainability Policy aims to reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. The latest GHG emissions reduction target of the policy includes 80 percent below 1990 levels by 2040. This goal would be achieved through implementation of various sustainability strategies in the CSUSM Sustainability Plan, including water conservation, waste management, zero net energy, transportation electrification, and VMT reductions. Therefore, the project would be consistent with the goals of the CSU Sustainability Policy as well as the CSUSM Sustainability Plan.

Moreover, while the project is not subject to the City's CAP, project-related GHG emissions have been compared to the 2030 efficiency target from the City's CAP for the sake of disclosure. The efficiency target in the CAP is 2.1 $MTCO_2e$ per year per service population. For this project, the service population is 383, which is the sum of students, faculty, and staff generated by the project. As shown in Table 3.8-2, the project would result in 1.63 $MTCO_2e$ per year per service population at opening year 2028, which is more efficient that then CAP efficiency target for development projects. Moreover, the emission estimates shown in Table 3.8-2 do not take into account features of the project that would reduce resource demand, such as attaining LEED certification. As a result, this impact would be less than significant.

Conclusion

In summary, because the project would be consistent with the goals of the CSU Sustainability Policy as well as the CSUSM Sustainability Plan, and would result in emissions well below the City's CAP efficiency target, the project's GHG emissions would not result in a cumulatively considerable contribution to climate change. This impact would be less than significant, and no mitigation is required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than significant impact. The project was evaluated, qualitatively, for consistency with applicable local and State plans that were developed with the intent of reducing GHG emissions.

The 2022 Scoping Plan lays out the pathway to achieve the State's carbon neutrality goal and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045. The Local Actions Appendix (Appendix D) to the 2022 Scoping Plan includes various recommendations that local governments can implement to align their planning and development review processes with the State's climate goals. The guidance recommends that local governments focus on transportation electrification, VMT reduction, and building decarbonization (CARB 2022).

The CSU Sustainability Policy aims to reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. The latest GHG emissions reduction target of the policy includes 80 percent below 1990 levels by 2040. This goal would be achieved through implementation of various sustainability strategies including water conservation, waste management, and zero natural gas use. Therefore, the project would be consistent with the goals of the CSU Sustainability Policy. Additionally, the CSUSM Sustainability Plan includes various goals for resource conservation, including setting a goal of net zero energy by 2040, building high-performance net zero energy buildings by 2030, achieving zero waste by 2025, among others. The proposed project would be consistent with these CSU and CSUSM goals, including limiting natural gas usage to only laboratory uses in Building 36B, achieving LEED certification, and powering the buildings with solar energy. Thus, the proposed project would be consistent with the CSU Sustainability Policy and CSUSM Sustainability Plan.

The proposed project would be consistent with the 2022 Scoping Plan, CSU Sustainability Policy, and CSUSM Sustainability Plan. Therefore, the project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing emissions of GHGs. This impact would be less than significant and no mitigation is required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) 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 a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

3.9.1 Environmental Setting

The State Water Resources Control Board's (SWRCB) GeoTracker website along with the California Department of Toxic Substances Control's (DTSC) Envirostor website provide a comprehensive list of the facilities and sites identified as meeting the "Cortese List" requirements pursuant to Government Code section 65962.5. The SWRCB GeoTracker website provides data relating to leaking underground storage tanks and other types of soil and groundwater contamination, along with associated cleanup activities. No active hazardous materials sites were identified within 0.5 mile of the project site (SWRCB 2024). Two cleanup sites, one located at 333 South Twin Oaks Valley Road and the other at 600 La Moree Road, have been closed. The DTSC Envirostor website provides data related to hazardous materials spills and clean ups. No hazardous waste facilities are located within 0.5 miles of the project site (DTSC 2024).

The closest school is Baypoint Preparatory Academy, approximately 0.7 mile northeast of the project site. The nearest airport, McClellan-Palomar Airport, is located approximately 7 miles west of the project site. The project site is not within the boundaries of an airport influence area.

The CSUSM 2020 Emergency Operations Plan (EOP) addresses CSUSM's planned response to emergency and disaster situations associated with natural and human-caused disasters (CSUSM 2020a). The EOP contains a campus evacuation plan, which identifies campus evacuation routes. Twin Oaks Valley Road, Barham Drive, and La Moree Road are the major arteries in and out of campus that may be used as evacuation routes. In addition, the existing service road may be used to help relieve traffic during emergency evacuation (CSUSM 2022). According to the Safety Element of the City of San Marcos General Plan, the City has not established official evacuation routes; however, main thoroughfares would serve as primary evacuation corridors in the event of an emergency (City of San Marcos 2012).

CSUSM offers several degree programs that involve students and faculty conducting research in laboratory environments. These research activities routinely involve the handling, storage, and disposal of hazardous materials. CSUSM has established programs for laboratory safety, which include procedures for storage and inventory of chemicals, cleanup of chemical spills, handling of radioactive material, and proper disposal of hazardous chemical waste in accordance with applicable laws and regulations.

The project site is within a local responsibility area (LRA) designated as a very high Fire Hazard Severity Zone (FHSZ) (CALFIRE 2021).

3.9.2 Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than significant impact. Commonly used hazardous substances associated with heavy construction equipment such as gasoline, diesel fuel, lubricating oil, grease, and solvents would be utilized during construction of the proposed project. These materials are not considered acutely hazardous and are used routinely throughout urban environments for similar types of construction projects. These materials would be transported, used, disposed of, and handled in accordance with all applicable laws and regulations concerning the management, use and transport of hazardous materials. Applicable regulations include, but are not limited to, the following: the federal Resource Conservation and Recovery Act, which includes requirements for hazardous solid waste management; the California Department of Toxic Substances Control Environmental Health Standards for the Management of Hazardous Waste (California Code of Regulations Title 22, Division 4.5), which include standards for generators and transporters of hazardous waste; CSU rules governing work practice requirements for renovation and demolition activities on all CSU campuses; and the California Division of Occupational Health and Safety, which includes standards for workplace health and safety. Use of common hazardous substances for their intended purpose during construction would not pose a significant risk to the public or environment.

During project operations, hazardous materials that could be used for the maintenance of campus facilities and landscaped areas include chemical reagents, solvents, fuels, paints, cleansers, pesticides, and fertilizers. These materials would be similar to those currently used in other parts of the CSUSM campus. The management, use, storage, and transportation of such hazardous materials is subject to applicable laws and regulations.

In addition, potentially hazardous materials and chemicals would be used and stored at the project site as a result of on-site research laboratory activities, particularly for research labs to support degree programs in Physics and Industrial Engineering as part of Phase 1B. Because most handling of potentially hazardous materials would occur indoors, pathways for exposure to hazardous chemicals under routine conditions include direct contact or injection during research or through accidental spills or inhalation. Although the specific types of materials and chemicals are not known at this time, CSUSM has established protocols for laboratory safety, which include procedures for storing and inventorying chemicals, cleanup of chemical spills, and proper disposal of hazardous chemical waste in accordance with applicable laws and regulations. CSUSM is also permitted to receive, possess, store, use, transfer, import and dispose of

radioactive material and radiation producing devices. If required, all use of radioactive materials and radiation-producing machines is governed by the provisions of Title 17 (California Code of Regulations Title 17), 10 CFR 20 (Code of Federal Regulations, Title 10, Chapter 1 part 20) and any additional provisions given in the Radiation Safety Manual. Additionally, the CSUSM 2020 EOP outlines procedures to address evacuation, clean up, and communication protocols to protect students and staff in the event of a hazardous materials spill (CSUSM 2020a).

Adherence to applicable laws, regulations, and plans would minimize risks associated with the routine transport, use, and disposal of hazardous materials. Therefore, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The impact would be less than significant, and no mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than significant impact. As discussed in Section 3.9.1, there are no existing hazardous materials sites at the project site or within 0.5 mile of the project site. However, project construction and operation would involve the routine transport, storage, use, and disposal of hazardous materials. As detailed in Section 3.9.2a, the proposed project would comply with existing federal and State laws and regulations regarding the transportation, use, and disposal of hazardous materials. Additionally, the CSUSM 2020 EOP outlines procedures to address evacuation, clean up, and communication protocols to protect students and staff in the event of a hazardous materials spill (CSUSM 2020a). Therefore, the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. This impact would be less than significant, and no mitigation is required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The nearest school, Baypoint Preparatory Academy, is located approximately 0.7 mile northeast of the project site. No existing or proposed schools are within one-quarter mile of the project site. Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur, and no mitigation is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. As discussed in Section 3.9.1, review of the GeoTracker and Envirostor databases determined that no active hazardous materials sites are located on or within 0.5 mile of the project site. The nearest cleanup sites, located at 333 South Twin Oaks Valley Road and 600 La Moree Road, have been closed (SWRCB 2024). Therefore, the proposed project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5. No impact would occur, and no mitigation is required.

e) 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?

No Impact. The nearest airport is the McClellan-Palomar Airport located approximately 7 miles west of the project site. The project site is not within the airport land use plan and is located outside of the 65 community noise equivalent level (CNEL) airport noise contour of this airport (URS 2005: Figure 5-4). In addition, the project site is not located within 2 miles of a public airport or in the vicinity of a known private airstrip. Therefore, the proposed project would not result in

airport safety hazards or excessive noise for people working in the project area. No impact would occur, and no mitigation is required.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. The proposed project would not result in any temporary or permanent closures or other modifications to the City of San Marcos' local roadway system but would result in minor changes to the circulation network within the CSUSM campus. As noted in Section 2.3.2, "Construction," the existing east-west service road would be relocated along the eastern boundary of the project site during initial site demolition. To ensure that access through the project site is maintained at all times, the existing service road would not be demolished until the new service road is fully constructed. Vehicular access on the existing north-south service/fire lane would be maintained through the project site for the duration of construction activities or detour routes would be provided. Full access through the project site would be restored following construction activities. Further, the State Fire Marshall would review the project plans to ensure that the new buildings and circulation improvements comply with the requirements of the CFC and to ensure that adequate emergency access and egress is provided. Therefore, the proposed project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plans. The impact would be less than significant, and no mitigation is required.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less than significant impact. As described in Section 3.9.1, the project site is within a very high FHSZ (CALFIRE 2021). The project site is surrounded by development to the north, west, and south, and an undeveloped hillside to the east. Vegetation on the project site is comprised of scattered shrubs and ruderal grasses, and the hillside immediately east of the project site contains stands of coastal sage scrub and mixed chaparral that could burn quickly in a wildfire. The proposed project would result in the development of two buildings and associated landscaping and hardscaping on a predominately vacant and disturbed site. The proposed project would be designed in accordance with the current CBC and CFC, which include requirements for the provision of defensible space, flammable vegetation clearance, and the use of ignition-resistant building materials for properties within a very high FHSZ in LRAs. The project design would also include adequate provisions for fire protection service, including adequate egress. Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The impact would be less than significant, and no mitigation is required.

3.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) 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:	☐	☐	☒	☐
i) Result in substantial on- or offsite erosion or siltation;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) 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	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

3.10.1 Environmental Setting

SURFACE WATER

The project site is within the San Marcos hydrologic area, which encompasses 36,000 acres. Approximately 72 percent of the watershed is developed. San Marcos Creek and Encinitas Creek are the two major tributaries in the hydrologic area, which converge at Batiquitos Lagoon in the City of Carlsbad before discharging into the Pacific Ocean (Project Clean Water 2022). San Marcos Creek is approximately 0.6 mile north of the project site. This segment of the creek is listed under Section 303(d) of the Clean Water Act due to the following pollutants: benthic community effects, bifenthrin, dichlorodiphenyldichloroethylene, indicator bacteria, nitrogen, phosphorus, pyrethroids, selenium, total dissolved solids, and toxicity (SWRCB 2022).

STORMWATER DRAINAGE

The project site drains toward existing storm drain infrastructure northwest of the project site, which discharges to San Marcos Creek (CSUSM 2020b).

GROUNDWATER

A static, near-surface groundwater table was not observed at the project site as part of the Geotechnical Investigation. The project site exhibits a "no infiltration" condition due to the underlying shallow hard rock (Geocon 2023).

The project site is not within the boundaries of a groundwater basin mapped by the California Department of Water Resources; however, the southernmost boundary of the San Marcos Area groundwater basin is approximately 0.6 mile north of the project site. Under the Sustainable Groundwater Management Act, medium- and high-priority groundwater basins are required to assign a groundwater sustainability agency to develop a groundwater sustainability plan and manage groundwater for long-term sustainability. The San Marcos Area groundwater basin is categorized as a very low priority basin and is therefore not required to submit a groundwater sustainability plan (DWR 2024).

The Vallecitos Water District (VWD), the water service provider for CSUSM, currently imports or purchases 100 percent of its potable water supply from the San Diego County Water Authority (SDCWA). SDCWA's water supply is primarily sourced from the State Water Project and the Colorado River (SDCWA 2024). Local groundwater supplies have historically not been used by VWD due to uncertain quantity and relatively poor quality (VWD 2021).

As noted in Section 2, "Project Description," an existing groundwater well is located approximately 110 feet south of the project site, located adjacent to the hillside across from Markstein Hall. The well is used to fulfill most of CSUSM's landscaping needs and has reduced the university's potable water demand.

FLOOD RISK

According to the Federal Emergency Management Agency Flood Insurance Rate Maps, the project site is within Zone X, which is an area determined to be outside the 0.2 percent annual chance floodplain (FEMA 2012). The project site is over 7 miles from the Pacific Ocean and is not within a tsunami hazard area (CGS 2024). In addition, the project site is not in proximity to an enclosed body of water that is susceptible to seiche.

3.10.2 Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than significant impact. Construction activities could potentially violate applicable water quality standards by introducing pollutants to stormwater runoff. There are two primary ways that construction activities could adversely affect water quality: ground disturbance and pollutant spills or leaks. Ground disturbance such as vegetation removal, compaction, grading, and temporary soil stockpiling could potentially increase sediment levels in stormwater runoff by eroding soils that have been loosened or newly exposed by construction activity. Materials that could spill or leak during construction include diesel fuel, gasoline, lubrication oil, cement slurry, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and construction-related trash and debris. The use of these materials would be limited to the minimum necessary to fuel vehicles, power equipment, and complete activities. Improper management of hazardous materials could result in accidental spills or leaks, which could locally contaminate stormwater runoff.

The proposed project would involve approximately 2.63 acres of ground disturbance. Construction activities that disturb one or more acres of soil are subject to the requirements of the Construction General Permit. Construction activities subject to this permit include clearing, grubbing, grading, demolition, stockpiling, and excavation. The Construction General Permit requires projects to implement a site-specific SWPPP, which must list the BMPs that would be implemented to prevent soil erosion and sediment discharge and protect stormwater runoff. BMPs may include erosion

controls (e.g., mulches, soil binders, erosion control blankets/mats, outlet projection/energy dissipation devices), sediment controls (e.g., silt fences, fiber rolls, gravel bags), tracking controls (e.g., stabilized construction entrance/exit, entrance/outlet tire wash), wind erosion controls, non-stormwater management, and materials and water management (cleanup and containment of trash and debris, stockpile management, spill prevention and control, hazardous waste management). Implementation of the BMPs included in the SWPPP would protect water quality by reducing construction-induced erosion and sedimentation on the project site and by reducing the amount of sediment and other potential water pollutants that leave the project site. The SWPPP would also include hazardous materials BMPs necessary to prevent or contain any spills or leaks that may be associated with construction equipment and materials.

Although construction activities have the potential to adversely affect water quality, required coverage under the Construction General Permit would ensure that potential construction-related impacts on water quality are avoided or substantially minimized. Coverage under the Construction General Permit would also ensure that the proposed project would not violate any SWRCB or RWQCB standards or waste discharge requirements.

The proposed project would alter existing drainage patterns, which could change the volume and quantity of stormwater runoff leaving the project site. CSUSM is subject to the requirements of the Waste Discharge Requirements (WDRs) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (Phase II Permit). To meet the requirements of the Phase II Permit, CSUSM must implement post-construction stormwater management controls for new development and redevelopment projects. These controls include site design measures, low impact development (LID) design standards, source control measures, and stormwater retention and treatment BMPs. The specific types and locations of post-construction stormwater management controls would be identified as the project design advances and site drainage would tie into existing campus storm drain infrastructure.

Based on the above discussion, the proposed project would not violate water quality standards and waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The impact would be less than significant and no mitigation is required.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than significant impact. Excavation is expected to occur to a maximum depth of 6 feet below the ground surface for the building structure and 8 to 10 feet for the gravity fed utility systems. Because no near-surface groundwater table was observed as part of the Geotechnical Investigation, groundwater would not likely be encountered during project construction and no dewatering would be required. Construction activities would result in a temporary increase in water consumption for cleaning surfaces, mixing with concrete or other materials, suppressing dust, and establishing plants. The relatively minor water supply needed for proposed construction activities would not consume a substantial amount of water supplies. Therefore, construction activities would not result in a substantial decrease in groundwater supplies.

Once operational, the proposed project would support approximately 350 students not currently enrolled and 33 new staff and faculty, which would increase campus water demand compared to existing conditions. As discussed above, VWD would supply potable water to the proposed project. VWD's water supply is primarily sourced from the State Water Project and the Colorado River and the agency does not use local groundwater supplies (SDCWA 2024, VWD 2021). CSUSM may also utilize groundwater from the existing on-site well for the proposed project's landscaping needs. CSUSM would ensure the sustainable use of groundwater resources through the use of native and drought-tolerant landscaping and weather-based smart irrigation systems. Therefore, operation of the proposed project would not result in a substantial decrease in groundwater supplies.

The proposed project would result in the development of new impervious surfaces, including new buildings and hardscaping. As discussed above, the project site does not provide for groundwater recharge due to the shallow hard rock underlying the project site. Therefore, the proposed project would not substantially interfere with groundwater recharge and would not result in a net deficit in aquifer volume or a lowering of the local groundwater table.

Based on the above discussion, impacts related to groundwater use and groundwater recharge would be less than significant and no mitigation is required.

c) 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:

i) Result in substantial on- or offsite erosion or siltation;

Less than significant impact. During project construction, drainage patterns on the project site would be altered due to grading activities. As discussed in Section 3.10.2(a), the proposed project would be required to comply with the conditions of the Construction General Permit. A SWPPP would be prepared and implemented, which would include erosion controls BMPs (e.g., mulches, soil binders, erosion control blankets/mats, outlet projection/energy dissipation devices), sediment controls (e.g., silt fences, fiber rolls, gravel bags), tracking controls (e.g., stabilized construction entrance/exit, entrance/outlet tire wash), wind erosion controls, non-stormwater management, and materials and water management (cleanup and containment of trash and debris, stockpile management, spill prevention and control, hazardous waste management). Implementation of the BMPs included in the SWPPP would reduce the potential for construction-related erosion and siltation at the project site.

Once operational, the proposed project would be fully developed with structures, hardscape, and landscape. As discussed in Section 3.10.2(a), CSUSM is required to implement post-construction stormwater management controls, including erosion control and site stabilization measures, for new development and redevelopment projects. The specific types and locations of post-construction stormwater management controls would be identified as the project design advances and site drainage would tie into existing campus storm drain infrastructure. Therefore, substantial erosion and siltation would not occur during operations.

Based on the above discussion, the proposed project would not substantially alter the existing drainage pattern of the project site in a manner that would result in substantial erosion or siltation. This impact would be less than significant and no mitigation is required.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less than significant impact. During project construction, drainage patterns and runoff quantities would be temporarily altered due to grading activities on the project site. Compliance with a project-specific SWPPP, and specifically the use of runoff-control devices, would ensure that runoff quantities are controlled to the extent practicable, to prevent flooding or ponding of excess water at the project site during construction activities.

Once operational, the proposed project would be fully developed with structures, hardscape, and landscape. As noted in Section 3.10.1, the project site exhibits a "no infiltration" condition due to the shallow hard rock underlying the project site. Therefore, new impervious surfaces from project implementation would not increase runoff volumes compared to existing conditions. Further, as discussed in Section 3.10.2(a), CSUSM is required to implement post-construction stormwater management controls, including flood control and drainage measures, for new development and redevelopment projects. The specific types and locations of post-construction stormwater management controls would be identified as the project design advances.

Generally, the project site would be graded and maintained such that surface drainage is directed away from structures in accordance with CBC requirements. Surface drainage would be directed away from the top of slopes into swales or other controlled drainage devices. Roof and pavement drainage would be directed into conduits that carry runoff from the proposed buildings and tie into existing campus storm drain infrastructure. Therefore, project operations would not result in flooding.

Based on the above discussion, the proposed project would not substantially alter the existing drainage pattern of the project site in a manner that would result in on- or off-site flooding. This impact would be less than significant and no mitigation is required.

iii) 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

Less than significant impact. During project construction, drainage patterns and runoff quantities may be temporarily altered due to grading activities at the project site. Compliance with a project-specific SWPPP, and specifically the use of runoff-control devices, would ensure that runoff quantities are controlled to the extent practicable, to avoid overwhelming the existing stormwater drainage system. Furthermore, the SWPPP would contain project-specific BMPs that would prevent construction-related pollutants, such as sediments and fuels for equipment, from entering stormwater runoff. Through compliance with the SWPPP, project construction would not provide a substantial source of polluted runoff and would not substantially increase runoff volumes leading to exceedances in the storm drain capacity.

As described in Section 3.10.2(a), the project site exhibits a "no infiltration" condition due to the shallow hard rock underlying the project site (Geocon 2023). Therefore, new impervious surfaces from project implementation would not substantially increase stormwater runoff volumes from existing conditions. Further, CSUSM must implement measures to address discharges of post-construction stormwater runoff from impervious areas in accordance with the Phase II Permit. These measures include site design measures, LID design standards, source control measures, and stormwater retention and treatment BMPs. The specific types and locations of post-construction stormwater management controls would be identified as the project design advances and site drainage would tie into existing campus storm drain infrastructure. For these reasons, project operation would not create or contribute to additional runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts related to stormwater drainage system capacity and polluted runoff would be less than significant and no mitigation is required.

iv) Impede or redirect flood flows?

No impact. As discussed in Section 3.10.1, the project site is within Zone X, which is an area determined to be outside the 0.2 percent annual chance floodplain (FEMA 2012). The proposed project would not place new structures within a flood hazard area. Therefore, the proposed project would have no impact related to impeding or redirecting flood flows, and no mitigation is required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No impact. The project site is over 7 miles inland from the Pacific Ocean. As discussed in Section 3.10.1, the project site is not within a flood or tsunami hazard area and is not in proximity to an enclosed waterbody that could generate a seiche (FEMA 2012, CGS 2024). Therefore, the proposed project would have no impact related to the release of pollutants due to project inundation, and no mitigation is required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than significant impact. The project site is under the jurisdiction of the San Diego RWQCB. The Water Quality Control Plan for the San Diego Basin (Basin Plan) contains the region's water quality regulations and programs for implementing these regulations (San Diego RWQCB 2021).

Construction activities would be subject to the requirements of the San Diego RWQCB to ensure that stormwater pollutants resulting from construction would not substantially degrade water quality. As discussed in Section 3.10.2(a) above, the proposed project would be subject to the requirements of the Construction General Permit. To comply with the Construction General Permit, CSUSM would be required to prepare a site-specific SWPPP. Implementation of the BMPs included in the SWPPP would protect water quality by reducing construction-induced erosion and sedimentation on the project site and by reducing the amount of sediment and other potential water pollutants that leave the project site. The SWPPP would also include hazardous materials BMPs necessary to prevent or contain any spills or leaks that

may be associated with construction equipment and materials. Therefore, project construction would not conflict with water quality regulations established in the Basin Plan.

As discussed in Section 3.10.2(a), CSUSM must implement measures to address discharges of post-construction stormwater runoff from impervious areas in accordance with the Phase II Permit. The specific types and locations of post-construction stormwater management controls would be identified as the project design advances and site drainage would tie into existing campus storm drain infrastructure. Therefore, operation of the proposed project would not conflict with water quality regulations established in the Basin Plan.

As discussed in Section 3.10.1, the project site is not within the boundaries of a groundwater basin mapped by the California Department of Water Resources. Therefore, there are no sustainable groundwater management plans applicable to the project site. Regardless, as discussed in Section 3.10.2(b) above, the proposed project would not substantially decrease groundwater supplies or interfere with groundwater recharge.

In summary, the proposed project would not conflict with or obstruct implementation of the Basin Plan because the proposed project would comply with all applicable permits and regulations governing the protection of water quality. Additionally, the proposed project would not result in the unsustainable consumption of groundwater resources or otherwise interfere with groundwater recharge. Based on the above discussion, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The impact would be less than significant and no mitigation is required.

3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) 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?	☐	☐	☒	☐

3.11.1 Environmental Setting

The project site and off-site utility tunnel alignment encompass 2.63 acres on the eastern portion of the CSUSM campus, which is located within the central portion of the City of San Marcos in San Diego County, California. The campus is designated for Institutional/Public Land uses in the City's General Plan and is zoned as Public-Institutional (P-I) by the City (City of San Marcos 2024). However, as described in Section 2.5, "California State University Autonomy," CSUSM is an entity of the State of California and is not subject to municipal plans, policies, or regulations. Thus, the CSUSM campus is not part of or subject to the General Plans or municipal codes of the City of San Marcos or San Diego County. The adopted Campus Master Plan is the applicable campus land use plan, which contains specific guiding principles for planning and design of the buildings, parking areas, common areas, and landscaping on campus (CSUSM 2018). However, in the exercise of its discretion, the CSU system may reference, describe, and address local plans, policies, and regulations where appropriate and for informational purposes.

The project site is generally vacant and disturbed with service roadways, temporary trailers and storage containers, and small piles of rock and discarded construction materials. The project site is situated north and east of Markstein Hall, east of University Hall, and south of the Arts Building. Other CSUSM campus buildings and surface parking lots are located further north, west, and south of the project site. An undeveloped, vegetated hillside; avocado groves; and a single-family residential subdivision are located to the east of the project site. The project site is currently identified as a single laboratory building in the Campus Master Plan (CSUSM 2018).

3.11.2 Discussion

a) Physically divide an established community?

No impact. The proposed project would result in the development of two buildings and associated landscaping and hardscaping on a predominately vacant and disturbed site. Proposed project improvements would be confined to the CSUSM campus. The proposed project would not involve features such as new roadways, aboveground utility infrastructure, or new easements through established neighborhoods, or permanent street or sidewalk closures that would physically divide the surrounding established community. The proposed project would result in minor changes to the circulation network within the CSUSM campus. As discussed in Section 2.9.2(f), the existing east-west service road would be relocated along the eastern boundary of the project site during initial site demolition. To ensure that access through the project site is maintained at all times, the existing service road would not be demolished until the new service road is fully constructed. Vehicular access on the existing north-south service/fire lane would be maintained through the project site for the duration of construction activities or detour routes would be provided. Full access through the project site would be restored following construction activities. Therefore, the proposed project would not physically divide an established community. No impact would occur, and no mitigation is required.

b) 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. As discussed in Section 3.11.1, CSUSM is an entity of the State of California, and the proposed project is not subject to local zoning or other regulations; rather, the adopted Campus Master Plan is the applicable campus land use plan. The proposed project would result in the development of two buildings and associated landscaping and hardscaping on a predominately vacant and disturbed site. As noted in Section 2.1, "Project Background and Overview," the project site was initially envisioned as a single Classroom/Lab/Office Building (Building 36) in the currently adopted CSUSM Master Plan (CSUSM 2018). However, CSUSM is now proposing a minor master plan revision to allow for the development of two buildings (36A and 38B) to address changing programmatic needs at the campus in support of new CSTEM undergraduate programs on campus. The type of land use proposed by the project is consistent with the land use envisioned for the site in the Campus Master Plan. In addition, the proposed project would generate approximately 350 new students (i.e., students not currently enrolled) and approximately 33 new staff and faculty. The proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan, which depicts the campus facilities that were envisioned to accommodate an anticipated 25,000 full-time equivalent students (FTES) by 2030 (CSUSM 2018). Moreover, the proposed project would be consistent with all applicable federal and State laws and regulations and CSU and CSUSM plans and policies, such as building and sustainability standards, that are designed to reduce environmental impacts. Therefore, the proposed project would not conflict with any adopted plans, policies, or regulations adopted for avoiding or mitigating an environmental effect. This impact would be less than significant, and no mitigation is required.

3.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources. Would the project:				
a) 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?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐

3.12.1 Environmental Setting

The Surface Mining and Reclamation Act directs the State Geologist to identify and map the non-fuel mineral resources of the State to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data. Areas known as Mineral Resource Zones (MRZs) are classified on the basis of geologic factors, without regard to existing land use and land ownership. The areas are categorized into four general classifications (MRZ-1 through MRZ-4). Of the four, the MRZ-2 classification is recognized in land use planning because the likelihood for occurrence of significant mineral deposits is high, and the classification may be a factor in the discovery and development of mineral deposits that would tend to be economically beneficial to society. The project site is classified as MRZ-3, which indicates areas containing mineral deposits; however, the significance of which cannot be evaluated from available data (DOC 1996).

3.12.2 Discussion

a) 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?

and

b) 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. The majority of the CSUSM campus, including the project site, is underlain by Cretaceous-age granite that is commonly extracted and processed for use as construction aggregate. According to the State's Mineral Land Classification Maps, the project site is located within Aggregate Mineral Resource Classification Zone Category 3 (MRZ-3) (DOC 1996). MRZ-3 indicates an area containing deposits whose significance cannot be evaluated from available data. Although aggregate materials may be present within the project site, these resources have not been identified by the California Department of Mines and Geology as significant mineral resources.

The proposed project would result in the development of two buildings and associated landscaping and hardscaping on a predominately vacant and disturbed site. Construction activities would involve the removal of any underlying granite up to 8 to 10 feet below the ground's surface to install building foundations and underground utility infrastructure. The granite would be extracted, crushed on-site, and used as either landscape cover or structural backfill material.

As a State entity, CSUSM is not subject to local government planning and land use plans, policies, or regulations. Regardless, the project site is designated for Institutional/Public Land uses and not identified as a mineral resource recovery site in the City's General Plan (City of San Marcos 2024). The project site was envisioned for future development

as a classroom/lab/office building in the Campus Master Plan and is not planned for use as a mineral recovery site (CSUSM 2018). Further, the adjacent campus development site precludes the use of the project site for mineral resource extraction.

Based on the above discussion, the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. In addition, the proposed project would not 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. This impact would be less than significant, and no mitigation is required.

3.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.Noise. Would the project result in:				
a) 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, or a substantial temporary or permanent increase in noise levels above existing ambient levels that could result in an adverse effect on humans?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒

3.13.1 Environmental Setting

TECHNICAL NOISE TERMS

Prior to discussing the environmental setting and applicable noise standards, the following definitions of technical noise terms referenced throughout this section are provided:

- Equivalent Continuous Sound Level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq}, is the energy average of sound levels occurring during a 1-hour period.
- Maximum Sound Level (L_{max}): L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013:2-48; FTA 2018:207–208).
- Community Noise Equivalent Level (CNEL): Similar to L_{dn} with an additional penalty of 4.77 dBA (A-weighted decibels), for the hours 7 p.m. to 10 p.m., which are usually reserved for relaxation, television, reading, and conversation (Caltrans 2013a:2-48).
- Vibration Decibels (VdB): VdB is the vibration velocity level in decibel scale (FTA 2018:Table 5-1).
- Peak Particle Velocity (PPV): PPV is the peak signal value of an oscillating vibration waveform, usually expressed in inches per second (in/sec) (FTA 2018:Table 5-1).

AMBIENT NOISE CONDITIONS

The campus is located at 333 South Twin Oak Valley Road in the central portion of the City of San Marcos, in San Diego County, California. The project site is located north and east of Markstein Hall, east of University Hall, and south of the Arts Building. An undeveloped, vegetated hillside; avocado groves; and a single-family residential subdivision are located east of the project site on Via del Caballo. California State Route 78 (SR 78) is located 0.55 mile north of the project site, Interstate 15 (I-15) is located 3.0 miles east of the project site, and the McClellan-Palomar Airport is located 6.6 miles east of the project site. The project site is not within the boundaries of an airport influence area. Nearby noise-sensitive receptors include the single-family homes on Via Del Caballo, which are located approximately 0.21 mile (1,120 feet) east of the project site and separated by a hill. Other noise-sensitive receptors near the project site are the single-family homes along South Twin Oaks Valley Road, approximately 1,800 feet southwest of the project site.

The ambient noise of the project site and surrounding areas are mostly influenced by vehicular noise sources from roadways in the area. In the Noise Element of the City of San Marcos 2012 General Plan, existing roadway noise contours were modeled based on roadway traffic volumes and mapped. Roadways that primarily influence noise at the project site include South Twin Oaks Valley Road, East Barham Drive, and SR 78. Based on Figure 7-1 of the City's General Plan, *City of San Marcos Existing Noise* Contours, existing noise levels in the project vicinity would fall outside the 60 CNEL contour (City of San Marcos 2012). Thus, the existing ambient noise levels at the project site would be below 60 CNEL.

APPLICABLE NOISE AND VIBRATION STANDARDS

Noise and vibration standards have been adopted at the federal, State, and local level to protect sensitive land uses from excessive noise exposure. However, as an entity of the CSU system, which is a statutorily and legislatively created, constitutionally authorized entity of the State of California, CSUSM is not subject to local government planning and land use plans, policies, or regulations. Although there is no formal mechanism for joint planning or the exchange of ideas, CSUSM may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate. The proposed project would be subject to State and federal agency planning documents described herein but would not be bound by local or regional planning regulations or documents such as the City of San Marco's or San Diego County's General Plan or municipal code. Local noise and vibration standards are provided for informational purposes.

Federal Standards

Federal Transit Administration Standards for Exposure to Ground Vibration

The Federal Transit Administration (FTA) Division of Environmental Analysis developed the Transit Noise and Vibration Impact Assessment Manual, which provides guidance to engineers, planners, and consultants in assessing vibration from construction, operation, and maintenance of projects. To address the human response to ground vibration, the FTA has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses (Table 3.13-1). In addition, FTA has established construction vibration damage criteria (Table 3.13-2).

In addition to vibration criteria, FTA has also established construction noise criteria based on the land use type affected by noise and depending on whether or not construction noise would occur during the daytime or nighttime. The FTA criteria are as follows:

- Residential: 90 dBA L_{eq} (day) and 80 dBA L_{eq} (night)
- Commercial/Industrial: 100 dBA L_{eq} (day and night)

Table 3.13-1 Ground-Borne Vibration Impact Criteria for General Assessment for Human Response

Land Use Category	Ground-Borne Vibration Impact Levels for Human Response for Frequent Events[1] (VdB re 1 microinch/second)	Ground-Borne Vibration Impact Levels for Human Response for Occasional Events[2] (VdB re 1 microinch/second)	Ground-Borne Vibration Impact Levels for Human Response for Infrequent Events[3] (VdB re 1 microinch/second)
Category 1: Buildings where vibration would interfere with interior operations.	65[4]	65[4]	65[4]
Category 2: Residences and buildings where people normally sleep.	72	75	80
Category 3: Institutional land uses with primarily daytime uses.	75	78	83

Notes: VdB re 1 microinch/second = vibration decibels referenced to 1 microinch/second and based on the root mean square (RMS) velocity amplitude.

[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day.

[2] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

[3] Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

[4] This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018:123–126.

Table 3.13-2 FTA Construction Damage Vibration Criteria

Land Use Category	PPV (in/sec)
Reinforced-concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Notes: in/sec = inches per second; PPV = peak particle velocity

Source: FTA 2018.

Federal Interagency Committee on Noise

A noise level increase of 5 dBA, or greater, would typically be considered to result in increased levels of annoyance in environments where existing ambient noise levels are less than 60 dBA. In areas where the ambient noise level ranges from 60 to 65 dBA, increased levels of annoyance would be anticipated at increases of 3 dBA, or greater. Increases of 1.5 dBA, or greater, could result in increased levels of annoyance in areas where the ambient noise level exceeds 65 dBA. The rationale for the Federal Interagency Committee on Noise (FICON) recommended criteria is that as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant increases in annoyance (FICON 1992). The criteria is presented in Table 3.13-3.

Table 3.13-3 Federal Interagency Committee on Noise Recommended Criteria for Evaluation of Increases in Ambient Noise Levels

Ambient Noise Level Without Project	Increase Required for Significant Impact
<60 dBA	5.0 dBA, or greater
60–65 dBA	3.0 dBA, or greater
>65 dBA	1.5 dBA, or greater

Notes: dBA = A-weighted decibels

Source: FICON 1992.

State Standards

California Building Code Sound Transmission Standards

Noise within habitable units that is attributable to external sources is regulated by the California Building Standards codified in Title 24, Part 2, Section 1207 of the California Code of Regulations. These standards are enforceable at the time of construction or during occupancy and apply to habitable units with common interior walls, partitions, and ceilings or those adjacent to public areas such as halls, corridors, stairways, and service areas. Under these standards, the interior noise levels attributable to exterior sources shall not exceed 45 decibels (dB) in any habitable room. The noise metrics used to measure these levels can be L_{dn} or CNEL, consistent with the local general plan. Under PRC Section 25402.1(g), all cities and counties in the state are required to enforce the adopted California Building Code, including these standards for noise in interior environments.

California General Plan Guidelines

The State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research, provides guidance for the compatibility of projects within areas of specific noise exposure (OPR 2017). Acceptable and unacceptable community noise exposure limits for various land use categories have been determined to help guide new land use decisions in California communities. In many local jurisdictions, these guidelines are used to derive local noise standards and guidance. Citing US Environmental Protection Agency materials and the State Sound Transmissions Control Standards, the State's general plan guidelines recommend interior and exterior CNEL of 45 and 60 dB for residential units, respectively (OPR 2017:378).

Local Standards

City of San Marcos 2012 General Plan

The City of San Marcos 2012 General Plan Noise Element contains policies, goals, and actions to address noise within the City. The City has established acceptable exterior and interior noise levels for assessing land use compatibility of proposed land uses with the noise environment, which are set forth in the Noise Element.

San Marcos General Plan Noise Regulations

The City's approach to noise regulation uses the CNEL/L_{dn} noise descriptor and are intended to be applicable for land use designations exposed to noise levels generated by transportation-related sources. Land use compatibility noise exposure limits are generally established as:

- 60 dBA CNEL/L_{dn} for exterior spaces at a majority of land use designations throughout the City.
- 65 dBA CNEL/L_{dn} are permitted for multiple-family housing and housing in mixed-use contexts.

Table 3.13-4 Noise and Land Use Compatibility Guidelines for Transportation-Related Noise (CNEL)

Land Use Category	Acceptable[1] Exterior Noise Level (CNEL)	Conditionally Acceptable[2] Exterior Noise Level (CNEL)	Unacceptable Exterior Noise Level (CNEL)
Residential – Single family residences, mobile homes, senior/age-restricted housing	Under 60	60-75	75+
Residential – Multifamily residences, mixed use (residential/commercial)	Under 65	65-75	75+
Lodging – Hotels, motels	Under 65	65-75	75+
Schools, churches, hospitals, residential care facility, childcare facilities	Under 65	65-75	75+
Passive recreational parks, nature preserves, contemplative spaces, cemeteries	Under 65	65-75	75+
Active parks, golf courses, athletic fields, outdoor spectator sports, water recreation	Under 65	65-75	75+

Land Use Category	Acceptable[1] Exterior Noise Level (CNEL)	Conditionally Acceptable[2] Exterior Noise Level (CNEL)	Unacceptable Exterior Noise Level (CNEL)
Office/professional, government, medical/dental, commercial, retail, laboratories	Under 65	65-75	75+
Industrial, manufacturing, utilities, agriculture, mining, stables, ranching, warehouse, maintenance/repair	Under 65	65-80	80+

Notes:

[1] Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved

[2] Conditionally Acceptable – New construction or development should be undertaken only after a detailed noise analysis is conducted to determine if noise reduction measures are necessary to achieve acceptable levels for land use. Criteria for determining exterior and interior noise levels are listed in Table 7-4, Noise Standards, of the City of San Marcos General Plan Noise Element. If a project cannot mitigate noise to a level deemed Acceptable, the appropriate County decision-maker must determine that mitigation has been provided to the greatest extent practicable or that extraordinary circumstances exist.

Source: City of San Marcos 2012.

San Marcos General Plan Noise Standards

The following noise standards in the Noise Element of the City of San Marcos 2012 General Plan are relevant to the project:

1. The exterior noise level standard for Category A (residential land uses) shall be 60 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
7. For noise sensitive land uses where people normally do not sleep at night, the exterior and interior noise standard may be measured using either CNEL or the one-hour average noise level determined at the loudest hour during the period when the facility is normally occupied.

San Marcos General Plan Policies

The Noise Element of the City of San Marcos 2012 General Plan provides noise exposure information pertaining to noise and land use compatibility, transportation related noise, and non-transportation noise, which all pertain to this project. This background information is provided below.

- Policy N-1.1: Address the potential for excessive noise levels when making land use planning decisions in accordance with Table 3.13-4 Land Use Compatibility Noise Standards.
- Policy N-1.2: Ensure that acceptable noise levels are maintained near noise-sensitive uses.
- Policy N-1.4: Require new development projects to provide barriers to reduce noise levels or provide sufficient spatial buffers to separate excessive noise generating land uses and noise-sensitive land uses.
- Policy N-2.1: Encourage only noise-compatible land uses along existing and future roadways, highways, and freeways.
- Policy N-3.2: Limit the hours of construction and maintenance operations located adjacent to noise-sensitive land uses.

San Marcos Municipal Code

Chapter 10.24 - Noise

The City's existing Noise Ordinance (Chapter 10.24 of the San Marcos Municipal Code) prohibits loud, annoying, or unnecessary noises. It provides definition for and examples of prohibited noise sources. The following sections pertain to the project:

- 10.24.020 (b) (9): Erection or demolition of buildings, excluding owner resident additions or remodeling, and the grading and excavation of land including the use of blasting, the startup and use of heavy equipment such as dump trucks and graders and the use of jack hammers except on weekdays Monday through Friday between the

hours of 7:00 a.m. and 6:00 p.m. and on Saturdays 8:00 a.m. to 5:00 p.m. The City Manager may waive any or all of the provisions of this subsection in cases of urgent necessity, or in the interest of public health and safety. The provisions of this subsection may also be waived or modified pursuant to a Conditional Use Permit or other development entitlement processed and issued in accordance with the applicable City requirements and procedures.

- 10.24.020 (b) (10): Late Night Disturbances that are plainly audible by inhabitants or occupants of any adjacent or neighboring residential properties or units, or are plainly audible at a distance of 50 feet, that occur on week days, Monday through Friday, between the hours of 10:00 p.m. and 7:00 a.m. the following day, and/or on weekends, Saturday through Sunday, between the hours of 11:00 p.m. and 7:00 a.m. the following day, shall be prima facie evidence of violation of this subsection.

Chapter 20.300.700 - Performance Standards

The City's existing performance standards (Section 20.300.070 of the San Marcos Municipal Code) establish noise standards and aim to regulate prohibited unnecessary, excessive, and annoying noises from all noise sources. The following policies pertain to the project.

- 20.300.070 (E) (1): No person shall create or allow the creation of exterior noise that causes the noise level to exceed the noise standards established by Table 3.13-5. Increases in allowable noise levels listed in Table 3.13-5 may be permitted in accordance with the standards outlined in Table 3.13-5.
- 20.300.070 (F) – Vibration: Vibration may disturb the conduct of certain activities and create discomfort for some individuals. To minimize the disturbance and inconvenience from vibrations, no person or use shall create, maintain, or cause ground vibration that is discernible without instruments to a person of normal sensitivity at any point on a property that is adjacent to the property of the vibration source. The ground vibration caused by moving vehicles, trains, aircraft, or temporary construction or demolition is exempted.

Table 3.13-5 Exterior Noise Standards for Single-Family Residential Zones

Time Period	Allowable Noise Level (dBA Leq) Measured from the Property Line
7:00 a.m. to 10:00 p.m. (daytime)	60
10:00 p.m. to 7:00 a.m. (overnight)	50

Note: dBA = a-weighted decibels; L_{eq} = Equivalent Continuous Sound Level

Source: City of San Marcos 2023.

THRESHOLDS OF SIGNIFICANCE

CSUSM, and CSUs in general, do not have adopted noise standards or policies. Therefore, although State projects are exempt from local ordinances and standards, applicable noise standards from the City and other regulatory agencies (i.e., FTA) are considered as part of this analysis and with respect to off-site impacts. In consideration of the CEQA Guidelines Appendix G Checklist questions pertaining to noise, adopted San Marcos General Plan policies, San Marcos Municipal Code, and FTA noise and vibration criteria, the following criteria are used in this analysis to determine potential project impacts.

Construction Noise

- Construction-generated noise levels would be substantial if construction activities occur before 7:00 a.m. or after 6:00 p.m., Monday through Friday; before 8:00 a.m. or after 5:00 p.m. on Saturday; or at any time on Sundays or exceed FTA's construction noise criteria for residential land uses of 90 dBA L_{eq} during the day and 80 dBA L_{eq} at night.

Long-Term Operational Noise

- Stationary Noise Sources: Long-term increase in noise levels due to non-transportation noise sources would be substantial if the noise generated exceeds the City's noise standards for residential land uses of 60 dBA L_{eq} between the hours of 7:00 a.m. and 10:00 p.m. or 50 dBA L_{eq} between the hours of 10:00 p.m. and 7:00 a.m. (Table 3.13-5).

- Mobile-Source Noise: Long-term increases in mobile-source noise associated with project operations would be considered substantial if mobile sources result in increases of 5 dBA or greater in areas where the ambient noise level is below 60 dB, exceeding FICON's guidance for allowable incremental increases in noise (Table 3.13-3), or where mobile sources result in maximum noise levels that exceed 60 dBA CNEL (Table 3.13-4).

Vibration

- The generation of excessive groundborne vibration or groundborne noise levels has potential to cause structural damage or result in sleep disturbance to sensitive uses. Applying FTA's vibration assessment criteria for VdB and for in/sec PPV, the project could result in a potentially significant vibration impact if the following standards are exceeded:
  - Structural Damage: A limit of 0.20 in/sec PPV for buildings of normal conventional construction.
  - Sleep Disturbance: A limit of 80 VdB for infrequent events associated with heavy-duty equipment use.

3.13.2 Discussion

a) 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, or a substantial temporary or permanent increase in noise levels above existing ambient levels that could result in an adverse effect on humans?

Less than significant impact. This discussion includes an analysis of short-term construction noise and long-term operational noise. Because noise standards are often regulated differently depending on the source (e.g., stationary source, transportation source), each noise source has been evaluated using the appropriate adopted noise source and associated methodology for analysis. Significance is concluded for this resource topic based on the type of noise impact (temporary or permanent) that could occur as a result of project implementation.

Construction Noise (Temporary)

To assess potential short-term (construction-related) noise impacts, sensitive receptors and their relative exposure were identified. Project-generated construction source noise levels were determined based on methodologies, reference emission levels, and usage factors from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018) and FHWA's *Roadway Construction Noise Model User's Guide* (FHWA 2006). Reference levels for noise emissions for specific equipment or activity types are well documented and commonly used in the field of acoustics.

Construction is typically a temporary noise-generating activity and noise from construction ceases once the construction period is complete. Construction noise levels vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the noise source and receiver. The project would include two phases of construction and is expected to occur from June 2025 to July 2027.

Construction activities would include demolition to clear the roadways, site preparation to remove granite from the site, grading, construction of two IS&E buildings, architectural coating of the buildings, and paving. Consistent with the San Marcos Municipal Code Section 10.24.020, construction activities would occur Monday through Friday, between the hours of 7:00 a.m. and 4:00 p.m. No nighttime construction would occur.

Equipment used during construction would include loaders, crushers, excavators, drill rigs, dozers, concrete saws, scrapers, sweepers, lifts, forklifts, pumps, air compressors, generators, pavers, and rollers. Equipment with substantially higher noise-generation characteristics (e.g., pile drivers and blasting equipment) would not be used during construction.

The typical maximum noise levels for various pieces of construction equipment at a distance of 50 feet are presented in Table 3.13-6. However, construction equipment typically operates in alternating cycles of full power and low power, producing average noise levels less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

Table 3.13-6 Noise Emission Levels from Construction Equipment

Equipment Type	Typical Noise Level (L_{max} dBA) at 50 feet
Backhoe	80
Concrete Mixer	85
Compactor	80
Crane/Lift	85
Compressor (Air)	80
Crusher	85
Dozer	85
Drill Rig	85
Dump Truck	84
Excavator	85
Flat Bed Truck	84
Front End Loader	80
Generator	70
Grader	85
Paver	85
Roller	85
Pickup Trucks	54

Notes: dBA = a-weighted decibels; Lmax = Maximum Sound Level

Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.

Source: FTA 2018: 176.

As shown in Table 3.13-6, the maximum noise levels at 50 feet for typical construction equipment would generate noise levels up to 85 dBA for typical construction equipment. Construction noise in a well-defined area typically attenuates at approximately 6 dBA per doubling of distance. The nearest sensitive receptor to project construction and operations are the single-family residences on Via Del Caballo approximately 1,120 feet east of the project site.

Using calculation methods consistent with FTA methodology, available project-specific construction details and equipment, and modeling defaults, the estimated noise levels from construction for each phase were calculated at the nearest sensitive receptor (i.e., residences located 1,120 feet east of the project site), as presented in Table 3.13-7. The model inputs and outputs are provided in Appendix D of this IS/MND.

FTA has established construction-generated noise level thresholds of 90 dBA L_{eq} during the day and 80 dBA L_{eq} during the night for residential land uses.

Table 3.13-7 Construction Noise Model Results Summary

Construction Phase	Combined Noise at 50 feet (dba L_{eq})	Combined Noise at Nearest Receptor[1] (dBA L_{eq})	Applicable Threshold[2]	Exceeds Threshold?
Demolition	84.3	48.7	90 dBA L_{eq}	NO
Site Preparation	87.6	52.0	90 dBA L_{eq}	NO
Grading	87.6	52.1	90 dBA L_{eq}	NO
Building Construction	86.9	51.3	90 dBA L_{eq}	NO
Architectural Coating	88.6	53.0	90 dBA L_{eq}	NO
Paving	85.4	49.9	90 dBA L_{eq}	NO

Note: dBA = a-weighted decibels; Leq = Equivalent Continuous Sound Level

[1] Noise levels attenuated 1,120 feet to nearest sensitive receptor.

[2] FTA threshold of 90 dBA Leq during daytime hours.

Source: Modeled by Ascent in 2024.

Consistent with FTA-recommended methods for evaluating construction noise, the Leq noise metric is the most appropriate; thus, used as the basis for this analysis. Using the modeled attenuated construction noise levels of 48.7 to 53.0 dBA Leq, for construction activity that would occur during the daytime hours, thresholds of 90 dBA would not be exceeded.

Operational Noise (Long Term)

The proposed project would result in long-term operational mobile source noise levels associated with project-generated vehicle trips and would include new stationary sources (i.e., new heating, ventilation, and air conditioning [HVAC] equipment that each new building will be equipped with). Additionally, each building would be equipped with a backup generator, which would only be used for short periods on an emergency basis. Therefore, these backup generators would not be considered long-term, permanent noise sources.

Once operational, trip generation resulting from the educational land uses of the project would add approximately 444 additional trips per day. The majority of these trips would occur on Campus View Drive between La Moree Road and Craven Road. Fehr and Peers conducted a traffic study for a different project in 2022 that found that 6,733 daily trips occur on this segment of Campus View Drive (Fehr and Peers 2022).

Table 3.13-8 summarizes the modeled traffic noise levels at the nearest applicable offsite receptors from the roadway centerlines under existing and existing plus project conditions, along with the overall net change in noise level as a result of project-generated traffic.

Table 3.13-8 shows the existing and existing plus project noise levels of the affected roadway segment of Campus View Drive. According to FICON, areas where the ambient noise level is below 60 dBA, increased levels of annoyance would be anticipated at increases of 5 dBA or greater, which would be considered substantial (FICON 1992). These standards were applied to project-generated traffic noise increase for purposes of determining significance.

Table 3.13-8 Summary of Modeled Existing Plus Campus View Drive Traffic Noise Levels

Roadway Segment	Segment Description	Existing Condition Noise Levels (dBA CNEL)	Existing plus Project Conditions (dBA CNEL)	Applicable Theshold[1]	Traffic Noise Level Increase	Exceeds Threshold?
Campus View Drive	La Moree Road to Craven Road	47.6	47.9	5 dBA increase	0.3	NO

Notes: CNEL = Community Noise Equivalence Level; dBA = a-weighted decibels

[1] Applicable Threshold = FICON's 5 dBA increase from increased traffic

All modeling assumes average pavement, level roadways (less than 1.5 percent grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. All noise levels are reported as A-weighted noise levels. For additional details, refer to Appendix D for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Data modeled by Ascent in 2024.

As shown in Table 3.13-8, the project would not result in a substantial increase (i.e., 5 dBA in areas currently under 60 dBA) in ambient noise levels from traffic noise compared to existing conditions. Long-term operational traffic noise would not result in a substantial increase in noise. Additionally, the increase is traffic at full capacity would increase the traffic noise level to 47.9 dBA CNEL, which is under the transportation noise threshold of 60 dBA CNEL.

Noise levels commonly associated with larger commercial-use air conditioning systems, such as HVAC equipment, can reach levels of up to 78 dBA at 3 feet (Lennox 2019). Applying this reference noise level as an hourly average (L_{eq}) and assuming a 50 percent usage rate, would result in 75 dBA L_{eq} at 3 feet from the source. The location of the two HVAC systems is unknown at this time, but for purposed of this analysis, it is assumed that the HVAC systems will be located at

the project boundary, 1,120 feet west from the nearest sensitive receptors, the single-family homes on Via Del Caballo. When attenuated to the nearest sensitive receptor, the resulting combined noise level of these two HVAC systems would be 19.5 dBA L_{eq}. Building HVAC equipment generally runs throughout the day varying periods of time, depending on the weather and season. Thus, for a conservative analysis, it was assumed that HVAC equipment could run during all hours of the day. Stationary noise levels from proposed HVAC equipment would result in 16.5 dBA L_{eq} at nearby receptors, which would not exceed City's stationary noise standards of 60 dBA L_{eq} (daytime) or 50 dBA L_{eq} (nighttime), or the 60 dBA CNEL threshold.

Summary

Project construction would subject sensitive receptors to noise levels up to 53 dBA L_{eq}, which would be below FTA's threshold of 90 dBA L_{eq} for sensitive land uses. Stationary equipment would result in noise levels of 16.5 dBA L_{eq} for every hour of the day and would be below the City's threshold of 60 dBA L_{eq} during daytime hours and 50 dBA L_{eq} during nighttime hours. Additionally, at full capacity, the project would result in a 0.3 dBA increase in traffic noise along Campus View Drive, below FICON's threshold of a 5 dBA CNEL increase for areas where the traffic noise is under 60 dBA CNEL. This would increase traffic levels to 47.9 dBA CNEL, which is under the City's 60 dBA CNEL threshold. Thus, this impact would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact. To assess potential short-term (construction-related) vibration impacts, sensitive receptors and their relative exposure were identified. The project-generated construction source vibration levels were determined based on methodologies, reference emission levels, and usage factors from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018).

Construction activities that might expose people to excessive vibration, resulting in sleep disturbance or prolonged disruption to daily activities and work, are more likely to occur during extended construction schedules that involve impact equipment (e.g., pile drivers, jackhammers), blasting, or large haul trucks. FTA has also published guidance for conducting vibration impact analyses (FTA 2018). Based on FTA guidance, transient vibrations (such as construction activity) resulting in vibration levels of 0.2 in/sec PPV may be characterized as causing structural damage to non-engineered timber and masonry buildings; 0.3 PPV in/sec for engineered concrete masonry; and 0.5 PPV in/sec for reinforced concrete, steel, or timber structures. In addition, peak VdB established by the FTA, recommend a level of 80 VdB for the purpose of evaluating disturbance to sensitive land uses where people sleep.

Based on the proposed construction activity and types of equipment that would be used, the heaviest piece of construction equipment that would generate the highest levels of vibration would be a vibratory roller. Reference vibration levels for this type of equipment of 0.21 PPV in/sec and 94 VdB at 25 feet were used in this analysis (FTA 2018).

Based on reference levels for this equipment, FTA recommended criteria of 0.2 PPV in/sec for structural damage and 80 VdB for human disturbance could be exceeded at distances within 26 feet and 75 feet, respectively, of construction equipment use. As described above, the nearest sensitive receptor to the construction site would be the single-family homes on Via Del Caballo, approximately 1,120 feet east of the project site; therefore, there would be a low potential for a vibrational impact. Additionally, the proposed project would not introduce any permanent sources of vibration. This impact would be less than significant.

c) 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?

No impact. As discussed above, the project site and campus are approximately 6.6 miles east of the nearest airport, McClellan-Palomar Airport, and outside the Airport Influence Area (Kimley Horn 2018). The campus and project site are not within the 60 dBA CNEL noise contour for the McClellan-Palomar Airport and would not be subject to excessive airport noise levels. Therefore, the proposed project would have no impact related to exposure to excessive airport noise levels and no mitigation is required.

3.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing. Would the project:				
a) 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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Environmental Setting

The total population of the City of San Marcos was estimated to be 94,530 residents in 2023. The same year it was also estimated that there were approximately 92,341 households and 32,339 total housing units in the City with approximately 2.97 persons per household (DOF 2024). As of the Fall 2023 semester, total enrollment at CSUSM was 13,386 FTES during the fall 2023 semester.

3.14.2 Discussion

a) 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)?

Less than significant impact. The proposed project involves development of two IS&E buildings on the eastern portion of the CSUSM campus in support of new CSTEM undergraduate programs at the university. The proposed project would not involve the development of residential or commercial uses and would not include the extension of roads or other infrastructure to previously undeveloped areas. As described in Section 2.3.3, "Operations," the proposed project is anticipated to generate approximately 350 new students (i.e., students not currently enrolled) and 33 new staff and faculty. The proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan, which depicts the campus facilities that were envisioned to accommodate an anticipated capacity of 25,000 FTES by 2030 (CSUSM 2018). Therefore, the proposed project would not result in unplanned population growth. Moreover, it is anticipated that many of the new students would commute from the surrounding region and some of the new faculty and staff generated by the proposed project would be hired from the local population in the City and surrounding nearby areas. Therefore, the proposed project would not induce substantial unplanned population growth on or near the CSUSM campus or the City of San Marcos. The impact would be less than significant, and no mitigation is required.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No impact. The project site is generally vacant and disturbed and contains existing service roadways, temporary trailers and storage containers, and small piles of rock and discarded construction materials. The project site does not contain residential housing. Therefore, the proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. No impact would occur, and no mitigation is required.

3.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services. Would the project:				
a) 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 public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

3.15.1 Environmental Setting

The City of San Marcos Fire Department (SMFD) provides fire response and emergency medical services to all parts of the City, including the CSUSM campus. Services provided include fire suppression, rescue, emergency medical services, fire prevention services, vegetation management, public education, emergency preparedness, and trauma support. The nearest fire stations to the project site are Fire Stations 3 and 4. Fire Station 3 is located at 204 San Elijo Road, approximately 1.5 miles northeast of the project site, and Fire Station 4 is located at 180 West Mission Road, approximately 1.7 miles southwest of the project site. Law enforcement services on the project site are provided by CSUSM's University Police Department, located approximately 0.4 miles northeast of the project site at 425 La Moree Road. CSUSM University Police Department officers patrol the campus and assist the San Diego County Sheriff's department with any campus-affiliated calls within the City of San Marcos.

The project site is located within the boundaries of the San Marcos Unified School District. The closest public school is San Marcos Elementary School, approximately 1 mile northwest of the project site. Municipal recreational facilities in the vicinity of the project site include Alder Glenn Park, Civic Center Park, and Lakeview Park. CSUSM also offers various recreation facilities on campus, including a fitness center with a half court gymnasium, full-size outdoor basketball court, and sand volleyball court. In addition, CSUSM has a running field, soccer field, baseball field, and softball field on the west part of the campus. The nearest public library is the San Diego County Library San Marcos Branch, located 0.8 mile north of the project site. CSUSM also has an on-campus library, Kellogg Library, which contains archives, learning and academic support services, classrooms, math and adaptive technology labs, writing center, copy room, conference rooms, listening rooms, and study areas.

3.15.2 Discussion

a) 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 public services:

Fire protection?

Less than significant impact. The proposed project involves development of two IS&E buildings on the eastern portion of the CSUSM campus in support of new CSTEM undergraduate programs at the university. As discussed in Section 3.14, "Population and Housing," the proposed project would generate approximately 350 new students (i.e., students not currently enrolled) and approximately 33 new staff and faculty; however, the proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan (CSUSM 2018). Moreover, it is anticipated that many of the new FTES would commute from the surrounding region and some of the new staff and faculty would be hired from the local population in the City and surrounding nearby areas. Therefore, the proposed project would not induce unplanned population growth or substantially increase the demand for SMFD fire protection services. Furthermore, the new buildings would be subject to current CBC and CFC requirements for fire safety, including requirements for fire sprinkler systems, fire alarm systems, fire flow, equipment, and firefighter access. The CSU's Office of Fire Safety would review the project plans to ensure that the proposed project complies with all applicable requirements for fire safety. Based on the above discussion, the proposed project would not require the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives. The impact would be less than significant, and no mitigation is required.

Police protection?

Less than significant impact. As discussed in Section 3.15.2(a), the proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan (CSUSM 2018). In addition, many of the new students would commute from the surrounding region and some of the new staff and faculty would be hired from the local population in the City and surrounding areas. Therefore, the proposed project would not induce unplanned population growth or increase the demand for CSUSM's University Police Department services beyond what was projected in the Campus Master Plan. Based on the above discussion, the proposed project would not require the provision of new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives. The impact would be less than significant, and no mitigation is required.

Schools?

Less than significant impact. As discussed in Section 3.15.2(a), the proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan (CSUSM 2018). In addition, many of the new students would commute from the surrounding region and some of the new staff and faculty would be hired from the local population in the City and surrounding nearby areas. Therefore, the proposed project would not induce unplanned population growth or substantially increase the population of school-aged children. Based on the above discussion, the proposed project would not require the provision of new or physically altered schools to maintain acceptable service ratios or other performance objectives. The impact would be less than significant, and no mitigation is required.

Parks?

Less than significant impact. As discussed in Section 3.15.2(a), the proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan (CSUSM 2018). In addition, many of the

new students would commute from the surrounding region and some of the new staff and faculty would be hired from the local population in the City and surrounding nearby areas. Furthermore, as noted in Section 3.15.1, CSUSM offers various recreation facilities to serve the campus community. Therefore, the proposed project would not induce unplanned population growth or substantially increase the demand for local parks. Based on the above discussion, the proposed project would not require the provision of new or physically altered parks to maintain acceptable service ratios or other performance objectives. The impact would be less than significant, and no mitigation is required.

Other public facilities?

Less than significant impact. As discussed in Section 3.15.2(a), the proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan (CSUSM 2018). In addition, many of the new students would commute from the surrounding region and some of the new staff and faculty would be hired from the local population in the City and surrounding nearby areas. Furthermore, as noted in Section 3.15.1, CSUSM has a library that serves the campus community. Therefore, the proposed project would not induce unplanned population growth or substantially increase the demand for other public facilities, such as libraries. Based on the above discussion, the proposed project would not require the provision of new or physically altered public facilities, to maintain acceptable service ratios or other performance objectives. The impact would be less than significant, and no mitigation is required.

3.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation. Would the project:				
a) 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?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

3.16.1 Environmental Setting

As discussed in Section 3.15.1, "Public Services," recreation facilities in the vicinity of the project site include Alder Glenn Park, Civic Center Park, and Lakeview Park. CSUSM also offers various recreation facilities on campus, including a fitness center, running field, soccer field, baseball field, and softball field. These athletic fields are currently available to the community for rent. The fields are typically used by sports leagues and by the community for various events.

3.16.2 Discussion

a) 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?

and

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Less than significant impact. The proposed project would result in the development of two buildings and associated landscaping and hardscaping on a predominately vacant and disturbed site. As discussed in Section 3.14.2, the proposed project would generate approximately 350 new students (i.e., students not currently enrolled) and approximately 33 new faculty and staff; however, the proposed project would not increase the campus population at CSUSM beyond what was projected in the Campus Master Plan (CSUSM 2018). In addition, many of the new students would commute from the surrounding region and some of the new faculty and staff would be hired from the local population in the City and surrounding areas. Therefore, the proposed project would not induce unplanned population growth. Existing neighborhood and regional parks and other recreational facilities in the City of San Marcos serve a large population of existing residents and visitors. Furthermore, as noted in Section 3.15.1, CSUSM offers various recreation facilities to serve the campus community. Based on the above discussion, the proposed project would not cause substantial physical deterioration of existing neighborhood and regional parks or other recreational facilities to occur or be accelerated. In addition, the proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that could result in an adverse physical effect on the environment. The impact would be less than significant, and no mitigation is required.

3.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Transportation. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

3.17.1 Environmental Setting

ROADWAY NETWORK

Vehicular access to the project site is provided by the surrounding roadway network, which includes State Route (SR) 78, I-15, South Twin Oaks Valley Road, East Barham Drive, Craven Road, Campus Way, Campus View Drive/Palm Canyon Drive, and La Moree Road.

Highways

Regional access to the project site is provided by SR 78 and I-15, which are operated and maintained by the California Department of Transportation (Caltrans).

- SR 78 is an east-west highway that runs through the State of California from the City of Oceanside in San Diego County to the City of Blythe in Riverside County. Local freeway access is primarily provided by the SR 78 interchange at Twin Oaks Valley Road, which is located approximately 1.5 miles northwest of the project site. In the project vicinity, SR 78 consists of eight travel lanes (four mixed-flow lanes in each direction). The speed limit is assumed to be 65 miles per hour (mph).
- I-15 is a north-south highway that begins near the international Mexican border to the south in San Diego County and runs up to Alberta, Canada in the north. In the State of California, I-15 serves San Diego, Orange, Los Angeles, Riverside, and San Bernadino counties. I-15 connects to SR 78 east of the project site. In the project vicinity, I-15 consists of 3 to 6 travel lanes in each direction. The speed limit is assumed to be 65 mph.

Roadways

The following roadways provide access to the campus:

- South Twin Oaks Valley Road is a bidirectional north/south three- to four-lane roadway that connects SR 78 to East Barham Drive and Craven Road, which provide access to local CSUSM campus roadways. The posted speed limit is 45 mph.
- East Barham Drive is a bidirectional east/west roadway that connects to Campus Way north of the project site. East Barham Drive consists of two to four lanes in each direction and has a posted speed limit of 45 mph.

- Craven Road is a bidirectional east/west roadway that connects to Campus View Drive/Palm Canyon Road west of the project site. Craven Road consists of two lanes in each direction and has a posted speed limit of 25 mph.
- Campus Way is a bidirectional northwest/southeast roadway with two lanes in each direction. Campus Way connects to Campus View Drive. The posted speed limit is 25 mph.
- Campus View Drive/Palm Canyon Drive is a bidirectional north/south roadway with one to two lanes in each direction. The posted speed limits are 25 mph.
- La Moree Road is a bidirectional north/south roadway east of the project site with one lane provided for each direction of travel. La Moree Road connects to East Barham Drive and CSUSM campus internal roadways that would provide direct access to the project site. The posted speed limit is 35 mph.

BICYCLE AND PEDESTRIAN FACILITIES

The bicycle network in the City of San Marcos consists of multi-use paths, bicycle lanes, and bicycle routes. Bicycle facilities are classified in the City of San Marcos Bicycle and Pedestrian Master Plan as follows:

- Multi-Use or Shared Use Paths (Class I): Multi-use paths are physically separated from vehicle routes with exclusive rights-of-way for all non-motorized users including cyclists, pedestrians, and skaters, with vehicle cross flows kept at a minimum.
- Bicycle Lanes (Class II): Bicycle lanes provide an exclusive roadway space for cyclists, demarcated through pavement marking and signage. Bicycle lanes are one-way facilities and carry bicycle traffic in the same direction as the adjacent vehicle traffic.
- Bicycle Routes (Class III): A Class III facility is a suggested bicycle route marked by signs designating a preferred route between destinations. The designation of a roadway as a Class III facility should be based primarily on the advisability of encouraging bicycle use on that particular roadway (City of San Marcos 2015: 30-32).

Class II bike lanes and sidewalks are present in the vicinity of the project site. A description of existing bicycle and pedestrian facilities on the surrounding roadway system is provided below. Additionally, an internal network of paths is present throughout the CSUSM campus connecting campus buildings to parking areas, sports facilities, housing, and other academic uses.

- South Twin Oaks Valley Road: Class II bicycle lanes are present on each side of the roadway. Pedestrian facilities are present on the west side of South Twin Oaks Valley Road.
- East Barham Drive: Class II bicycle lanes are present on each side of the roadway. Pedestrian facilities are present on the south side of East Barham Drive. On the north side of East Barham Drive, sidewalks are only present along CSUSM property between June Way and Redel Road.
- Craven Road: Class II bicycle lanes and pedestrian facilities are present on each side of the roadway.
- Campus Way: Class II bicycle lanes and pedestrian facilities are present on each side of the roadway.
- Campus View Drive/Palm Canyon Drive: Class II bicycle lanes are present on each side of the roadway. Pedestrian facilities are provided on the east side of Campus View Drive.
- La Moree Road: Class II bicycle lanes and pedestrian facilities are present on each side of the roadway.

TRANSIT SYSTEM

The North County Transit District (NCTD) is responsible for providing bus, rail, and paratransit services within north county San Diego, including the City of San Marcos. NCTD operates a bus system referred to as the BREEZE. BREEZE serves eight north county cities, in addition to several unincorporated communities. BREEZE operates approximately 30 different bus routes, many of which provide connections to light rail systems and tourist attractions (NCTD 2022).

BREEZE route 347 provides service to and from CSUSM with two bus stops located on campus. BREEZE route 347 runs from Palomar College to the east to the CSU San Marcos SPRINTER Station to the west with the nearest bus stop located at Craven Circle approximately 0.2 mile east of the project site (walking distance). Service is provided between approximately 5:15 a.m. to 7:30 p.m. on weekdays and 7:45 a.m. to 7:00 p.m. on Saturdays. BREEZE route 347 does not operate on Sundays or holidays. BREEZE route 347 has approximately 30-minute headways (i.e., the amount of time between transit vehicle arrivals at a stop) Monday through Friday and 1-hour headways on Saturdays.

Additionally, NCTD operates the SPRINTER Light Rail system between Oceanside and Escondido on a rail line that runs approximately parallel to SR 78. The CSUSM SPRINTER Station is located approximately 0.4 mile northeast of the project site (an approximately 15 minute walk). The SPRINTER rail line is 22 miles long and runs 455 trains every week. The SPRINTER has a 30-minute frequency throughout the day Monday through Friday and service varies between 30-minute to 1-hour headways on Saturdays, Sundays, and holidays.

NCTD LIFT provides paratransit services at a level that is comparable to NCTD's fixed-route bus service. The NCTD LIFT service is provided to areas that are within 0.75-mile of an NCTD BREEZE bus route or SPRINTER rail station.

APPLICABLE PLANS AND REGULATIONS

Senate Bill 743

Senate Bill (SB) 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new guidelines that address transportation metrics under CEQA. Enacted as part of SB 743 (2013), PRC section 21099, subdivision (b)(1), directed the OPR to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

Subdivision (b)(2) of PRC section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any." (*emphasis* added)

OPR published its proposal for the comprehensive updates to the CEQA Guidelines in November 2017, which included proposed updates related to analyzing transportation impacts pursuant to SB 743. The updated CEQA Guidelines were adopted on December 28, 2018; and according to the new CEQA Guidelines Section 15064.3, VMT replaced congestion as the metric for determining transportation impacts. The guidelines state that "lead agencies may elect to be governed by these provisions of this section immediately. Beginning July 1, 2020, the provisions of this section shall apply statewide."

To provide guidance to agencies implementing the new CEQA requirements, OPR published the *Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory)* in December 2018. The *Technical Advisory* describes considerations agencies may use in selecting VMT metrics, calculation methodologies, and significance thresholds. The *Technical Advisory* does not mandate the use of specific metrics, methodologies or significance thresholds, because agencies have discretion to select those that are appropriate for the local land use and transportation context. Refer to the "California State University Transportation Impact Study Manual" section for information regarding the VMT metrics, calculations methodologies, and significance thresholds adopted by the CSU system.

California State University Transportation Impact Study Manual

The CSU *Transportation Impact Study Manual* (TISM) provides guidance for addressing transportation-related impacts under CEQA. The TISM includes guidance for analyzing transportation impacts (including VMT), applicable significance thresholds, and recommended mitigation measures. As detailed in the TISM, if the proposed project is located in a low-

VMT generating area as compared to the city, sub-region, or region and is consistent with the characteristics (i.e., density, mix of uses, transit accessibility) of the surrounding area, the project is presumed to result in a less than significant impact. Additionally, the TISM requires evaluation of whether the project would result in an increase or decrease in the regional, sub-regional, or citywide VMT, to determine whether the project would result in significant cumulative impacts. Accordingly, the TISM recommends the evaluation of the VMT under the "with project" condition to determine whether VMT would be in excess of the citywide, regional, or sub-regional VMT identified under the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) condition.

California State University Sustainability Policy

The CSU Sustainability Policy (CSU 2024) aims to reduce the university's impact on the environment; educate students, faculty, and staff on sustainable practices; and incorporate sustainability principles and climate science in the university's educational offerings. The policy contains the following statement related to transportation:

- The CSU will encourage and promote the use of alternative transportation and/or alternative fuels to reduce GHG emissions related to university associated transportation, including commuter and business travel.

California State University Transportation Demand Management Manual

The CSU Transportation Demand Management Manual (Nelson Nygaard 2012) provides a framework for implementing sustainable transportation programs for campuses throughout the CSU system. The manual contains a set of goals, criteria, and best practices that encourage students, faculty, and staff to commute to and from campus via bus/rail transit, carpools, vanpools, bicycling, and walking to lessen reliance upon single-occupant vehicle travel and reduce vehicle trips to campuses.

CSUSM Sustainability Master Plan

The purpose of the CSUSM Sustainability Master Plan is to provide clear, holistic guidance on how the university's sustainability goals will be achieved and how the plan aligns with and meets the needs of the CSUSM mission and strategic priorities. The Sustainability Master Plan is intended as a road map to continually engage the campus community and to ensure sustainability is aligned with student success, academic support, the University Strategic Plan, the CSU Systemwide Sustainability Policy, and other CSU-wide initiatives. The following Sustainability Master Plan goals and strategies are related to transportation:

- Education and Engagement:
  - Celebrate alternative modes of transportation at least 2 times per year, one per semester
  - Partner cross-departmentally to inform campus community about the benefits of alternative transport (i.e. health and wellness, cost savings, closer parking spots, etc.)
  - Conduct a bi-yearly survey on alternative transportation, share findings on CSUSM sustainability and Parking and Commuter Services webpages
  - Integrate transportation research into curriculum through a service learning program
- Evaluate Current and Future Transportation Needs:
  - Review and update the CSUSM Transportation Demand Management (TDM) Plan by 2020
  - On a semester basis, monitor the campus community using alternative transportation for trends or changes in behavior
  - Analyze infrastructure needs annually, to insure they are meeting the needs of those commuting using alternative modes
  - Continue to subsidize the public transportation program at to help incentivize it as a viable option
  - Research bike sharing options for the campus and assess infrastructure needs to ensure commuter safety

- Encourage car/vanpooling. Work with public agencies and service providers to provide funding and programming to those who would like to participate in these forms of transportation. Integrate into the AIMS permit software system

- Comply with CSU and State Requirements (such as AB 32):
  - Annually evaluate our campus fleet and determine how best to reduce our GHG emissions
  - Evaluate our service/delivery needs and develop a plan to reduce the number of trips made by vendors

3.17.2 Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than significant impact. The project would be situated within an existing multi-modal transportation system with access to nearby destinations by transit, walking, and bicycling.

As described in Chapter 2, "Project Description," project implementation would result in construction and operation of the proposed IS&E buildings that would consist of academic classrooms, laboratories, administration, and storage in support of new CSTEM undergraduate programs on campus. Existing transit services would have sufficient capacity to accommodate new transit passenger demand that would be generated by the project. Additionally, the proposed project would not require the construction, re-design, or alteration of any public roadways or the surrounding bicycle and pedestrian network; and thus, would not cause a physical disruption to existing transit services or facilities, or interfere with the implementation of planned transit services or facilities. Therefore, the proposed project would be consistent with CSUSM and CSU policies that promote access to and use of public transit. The proposed project would not conflict with a program, plan, ordinance, or policy addressing transit services or facilities.

Existing bicycle and pedestrian facilities within the vicinity of the project site would have sufficient capacity to accommodate additional bicycle and pedestrian travel demand that would be generated by the project. As detailed in Chapter 2, "Project Description," the existing north-south service lane west of the project site would be maintained and the east-west service road and bicycle lane would be relocated along the eastern project site boundary; therefore, the project would not cause an adverse effect to existing bicycle or pedestrian facilities or interfere with the implementation of planned bicycle or pedestrian facilities. Therefore, the project would be consistent with CSUSM and CSU policies that promote bicycle and pedestrian travel. The proposed project would not conflict with a program, plan, ordinance, or policy addressing bicycle or pedestrian facilities.

For the reasons detailed above, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, and thus, would result in a less than significant impact and no mitigation is required.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?

Less than significant impact. State CEQA Guidelines Section 15064.3 was added on December 28, 2018, to address the determination of significance for transportation impacts, which requires VMT as the basis of transportation analysis instead of congestion (such as level of service). The change in the focus of transportation analysis is intended to shift the focus from congestion to, among other things, reduction in greenhouse gas emissions, encouraging mixed-use development, and other factors. State CEQA Guidelines Section 15064.3(b) identifies criteria for analyzing the transportation impacts of a project.

As described above, lead agencies, such as CSUSM, have discretion to choose the most appropriate methodology to evaluate VMT subject to other applicable standards such as State CEQA Guidelines Section 15151 (standards of adequacy for Environmental Impact Report analyses). In 2018, OPR released a *Technical Advisory* to provide guidance and recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures as they relate to the implementation of SB 743. The CSU TISM describes the specific VMT analysis methods and significance

thresholds that apply to CSU campuses, including CSUSM. According to the CSU TISM, projects that meet one or more established screening criteria would result in a less than significant impact related to VMT for CEQA purposes.

According to the CSU TISM, land use projects located within a transit priority area (TPA) would result in a less than significant impact to VMT. As defined in the CSU TISM, TPAs are "development located within 0.5 mile of either an existing major transit stop (defined as a rail transit stop, ferry terminal served by either bus or rail transit, or the intersection of two or more major bus routes with 15-minute or better headways during the peak commute periods) or a stop along an existing high quality transit corridor (defined as a fixed route bus service with headways of 15-minutes or better)." The San Diego Association of Governments (SANDAG) developed a map that illustrates TPAs in the SANDAG region, which includes the City of San Marcos. The CSUSM campus, including the project site, is located within a TPA because of the project's vicinity to the NCTD SPRINTER station (SANDAG 2021) which is located within 0.5 mile north of the project site. Therefore, it can be presumed that the proposed project would not generate a substantial increase in VMT.

Additionally, it can be assumed that the proposed project would serve a portion of students who would already be on campus for other activities as well as students living on campus. As detailed in Section 3.17.1, "Environmental Setting," students, faculty, and staff are encouraged to use alternative modes of transportation and TDM strategies to reduce trips to and from campus. Available resources include carpool incentives, the guaranteed Ride Home Program, COMMUTE with Enterprise, and Zipcar. Additionally, the CSUSM Bicycle Program includes bicycle parking throughout campus, bike lockers, tire air pumps, and a commuter lounge. Students may also take advantage of discounted transit passes.

The CSUSM Campus Master Plan was included in the land use assumptions and analysis of SANDAG's 2021 RTP/SCS. As detailed in Chapter 2, "Project Description," the proposed project would involve a minor change on the project site as compared to the previously approved Campus Master Plan. Because the project proposes to build two buildings instead of one consisting of the similar uses (i.e., laboratories, learning areas, offices, and storage), it is not anticipated that the increase in VMT from what was previously approved as compared to the project would be substantial. Additionally, the proposed project would be consistent with the RTP/SCS planned land use for the project site of "Education and Institutions."

Therefore, because the proposed project would be located in a TPA (i.e., within 0.5 mile of either an existing major transit stop) and the proposed project is consistent with SANDAG's RTP/SCS, the proposed project would meet the screening criteria established in the CSU TISM and would not conflict or be inconsistent with CEQA Guidelines section 15064.3(b). Thus, the project would result in a less than significant impact to VMT and no mitigation is required.

c) 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. Vehicles would access the project site from an existing north-south service lane that runs west of the project site, and the project would not require the construction, re-design, or alteration of any surrounding public roadways. All on-site improvements associated with the proposed project, such as the relocation of the east-west service road along the eastern boundary of the project site, would be subject to, and designed in accordance with applicable CSU, City, and applicable industry design and safety standards to avoid creating a geometric design hazard. Therefore, the proposed project would not substantially increase transportation-related hazards; and thus, would result in a less than significant impact and no mitigation is required.

d) Result in inadequate emergency access?

Less than significant impact. The proposed project would not require the construction, re-design, or alteration of any public roadways. Access to the project site would be maintained during project construction from the CSUSM internal roadway network; once operational, emergency access onto the site would continue to be provided via the existing north-south service lane as well as the re-routed east-west service road along the eastern project site boundary (see Figure 2-5). Additionally, as detailed in Chapter 2, "Project Description," the project design would include adequate provisions for fire protection service.

The proposed project would be designed in compliance with all applicable emergency access requirements, including Uniform Fire Code requirements. Emergency access for the proposed project would be subject to review by all appropriate responsible emergency service agencies. Additionally, all CSU projects are required to follow the State University Administrative Manual, which requires the State Fire Marshal to review all projects prior to implementation. Therefore, the proposed project would be designed to meet applicable emergency access and design standards, and adequate emergency access would be provided. Thus, the project would result in a less than significant impact and no mitigation is required.

3.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources. Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)? 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)?	☐	☒	☐	☐
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?	☐	☒	☐	☐

3.18.1 Environmental Setting

As discussed in Section 3.5, "Cultural Resources," ASM prepared an Archaeological Survey Report in February 2024 to assess potential impacts on cultural resources as a result of the proposed project. As documented in the Archaeological Survey Report, ASM submitted a Sacred Lands File search request to the NAHC on February 6, 2024. The NAHC responded on February 8, 2024, and the results of the search were negative. The NAHC response provided 29 tribal contacts that may have more information regarding the project site.

In accordance with AB 52 and PRC Section 21080.3.1, CSUSM sent formal notification letters of the proposed project, on April 1, 2023, to the 29 tribal contacts listed in NAHC's response. The following tribes responded to CSUSM's notification letter and requested to engage in formal government-to-government consultation under CEQA:

- Rincon Band of Luiseño Indians: On April 16, 2024, a representative of the Rincon Band of Luiseño Indians responded to CSUSM's notification letter and requested to engage in formal government-to-government consultation under CEQA. CSUSM emailed the Tribe the project's Archaeological Survey Report and Geotechnical Investigation on April 25, 2024. CSUSM then conducted a site walk with a representative of the Tribe on May 17, 2024. During the site walk, the representative requested to review the project site plan and have a tribal monitor present during project-related ground disturbances, and stated that consultation could be closed. CSUSM sent an email on May 23, 2024, to acknowledge the Tribe's request, provide the project site plan, and close consultation with the Tribe. In a letter dated June 6, 2024, the representative indicated that the Tribe reviewed

the shared documents, provided cultural resources mitigation measures to be applied to the project, requested to be notified of any changes to the project plans, requested a final monitoring report, and asked that the Tribe be afforded the opportunity to monitor ground disturbances associated with the project.

- Campo Band of Mission Indians: On April 30, 2024, a representative of the Campo Band of Mission Indians responded to CSUSM's notification letter and requested to engage in formal government-to-government consultation under CEQA. During a phone call on May 13, 2024, the representative requested to schedule a site walk on May 16, 2024, but subsequently cancelled the meeting and requested to reschedule. CSUSM shared the project's Archaeological Survey Report and Geotechnical Investigation with the tribe on May 13, 2024. During a phone call on May 23, 2024, the representative requested to have a tribal monitor present during project-related ground disturbances. Consultation with the Campo Band of Mission Indians is ongoing and a site walk with the Tribe is forthcoming.
- San Pasqual Band of Mission Indians: On April 30, 2024, a representative of the San Pasqual Band of Mission Indians responded to CSUSM's notification letter and requested to engage in formal government-to-government consultation under CEQA. CSUSM shared the project's Archaeological Survey Report with the tribe on May 1, 2024. During a virtual meeting on May 28, 2024, the representative requested to have a tribal monitor present during project-related ground disturbances and concluded formal consultation.
- San Luis Rey Band of Mission Indians: On May 8, 2024, a representative of the San Luis Rey Band of Mission Indians responded to CSUSM's notification letter and requested to engage in formal government-to-government consultation under CEQA. The representative requested to schedule a site walk on May 20, 2024, but subsequently cancelled the meeting. During a follow-up call on May 24, 2024, a representative of the Tribe wanted to ensure that import soils are free of artifacts and CSUSM confirmed that no imported soils would be used for the project. During a virtual meeting on May 30, 2024, representatives of the Tribe requested to provide mitigation measures to be included in the project and be notified in the event of the discovery of a tribal cultural resource during construction activities. On June 4, 2024, CSUSM sent an email to the Tribe requesting to review the proposed mitigation measures. To date, CSUSM has not received a response and consultation with the Tribe is ongoing.

3.18.2 Discussion

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)?

and

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?

Less than significant impact with mitigation incorporated. The project site does not contain any known tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. No known resources within the project site were identified as tribal cultural resources as defined in

PRC section 21074. Further, the project site is underlain with approximately 2 to 5 feet of undocumented fill that has been extensively graded, followed by granitic rock (Geocon, Inc. 2023). During project construction, excavation is anticipated to occur to a maximum depth of 6 feet below the ground surface for the building structure and 8 to 10 feet for the gravity fed utility systems. Because ground disturbance would not occur in native soils, buried tribal cultural resources are not expected to be encountered during project construction.

The AB 52 consultation is ongoing and the potential remains for the unanticipated discovery of a tribal cultural resource on the project site. Mitigation Measure TCR-1 through TCR-4, which were developed based on input from consulting tribes, require CSUSM to develop a cultural resources monitoring plan, retain archaeological and tribal monitors, follow specific procedures in the event of unanticipated discoveries, avoid and preserve sacred sites, relinquish ownership of artifacts and repatriate cultural resources to the respective tribe, and complete a monitoring report. With implementation of Mitigation Measures TCR-1 through TCR-4, the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource. This impact would be less than significant with mitigation incorporated.

Required Mitigation Measures

TCR-1: Cultural Resources Monitoring Plan

At least 60 days prior to pulling grading permits, CSUSM will consult with a qualified archaeologist to develop a written Cultural Resources Monitoring Plan (CRMP). The CRMP will guide the procedures and protocols of a monitoring program that shall be implemented within the project site. The CRMP will be prepared in consultation with and review from the consulting tribes (i.e., Rincon Band of Luiseño Indians, Campo Band of Mission Indians, San Pasqual Band of Mission Indians, and San Luis Rey Band of Mission Indians). The plan shall outline the project schedule; if applicable, discuss any specific avoidance, preservation, or excavations required; address the methodology for grading activity observation by the monitors; and include a treatment plan, based on the project mitigation measures and conditions of approval, should any cultural resources be identified. The extent of the monitoring program will depend on the duration and complexity of ground disturbing activities. Ground-disturbing activities include vegetation clearance; removal, relocation, and installation of underground pipelines, footings, or foundations for signage, lighting, and other infrastructure or vertical construction; installation of paved sitework; grading, including removal of rock outcrops; and excavation.

It is possible that full-time archaeological and tribal monitoring during ground disturbing activities in native soils that have not been previously disturbed will occur throughout the entire project site, however, the archaeologist and tribal monitor shall determine the required duration and extent of monitoring. If the archaeological monitor determines that no archaeological resources have potential to be disturbed by the project upon assessment of project site conditions, CSUSM can suspend archaeological monitoring. A rotating schedule for tribal monitoring from all consulting tribes that wish to conduct monitoring will be created and outlined in the CRMP. Should the monitors determine that there is no longer any potential to impact cultural resources within the project site, all monitoring shall cease. Appropriate participants should be notified and the required forms and reports should be prepared and submitted.

The CRMP will be submitted to the campus planner for review and edits. Once all edits are complete and prior to pulling planning permits, the final CRMP will be submitted to the CSUSM Facilities Development & Management; the construction manager; and the consulting tribes. Construction personnel shall adhere to the stipulations of the CRMP.

TCR-2: Tribal Monitoring

At least 45 days prior to pulling grading permits, CSUSM shall contact the consulting tribes to enter into a Tribal Monitoring Agreement and retain qualified tribal monitors to monitor on a rotating basis all ground disturbing activities in native soils that have not been previously disturbed. The agreement shall address the participation of professional tribal monitors during ground-disturbing activities in native soils that have not been previously disturbed; project scheduling; and terms of compensation for the monitors. Upon completion, the finalized agreement will be submitted to the CSUSM Facilities Development & Management to satisfy this requirement. The consulting tribes will also be notified at least 48 hours in advance of the pre-construction meeting so preparations can be made for a representative to attend. During the meeting, the representative, in coordination with the project archaeologist, will discuss the procedures outlined in the

CRMP. The Tribal monitor shall complete daily monitoring logs that describe each day's activities, including construction activities, locations, soil, and any cultural materials identified.

TCR-3: Archaeological Monitoring

As described under Mitigation Measure TCR-1, if the qualified archaeologist determines that no archaeological resources have potential to be disturbed by ground-disturbing activities, CSUSM can suspend archaeological monitoring. If an archaeological monitor is needed, at least 45 days prior to pulling grading permits, CSUSM shall contact a qualified archaeologist to enter into an agreement to retain a qualified archaeological monitor to all monitor ground-disturbing activities in native soils that have not been previously disturbed. The qualified archaeologist shall meet the Secretary of the Interior's (SOI) Professional Qualifications Standards (48 Federal Register 44738-39). Upon completion, the finalized agreement will be submitted to the CSUSM Facilities Development & Management to satisfy this requirement. The project archaeologist will also be notified at least 48 hours in advance of the pre-construction meeting so preparations can be made for a representative to attend. During the meeting, the archaeologist, in coordination with the tribal representative, will discuss the procedures outlined in the CRMP.

If archaeological monitoring occurs, the project archaeologist shall prepare a monitoring report no later than 90 days after monitoring has been completed. The report will include the results of monitoring including a list of project personnel, a catalog of any cultural resources that were identified, any associated California Department of Parks and Recreation (DPR) 523 forms and/or confidential maps, details of the location of the final disposition of cultural resources, any issues or problems that occurred during monitoring, and any other pertinent information. Once completed, the project archaeologist will submit a draft to CSUSM for review and approval. Upon approval by CSUSM, a complete final report shall be submitted to the appropriate Information Center, the consulting tribes, and any relevant curation facility.

TCR-4: Unanticipated Discoveries

In the event that cultural resource(s) are unearthed during ground-disturbing activities, the archeological monitor and tribal monitor may, with CSUSM agreement, temporarily halt or redirect ground disturbing activities away from the vicinity of these unanticipated discoveries so that they may be evaluated. The project archaeologist and the consulting tribes shall meet with CSUSM and assess the significance of such cultural resource(s). If the cultural resource(s) is determined to be culturally significant, the project archaeologist and consulting tribes shall meet with CSUSM to confer regarding the appropriate treatment for the cultural resource(s). Pursuant to PRC Section 21083.2(b) avoidance is the preferred method of preservation. The archaeologist and the consulting tribes shall make recommendations to CSUSM on the measures that will be implemented to protect the newly discovered cultural resource(s), including avoidance in place, excavation, relocation, and further evaluation of the discoveries in accordance with CEQA. No further ground disturbance shall occur in the area of the discovery until CSUSM approves the measures to protect the significant cultural resource(s).

If the project archaeologist and the consulting tribes cannot agree on the significance or the mitigation for the newly discovered cultural resource(s), these issues will be presented to the CSUSM Facilities Development & Management for decision. CSUSM Facilities Development & Management shall make the determination based on the provisions of CEQA with respect to cultural resources and shall take into account the religious beliefs, customs, and practices of the consulting tribes.

- All sacred sites, should they be encountered within the project site, shall be avoided and preserved as the preferred mitigation, if feasible.
- The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all cultural artifacts that are found on the project area to the consulting tribe for reburial at a mutually agreeable location.

3.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems. Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐
e) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 Environmental Setting

WATER

VWD supplies potable water CSUSM. VWD's service area encompasses 45 square miles within northern San Diego County. VWD currently imports or purchases 100 percent of its potable water supply from the San Diego County Water Authority (SDCWA). VWD also purchases desalinated water from the Claude "Bud" Lewis Carlsbad Desalination Plant in the City of Carlsbad, and approximately 2,750 acre-feet per year (AFY) from the Olivenhain Municipal Water District's (OMWD) David C. McCollom Water Treatment Plant (VWD 2021).

The 2020 Urban Water Management Plan (UWMP) for the Vallecitos Water District analyzes past, current, and future water demands and the reliability of water supplies within the district's service area. According to the UWMP, VWD provided an average of 12.1 million gallons per day (MGD) of potable water in 2020. Water demand is projected to grow from 17.4 MGD in 2025 to 22.1 MGD in 2045 (VWD 2021).

In 2020, CSUSM's water usage was approximately 42,000 hundred cubic feet, equivalent to 96.4 AFY or 0.09 MGD. Water usage has generally increased consistently with the campus population increase over time (CSUSM 2024a). CSUSM implements water conservation strategies to reduce potable water consumption, which include installing low-flow faucets, dual flush toilets, and waterless urinals; planting drought tolerant and native plants; using recycled water to wash campus

vehicles and equipment; and implementing a high-tech landscape monitoring system. In 2013, CSUSM began using a groundwater well for irrigation, which has reduced CSUSM's potable water consumption (CSUSM 2024b).

WASTEWATER

The CSUSM sewer system is comprised of private mains that ultimately tie into the VWD sanitary sewer system mains located in the streets surrounding the campus. Due to the topography of the campus, wastewater flows generated from different parts of the campus are collected by separate networks of sewer mains. Flows generated from the central part of the campus, where the project site is located, are conveyed in a northerly direction. The network consists of 6- and 8-inch pipelines that discharge to an 8-inch main located in Campus Way, which ultimately discharges into an existing 15-inch main in Barham Drive (CSUSM 2024c). Once in VWD's sewer system, wastewater flows are conveyed to OMWD's David C. McCollom Water Treatment Plant, which treats up to 34 million gallons of water each day (OMWD 2023).

ELECTRICITY AND NATURAL GAS

San Diego Gas & Electric supplies electricity and natural gas to CSUSM. From 2012 to 2020, the campus population increased by approximately 4,000. During that time, overall electricity usage decreased from 15,000,000 kilowatt hours (kWh) to 13,000,000 kWh, while natural gas usage increased from 300,000 therms to 1,300,000 therms (CSUSM 2024a). Starting in 2015, CSUSM experienced a large increase in natural gas usage when the university commissioned a new fuel cell system to increase renewable energy generation. The fuel cell system converts natural gas into electricity to meet CSUSM's energy needs while reducing carbon dioxide emissions into the atmosphere (CSUSM 2016).

TELECOMMUNICATIONS

CSUSM's Instructional and Information Technology Services Department provides telecommunications services to the campus. Other telecommunications providers in the area include Comcast, Cox Communications, AT&T, Spring, T-Mobile, and Spectrum.

SOLID WASTE

The closest landfill to the project site the Miramar Landfill, located in the City of San Diego. The landfill has a maximum permitted capacity of 97,354,735 cubic yards and a maximum permitted throughput of 8,000 tons per day. The landfill had a remaining capacity of 11,080,871 cubic yards as of January 30, 2020, and is expected to continue operations through January 1, 2031 (CalRecycle 2024a). The Sycamore Landfill is another nearby landfill located in the City of San Diego. This landfill has a maximum permitted capacity of 147,908,000 cubic yards and a maximum permitted throughput of 5,000 tons per day. The landfill had a remaining capacity of 113,972,637 cubic yards as of December 31, 2016, and is expected to continue operations through December 31, 2042 (CalRecycle 2024b).

Based on data reported to CalRecycle in 2022, CSUSM sent approximately 613.36 tons of solid waste to the landfill, diverted approximately 345.82 tons of recycled material, and composted approximately 79.9 tons of organic material. In 2022, CSUSM's annual employee per capita disposal rate was 2.25 pounds/person/day and student per capita disposal rate was 0.26 pounds/person/day (CalRecycle 2022).

3.19.2 Discussion

a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

Less than significant impact. The proposed project would include new domestic and fire water, sanitary sewer, storm drain, mechanical hydronic piping, electrical power, and telecommunications connections that would tie-in to existing utility lines at Markstein Hall, approximately 20 feet south of the project site. Trenching for utility connections between the proposed buildings and existing utility mains are considered part of the proposed project and would occur entirely within the project site boundaries. The impacts associated with their construction, including ground disturbance, are analyzed in the other sections of this Initial Study. For example, Section 3.3, "Air Quality," Section 3.8, "Greenhouse Gas Emissions and Climate Change," and Section 3.13, "Noise," evaluate increases in air pollutant and greenhouse gas emissions and noise levels associated with all construction activities, including any ground disturbance needed for tie-ins to existing utility infrastructure, as well as increases in emissions associated with the proposed project's utility demands. Section 3.5, "Cultural Resources," evaluates the potential impacts that trenching and excavation, including any ground disturbance needed for tie-ins to existing utility infrastructure, may have on buried resources. Section 3.7, "Geology and Soils," Section 3.9, "Hazards and Hazardous Materials," and Section 3.10, "Hydrology and Water Quality," evaluate the potential impacts that trenching and excavation, including any ground disturbance needed for tie-ins to existing utility infrastructure, may have related to erosion and siltation, degradation of water quality, and the release of contamination into the environment. No new or expanded infrastructure beyond those proposed as part of the proposed project and within the project site boundaries would be required. This impact would be less than significant, and no mitigation is required.

b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than significant impact. Construction activities would result in a temporary increase in water consumption for cleaning surfaces, mixing with concrete or other materials, suppressing dust, and establishing plants. The relatively minor water supply needed for proposed construction activities would leave sufficient water supplies available for other reasonably foreseeable future development during normal, dry, and multiple dry years.

Once operational, the proposed project would support approximately 350 students not currently enrolled and 33 new staff and faculty, which would increase campus potable water demand at CSUSM compared to existing conditions. The proposed project would have an estimated water demand of 2.3 AFY, based on the proposed building square footage and land use type.

The campus population growth attributable to the proposed project would be within the growth projections anticipated under the Campus Master Plan (CSUSM 2018a), and have therefore been accounted for in VWD's assessment of future water demands. VWD is dependent on the water supply abilities of its wholesaler, the SDCWA. According to the SDCWA's 2020 UWMP, the SDCWA anticipates meeting all future demands of its member agencies in normal and single dry -year scenarios; however, some level of shortage could potentially be experienced during the multiple dry-year scenarios. The purchase of contracted desalinated seawater supply through SDCWA helps VWD alleviate potential multiple dry-year water shortages. Desalinated water supplies are assumed to be reliable and available even during drought conditions. The SDCWA reliability assessment reports that adequate water supply is anticipated within the authority's service area for normal/average and single dry years through 2045. However, supply limitations that arise in multiple dry year scenarios must be addressed through implementation of extraordinary water conservation measures. VWD's water conservation programs and demand management measures include water waste prevention ordinances; metering; conservation pricing through a tiered water rate structure; public education and outreach; programs to assess and manage distribution system real loss; and residential, commercial and landscape BMPs (VWD 2021).

Further, as indicated in Section 3.19.1, CSUSM would incorporate water conservation strategies as part of the proposed project to reduce potable water consumption, which include installing low-flow faucets, dual flush toilets, and waterless urinals; planting drought tolerant and native plants; using recycled water to wash campus vehicles and equipment; and implementing a high-tech landscape monitoring system. CSUSM may also utilize groundwater from the existing on-site well for the proposed project's landscaping needs to reduce water demand from VWD.

Based on the above discussion, sufficient water supplies would be available to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years. This impact would be less than significant and no mitigation is required.

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

Less than significant impact. Construction activities would result in temporary wastewater generation. However, wastewater generation would be minimal, and OMWD would have adequate capacity to serve the proposed project's demand during construction. Once operational, the proposed project would support approximately 350 students not currently enrolled and 33 new staff and faculty, which would increase wastewater generation at CSUSM compared to existing conditions. The proposed project would generate approximately .002 MGD of wastewater, based on the proposed building square footage and occupancy. The proposed project's wastewater generation would represent a negligible percent of the 34-million-gallon treatment capacity at OMWD's David C. McCollom Water Treatment Plant. The campus population growth attributable to the proposed project would be within the growth projections anticipated under the Campus Master Plan (CSUSM 2018a), and is therefore within the growth projections used by OMWD in assessing future wastewater treatment capacity. Further, as noted in Section 3.19.2(b), CSUSM would implement water conservation strategies that would help reduce the volume of wastewater generated by the proposed project. Therefore, OMWD would have adequate capacity to serve the project's projected demand in addition to existing commitments. This impact would be less than significant and no mitigation is required.

d) 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?

and

e) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than significant impact. During construction, the proposed project is estimated to generate approximately 168 tons of trash and 54 tons of demolition debris. In accordance with Section 5.408 of the CALGreen Code, the proposed project would implement a Construction Waste Management Plan that would require recycling and/or salvaging a minimum of 65 percent of nonhazardous construction and demolition debris. Project-generated construction and demolition debris would be hauled to the Miramar Landfill, which has a remaining capacity of 11,080,871 cubic yards. Solid waste generated during construction would represent a negligible percentage of the landfill's remaining capacity. Therefore, the Miramar Landfill has adequate capacity to accommodate the solid waste generated during project construction.

Once operational, the proposed project would support approximately 350 students not currently enrolled and 33 new staff and faculty, which would increase solid waste generation compared to existing conditions. Based on CSUSM's per capita disposal rate, project operations would generate approximately 165 pounds of solid waste per day, equivalent to 0.08 tons of solid waste per day. Solid waste would be hauled to the Miramar Landfill, which has a maximum permitted throughput of 8,000 tons per day and is expected to continue operations through January 1, 2031, or the Sycamore Landfill, which has a maximum permitted throughput of 5,000 tons per day and is expected to continue operations through December 31, 2042. Solid waste generated during operations would represent a negligible increase in the maximum permitted daily throughout of these landfills. Therefore, existing landfills have adequate capacity to accommodate the solid waste generated during project operations.

In accordance with CSU Sustainability Policy (CSU 2022) and the CSUSM Sustainability Master Plan (CSUSM 2018b), the university is working towards its goal of achieving zero waste by 2025 and reaching a 90 percent diversion rate. Accordingly, it is anticipated that CSUSM's per capita disposal rates would substantially decrease over time. Compliance with the CSU Sustainability Policy and the CSUSM Sustainability Master Plan would ensure that the proposed project would meet or exceed the requirements of applicable solid waste reduction goals and requirements, which include Assembly Bill (AB) 939 and SB 1322 (California's Integrated Waste Management Act), AB 341 (mandatory commercial recycling requirements), AB 1826 (mandatory commercial organics recycling), SB 1374 (construction and demolition waste materials diversion requirements), and CALGreen Sections 4.408 and 5.408 (construction waste reduction, disposal, and recycling requirements).

Based on the above discussion, the proposed project would not 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. In addition, the proposed project would comply with applicable State and local requirements pertaining to solid waste, construction waste diversion, and recycling. Therefore, this impact would be less than significant and no mitigation is required.

3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire. Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones? If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Require the installation 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?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐

3.20.1 Environmental Setting

The project site is within a local responsibility area (LRA) designated as a very high Fire Hazard Severity Zone (FHSZ) and within one mile of a state responsibility area (CALFIRE 2021). The topography of the project site is relatively flat, but the project site is adjacent to an undeveloped hillside to the east. No landslides have been documented on or adjacent to the project site (Geocon, Inc. 2023). Vegetation on the project site is comprised of scattered shrubs and ruderal grasses, and the hillside immediately east of the project site contains stands of coastal sage scrub and mixed chaparral that could burn quickly in a wildfire. As discussed in Section 3.10.1, the project site is in an area with minimal flood hazard (FEMA 2012).

As described in Section 3.15, "Public Services," the project site is served by the City of San Marcos Fire Department. According to the Safety Element of the City of San Marcos General Plan, the City has not established official evacuation routes; however, main thoroughfares would serve as primary evacuation corridors in the event of an emergency (City of San Marcos 2012). According to the Campus Evacuation Plan (CSUSM 2019), Twin Oaks Valley Road, Barham Drive, and La Moree Road are the major arteries in and out of campus that may be used as evacuation routes. In addition, the existing service road may be used to help relieve traffic during emergency evacuation (CSUSM 2022).

3.20.2 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. As discussed in Section 3.9.2(f), the proposed project would not result in any temporary or permanent closures or other modifications to the City of San Marcos' local roadway system but would result in minor changes to the circulation network within the CSUSM campus. As noted in Section 2.3.2, "Construction," the existing east-west service road would be relocated along the eastern boundary of the project site during initial site demolition. To ensure that access through the project site is maintained at all times, the existing service road would not be demolished until the new service road is fully constructed. Vehicular access on the existing north-south service/fire lane would be maintained through the project site for the duration of construction activities or other detours would be provided. Full access through the project site would be restored following construction activities. Further, the State Fire Marshall would review the project plans to ensure that the new buildings and circulation improvements comply with the requirements of the CFC and to ensure that adequate emergency access is provided. Project operations would also be subject to the procedures of the CSUSM 2020 EOP, which includes emergency response actions, including an evacuation plan, for the CSUSM campus in the event of a wildfire. Therefore, the proposed project would not substantially impair an adopted emergency response or evacuation plan. The impact would be less than significant, and no mitigation is required.

b) 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?

Less than significant impact. As described above, the project site is in a very high FHSZ in an LRA (CALFIRE 2021). The project site is surrounded by development to the north, west, and south. The topography of the project site is relatively flat, but the project site is adjacent to an undeveloped hillside to the east. Vegetation on the project site is comprised of scattered shrubs and ruderal grasses, and the hillside immediately east of the project site contains stands of coastal sage scrub and mixed chaparral that could burn quickly in a wildfire.

The proposed project would involve development of two buildings, associated hardscape and landscaping, and a utility tunnel on 2.63 acres within the CSUSM campus. The proposed project would be designed in accordance with the current CBC and CFC, which include requirements for the provision of defensible space, flammable vegetation clearance, and the use of ignition-resistant building materials for properties within a very high FHSZ in LRAs. The project design would also include adequate provisions for fire protection service, including adequate egress. Therefore, the proposed project would not exacerbate wildfire risk and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant, and no mitigation would be required.

c) Require the installation 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?

Less than significant impact. The proposed project would involve development of two buildings, associated hardscape and landscaping, and a utility tunnel on 2.63 acres within the CSUSM campus. As discussed in Section 2.3.2, "Construction," the existing east-west service road would be relocated along the eastern boundary of the project site. Utility lines below the existing roadway would be removed and new underground utilities would be installed under the re-routed service road. No above-ground power lines or other utility infrastructure would be required. As discussed in Section 3.20.2(b), the proposed project would be constructed in accordance with fire safety standards in the current CBC and CFC for properties within a very high FHSZ in LRAs. Therefore, the proposed project would not require the installation of associated infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. The impact would be less than significant, and no mitigation is required.

d) 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. As discussed in Section 3.10.1, the topography of the project site is relatively flat and no landslides have been documented on or adjacent to the project site (Geocon, Inc. 2023). As discussed in Section 3.10.2, the proposed project would alter existing drainage patterns, which could change the volume and quantity of stormwater runoff leaving the project site. However, CSUSM would be required to implement post-construction stormwater management controls that would adequately capture runoff and tie into existing campus storm drain infrastructure. Further, the project site is located in an area of minimal flood hazard (FEMA 2012). Therefore, the proposed project would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. The impact would be less than significant, and no mitigation is required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

3.21.1 Environmental Setting

Refer to the "Environmental Setting" discussion in Sections 3.1 through 3.20 of this Initial Study for a summary of the existing environmental conditions in the project site and vicinity.

3.21.2 Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

Less than significant impact with mitigation incorporated. As discussed in Section 3.1, "Aesthetics"; Section 3.3, "Air Quality"; Section 3.8, "Greenhouse Gas Emissions"; Section 3.9, "Hazards and Hazardous Materials"; Section 3.10, "Hydrology and Water Quality"; and Section 3.13, "Noise," project construction would result in short-term and temporary changes to the visual environment, increases in air pollutants, greenhouse gas emissions, and noise levels, erosion and degradation of water quality, and potential releases of hazardous materials into the environment. The proposed project would also introduce new stationary noise sources. However, compliance with applicable permits, programs, and regulations during construction would ensure that the project would not substantially degrade the quality of the environment.

As described in Section 3.4, "Biological Resources," the project site contains Diegan coastal sage scrub and southern mixed chaparral, which are considered sensitive natural communities and could provide habitat for migratory birds, raptors, or other avian species considered special-status. The effects on these communities, including vegetation removal and ground-disturbing activities, would be partially to disturbed habitat and the total size of the impact to would not exceed 0.1 acre (0.04 acre total impact). In addition, potential impacts on nesting migratory birds and raptors would be reduced to a less than significant level with implementation of Mitigation Measures BIO-1 and BIO-2. Therefore, the proposed project would not have potential to reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

As described in Section 3.5, "Cultural Resources," Section 3.18, "Tribal Cultural Resources," and Section 3.7, "Geology and Soils," no previously identified historical resources, archaeological resources, known cemeteries or burials, tribal cultural resources, or paleontological resources have been identified within the project site or utility tunnel alignment. Ground disturbance would occur within undocumented fill and granitic rock and is not expected to contain buried cultural or paleontological resources. In the unlikely event that human remains or related cultural materials are encountered, compliance with Health and Safety Code Section 7050.5 and PRC Section 5097 would ensure that these resources are properly identified, evaluated, and recovered. In addition, Mitigation Measures CUL-1 and TCR-1 through TCR-4 would require CSUSM to develop a cultural resources monitoring plan and implement a cultural monitoring program, retain archaeological and tribal monitors, follow specific procedures in the event of unanticipated discoveries, avoid and preserve sacred sites, relinquish ownership of artifacts and repatriate cultural resources to the respective tribe, and complete a monitoring report, which would ensure that impacts on tribal cultural resources would be avoided. Therefore, the proposed project would not eliminate important examples of the major periods of California history or prehistory.

With implementation of Mitigation Measures BIO-1, BIO-2, CUL-1, and TCR-1 through TCR-4, and compliance with applicable permits, programs, and regulations, the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than significant impact with mitigation incorporated. Cumulative environmental effects are multiple individual effects that, when considered together, would be considerable or compound or increase other environmental impacts. Individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time. The proposed project is within the CSUSM campus, where there is potential for future development and construction activities to occur.

As described in Sections 3.1 through 3.20, construction activities would result in short-term and temporary effects on the environment, including the following: changes to the visual setting; increases in air pollutants and noise levels; erosion and degradation of water quality; potential releases of hazardous materials into the environment; potential disturbance to nesting birds; and increases in demand for utilities and services. Although not anticipated, there is also potential for tribal cultural resources to be encountered during project construction. The proposed project would also introduce new stationary and mobile noise sources, which would dissipate with distance from the source. With implementation of mitigation measures Mitigation Measures BIO-1, BIO-2, CUL-1, and TCR-1 through TCR-4 and compliance with applicable permits, programs, and regulations, these environmental effects would be reduced to less than significant levels such that these effects would not be cumulatively considerable.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less than significant impact. As discussed in Section 3.3, "Air Quality"; Section 3.8, "Greenhouse Gas Emissions"; Section 3.9, "Hazards and Hazardous Materials"; Section 3.10, "Hydrology and Water Quality"; Section 3.13, "Noise"; and Section 3.17, "Transportation," project construction would result in the short-term and temporary increases in air pollutants, greenhouse gas emissions, and noise levels; degradation of water quality; potential releases of hazardous materials into the environment; and disruptions to the transportation network. The proposed project would also introduce new stationary and mobile noise sources. However, with compliance with applicable permits, programs, and regulations during construction, these environmental effects would not cause substantial adverse effects on human beings.

This page intentionally left blank.

4 REFERENCES

1 Introduction

No references are cited in this section.

2 Project Description

California Department of Forestry and Fire Protection. 2009. *Very High Fire Hazard Severity Zones in LRA as Recommended by CAL FIRE – San Marcos*. Retrieved from: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps. Accessed January 24, 2024.

California State University. 2018 (December). *Outdoor Lighting Design Guide*. Available: https://www.calstate.edu/csu-system/doing-business-with-the-csu/capital-planning-design-construction/operations-center/Documents/guidelines/Outdoor-Lighting-Design-Guide-R3-2018-12-10.pdf. Accessed February 6, 2024.

California State University, San Marcos. 2018a (March). *California State University San Marcos Campus Master Plan.* Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed January 24, 2024.

_____. 2018b (December). *Sustainability Master Plan*. Available: https://www.csusm.edu/sustainability/docs/sustainabilitymasterplan.pdf. Accessed January 24, 2024.

CAL FIRE. *See* California Department of Forestry and Fire Protection.

CSU. *See* California State University.

CSUSM. *See* California State University, San Marcos.

3 Environmental Checklist

California State University, San Marcos. 2018a (March). *California State University San Marcos Campus Master Plan*. Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed January 24, 2024.

3.1 Aesthetics

California Department of Transportation. 2024. California State Scenic Highway System Map. Available: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed February 28, 2024.

California State University, San Marcos. 2013. *Building Standards*. Available: https://www.csusm.edu/pdc/standards-and-regulations/buildingstandards/specsections/02000-site-work/02900_landscapeplanting_2013-2014.pdf. Accessed June 7, 2024.

Caltrans. *See* California Department of Transportation.

City of San Marcos. 2012. *General Plan*. Retrieved from: https://www.san-marcos.net/work/economic-development/general-plan. Accessed March 12, 2024.

CSU Office of the Chancellor. 2018. *Outdoor Lighting Design Guide*. Available: https://www.calstate.edu/csu-system/doing-business-with-the-csu/capital-planning-design-construction/operations-center/Documents/guidelines/Outdoor-Lighting-Design-Guide-R3-2018-12-10.pdf. Accessed June 7, 2024.

CSUSM. *See* California State University, San Marcos.

3.2 Agriculture and Forest Resources

California Department of Conservation. 2024a. Important Farmland Mapper. Available: https://maps.conservation.ca.gov/agriculture/. Accessed February 28, 2024.

———. 2024b. Williamson Act Enrollment Mapper. Available: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/. Accessed February 28, 2024.

City of San Marcos. 2024. General Plan Land Use Map. Available: https://maps.sanmarcos.net/portal/apps/instant/minimalist/index.html?appid=6a719409702843ff969b017bd5131eb3. Accessed February 28, 2024.

DOC. *See* California Department of Conservation.

3.3 Air Quality

California Air Pollution Control Officers Association. 2022. California Emissions Estimator Model Version 2022.1.

California Air Resources Board. 2000 (October). Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. Available: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf. Accessed February 7, 2021.

———. 2004. 2004 Revisions to the Carbon Monoxide Maintenance Plan. Available: https://ww2.arb.ca.gov/resources/documents/2004-revisions-carbon-monoxide-maintenance-plan. Accessed April 22, 2024.

———. 2013. *California Almanac of Emissions and Air Quality—2013 Edition*. Available: http://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm. Accessed April 22, 2024.

CAPCOA. *See* California Air Pollution Control Officers Association.

CARB. *See* California Air Resources Board.

County of San Diego. 2007 (March). *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality*. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works. Available: https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf. Accessed June 1, 2021.

San Diego Air Pollution Control District. 2024. Attainment Status. Available: https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html. Accessed April 22, 2024.

———. 2022. Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments (HRAs). Available: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Hot-Spots-Guidelines.pdf. Accessed April 22, 2024.

———. 2020a. *Attainment Status*. Available: https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html. Accessed April 24, 2024.

———. 2020b (October). *2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County*. Available: https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/Att%20A%20(Attainment%20Plan)_ws.pdf. Accessed April 24, 2024.

———. 2019 (June). *Rule 20.2, New Source Review, Non-Major Stationary Sources*. Available: https://www.sdapcd.org/content/dam/sdapcd/documents/rules/current-rules/Rule-20.2.pdf. Accessed April 24, 2024.

SCAQMD. *See* South Coast Air Quality Management District.

South Coast Air Quality Management District. 2003. 2003 Air Quality Management Plan. https://www.aqmd.gov/home/air-quality/air-quality-management-plans/air-quality-mgt-plan/2003-aqmp. Accessed April 22, 2024.

U.S. Environmental Protection Agency. 2019 (August). *Environments and Contaminants: Criteria Air Pollutants. In America's Children and the Environment*. Updated Third Edition. Available: https://www.epa.gov/system/files/documents/2022-04/ace3-criteria-air-pollutants-report-section.pdf. Accessed April 22, 2024.

3.4 Biological Resources

Holland, R. F. 1986. *Preliminary descriptions of the terrestrial natural communities of California*. Unpublished report. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. March 2008. *Draft vegetation communities of San Diego County*. Based on Preliminary descriptions of the terrestrial natural communities of California, R. F. Holland, Ph.D., October 1986.

3.5 Cultural Resources

ASM. *See* ASM Affiliates, Inc.

ASM Affiliates, Inc. 2024 (April). *Archaeological Survey Report for the California State University San Marcos Integrated Science and Engineering Building Project, San Marcos, California.*

Geocon, Inc. 2023. Geotechnical Investigation, California State University, San Marcos, Integrated Science and Engineering Building (SM-1050), San Marcos, California. Prepared for California State University, San Marcos, San Marcos, California.

3.6 Energy

BTS. *See* Bureau of Transportation Statistics.

Bureau of Transportation Statistics. 2023. *U.S. Energy Consumption by the Transportation Sector*. Available: https://www.bts.gov/content/us-energy-consumption-transportation-sector. Accessed April 24, 2024.

California State Board of Equalization. 2024. Fuel Taxes Statistics & Reports. Available: https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm. Accessed April 22, 2024.

California Energy Commission. 2019. *2019 California Energy Efficiency Action Plan*. Available: https://www.energy.ca.gov/filebrowser/download/1900. Accessed: July 13, 2022.

———. 2023a. 2023 California Renewables Portfolio Standard Annual Report, November 2023. Available: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2023/2023-rps-annual-report-to-the-legislature.pdf. Accessed March 12, 2024.

———. 2023b. 2022 Power Content Label. Available: https://www.energy.ca.gov/filebrowser/download/6064. Accessed March 24, 2024.

———. 2022. 2022 Power Label. https://www.energy.ca.gov/filebrowser/download/6064. Accessed April 22, 2024.

California Energy Commission and the California Air Resources Board. 2003 (August). *Reducing California's Petroleum Dependence*. Available: https://ww2.arb.ca.gov/sites/default/files/classic/fuels/carefinery/ab2076final.pdf. Accessed April 22, 2024.

California State University, San Marcos. 2018b (December). *Sustainability Master Plan*. Available: https://www.csusm.edu/sustainability/docs/sustainabilitymasterplan.pdf. Accessed January 24, 2024.

EIA. See U.S. Energy Information Administration.

U.S. Energy Information Administration. 2023. California State Profile. Available: https://www.eia.gov/state/print.php?sid=CA. Accessed April 22, 2024.

3.7 Geology and Soils

Geocon, Inc. 2023. Geotechnical Investigation, California State University, San Marcos, Integrated Science and Engineering Building (SM-1050), San Marcos, California. Prepared for California State University, San Marcos, San Marcos, California.

3.8 Greenhouse Gas Emissions

California Air Resources Board. 2023. 2000-2021 GHG Inventory (2023 Edition). Available: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed March 12, 2024.

———. 2022. *Final 2022 Scoping Plan Update*. Available: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed March 12, 2024.

City of San Marcos. 2020. Final Climate Action Plan. Available: https://www.san-marcos.net/departments/development-services/planning/climate-action-plan. Accessed April 22, 2024.

California State University, San Marcos. 2018b (December). *Sustainability Master Plan*. Available: https://www.csusm.edu/sustainability/docs/sustainabilitymasterplan.pdf. Accessed January 24, 2024.

County of San Diego. 2024. Draft 2024 Climate Action Plan. Retrieved from: https://www.sandiegocounty.gov/content/sdc/sustainability/climateactionplan/seir.html. Accessed March 12, 2024.

Intergovernmental Panel on Climate Change. 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. Pages 465–570 in *Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Available: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. Accessed December 21, 2020.

———. 2014. *Climate Change 2014 Synthesis Report: Summary for Policymakers*. Available: https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf. Accessed December 21, 2020.

IPCC. *See* Intergovernmental Panel on Climate Change.

United Nations. 2015 (December 13). *Historic Paris Agreement on Climate Change: 195 Nations Set Path to Keep Temperature Rise Well Below 2 Degrees Celsius*. Available: https://unfccc.int/news/finale-cop21. Accessed May 21, 2021.

3.9 Hazards and Hazardous Materials

California Department of Forestry and Fire Protection. 2021. FHSZ Viewer. Available: https://egis.fire.ca.gov/FHSZ/. Accessed February 28, 2024.

CALFIRE. *See* California Department of Forestry and Fire Protection.

California Department of Toxic Substances Control. 2024. DTSC Envirostor Database. Available: https://www.envirostor.dtsc.ca.gov/public/map/?global_id=38330005. Accessed February 28, 2024.

California State University, San Marcos. 2020a. Emergency Operations Plan. Available: https://www.csusm.edu/em/documents/emergencyoperationsplan.basic.2020.ver2.pdf. Accessed February 28, 2024.

———. 2022. Campus Evacuation Procedures. Available: https://www.csusm.edu/em/procedures/evacuation.html. Accessed February 28, 2024.

CSUSM. *See* California State University, San Marcos.

California State Water Resources Control Board. 2024. Geotracker Database. Available: https://geotracker.waterboards.ca.gov/map/?global_id=T0607302824#. Accessed February 28, 2024.

City of San Marcos. 2012. *General Plan*. Retrieved from: https://www.san-marcos.net/work/economic-development/general-plan. Accessed March 12, 2024.

SWRCB. *See* California State Water Resources Control Board.

United Research Services. 2005. McClellan-Palomar Airport FAR Part 150 Study Update. Noise Exposure Maps Volume 1 of 2. Prepared for McClellan-Palomar Airport.

URS. *See* United Research Services.

3.10 Hydrology and Water Quality

California Geological Survey. 2024. *CGS Information Warehouse: Tsunami Hazard Area Map*. Retrieved from: https://maps.conservation.ca.gov/cgs/informationwarehouse/ts_evacuation/. Accessed March 5, 2024.

CGS. *See* California Geological Survey.

California State University, San Marcos. 2020b (May). *Storm Water Management Plan*. Available: https://www.csusm.edu/shs/documents/csusm_swmp20201004.pdf. Accessed March 6, 2024.

CSUSM. *See* California State University, San Marcos.

California Department of Water Resources. 2024. *SGMA Basin Prioritization Dashboard*. Available: https://gis.water.ca.gov/app/bp-dashboard/final/. Accessed March 6, 2024.

DWR. *See* California Department of Water Resources.

Federal Emergency Management Agency. 2012 (May). *Flood Insurance Rate Map, Map Number 06073C0793G*. Retrieved from: https://msc.fema.gov/portal/home. Accessed March 5, 2024.

FEMA. *See* Federal Emergency Management Agency.

Geocon, Inc. 2023. Geotechnical Investigation, California State University, San Marcos, Integrated Science and Engineering Building (SM-1050), San Marcos, California. Prepared for California State University, San Marcos, San Marcos, California.

Project Clean Water. 2022. *Carlsbad Watershed Management Area*. Available: https://projectcleanwater.org/watersheds/carlsbad-wma/. Accessed March 6, 2024.

San Diego County Water Authority. 2024. *Your Water*. Available: https://www.sdcwa.org/your-water/. Accessed April 24, 2024.

San Diego Regional Water Quality Control Board. 2021. *Water Quality Control Plan for the San Diego Basin*. Adopted September 8, 1994; reflects amendments through September 1, 2021. Available: https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/docs/cover_and_title_pgs.pdf. Accessed March 5, 2024.

SDCWA. *See* San Diego County Water Authority.

State Water Resources Control Board. 2022. *California 2020-2022 Integrated Report*. Retrieved from: https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=6cca2a3a18154655992012663 73cbb7b. Accessed March 6, 2024.

San Diego RWQCB. *See* San Diego Regional Water Quality Control Board.

SWRCB. *See* State Water Resources Control Board.

Vallecitos Water District. 2021 (June). *2020 Urban Water Management Plan*. Retrieved from: https://www.vwd.org/departments/engineering/capital-facilities/urban-water-management-plan-uwmp-copy. Accessed March 4, 2024.

VWD. *See* Vallecitos Water District.

3.11 Land Use and Planning

California State University, San Marcos. 2018. Campus Master Plan. Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed February 28, 2024.

City of San Marcos. 2024. General Plan Land Use Map. Available: https://maps.san-marcos.net/portal/apps/instant/minimalist/index.html?appid=6a719409702843ff969b017bd5131eb3. Accessed February 28, 2024.

CSUSM. *See* California State University, San Marcos.

3.12 Mineral Resources

California Department of Conservation. 1996. Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region.

California State University, San Marcos. 2018. Campus Master Plan. Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed February 28, 2024.

City of San Marcos. 2024. General Plan Land Use Map. Available: https://maps.san-marcos.net/portal/apps/instant/minimalist/index.html?appid=6a719409702843ff969b017bd5131eb3. Accessed February 28, 2024.

CSUSM. *See* California State University, San Marcos.

DOC. *See* California Department of Conservation.

3.13 Noise

California Department of Transportation. 2013 (September). *Transportation and Construction Vibration Guidance Manual*. Sacramento, CA: Noise, Division of Environmental Analysis. Sacramento, CA. Accessed April 2024.

City of San Marcos. 2012. *General Plan*. Retrieved from: https://www.san-marcos.net/work/economic-development/general-plan. Accessed March 12, 2024.

———. 2023. *San Marcos Municipal Code*. Available: https://library.municode.com/ca/san_marcos/codes/code_of_ordinances. Accessed April 2024.

Federal Highway Administration. 2006 (January). *Roadway Construction Noise Model User's Guide*. Washington, D.C. Prepared by the Research and Innovative Technology Administration, Cambridge, MA.

Federal Interagency Committee on Noise. 1992. Federal Agency Review on Selected Airport Noise Analysis Issues. Available: http://www.gsweventcenter.com/Draft_SEIR_References/1992_08_Federal_Interagency_Committee_on_Noise.pdf. Accessed April 2024.

Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. Washington, DC. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed April 2024.

Fehr and Peers. 2022. Campus View Drive and Campus Way Intersection Operations Evaluation for University Village Student Success Project

FHWA. *See* Federal Highway Administration.

FTA. *See* Federal Transit Administration.

Governor's Office of Planning and Research. 2017 (August). State of California General Plan Guidelines. Sacramento, CA. Available: http://www.opr.ca.gov/planning/general-plan/.

Kimley Horn. 2018. *McClellan-Palomar Airport Master Plan*. Available: https://www.sandiegocounty.gov/content/dam/sdc/dpw/AIRPORTS/palomar/documents/McClellan-Palomar_Master-Plan-Update_2018_DRAFT.pdf. Accessed April 2024.

Lennox. 2019 (March). 716ACX MERIT Series R-410A Two-Stage Compressor Product Specifications. Available: https://www.lennoxpros.com/docs/Technical/210873.pdf. Accessed April 2024.

OPR. *See* Governor's Office of Planning and Research.

3.14 Population and Housing

California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2023 with 2020 Census Benchmark. Retrieved from: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed June 6, 2024.

California State University, San Marcos. 2018. *California State University San Marcos Campus Master Plan.* Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed February 28, 2024.

CSUSM. *See* California State University, San Marcos.

DOF. *See* California Department of Finance.

3.15 Public Services

California State University, San Marcos. 2018. *California State University San Marcos Campus Master Plan.* Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed February 28, 2024.

CSUSM. *See* California State University, San Marcos.

3.16 Recreation

California State University, San Marcos. 2018. *California State University San Marcos Campus Master Plan.* Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed February 28, 2024.

CSUSM. *See* California State University, San Marcos.

3.17 Transportation

City of San Marcos. 2015 (May). *Bicycle Pedestrian Master Plan*. Prepared by KTU+A Planning and Landscape Architecture. Available: https://issuu.com/ktua/docs/sm_bpmp_final_lores. Accessed March 27, 2024.

California State University. 2024 (May). *California State University Sustainability Policy*. Available: https://calstate.policystat.com/policy/15829246/latest/. Accessed June 7, 2024.

Caltrans. *See* California Department of Transportation.

CSU. *See* California State University.

Nelson Nygaard. 2012 (November). *California State University Transportation Demand Management Manual*. Available: https://www.calstate.edu/csu-system/doing-business-with-the-csu/capital-planning-design-construction/Documents/CSU%20Systemwide%20TDM%20Manual.pdf. Accessed March 27, 2024.

North County Transit District. 2022 (December). BREEZE Fact Sheet. Available: https://gonctd-bucket.s3.us-west-1.amazonaws.com/wp-content/uploads/2022/12/BREEZE-Fact-Sheet-December-2022.pdf. Accessed March 27, 2024.

NCTD. *See* North County Transit District.

OPR. *See* California Governor's Office of Planning and Research.

San Diego Association of Governments. 2021 (December). *Transit Priority Areas (TPA) 2016*. Available: https://sdforwarddata-sandag.hub.arcgis.com/datasets/SANDAG::tpa-2016/explore?location=33.138662%2C-117.143898%2C14.79. Accessed March 21, 2024.

SANDAG. *See* San Diego Association of Governments.

3.18 Tribal Cultural Resources

Geocon, Inc. 2023. Geotechnical Investigation, California State University, San Marcos, Integrated Science and Engineering Building (SM-1050), San Marcos, California. Prepared for California State University, San Marcos, San Marcos, California.

3.19 Utilities and Service Systems

CalRecycle. *See* California Department of Resources Recycling and Recovery.

California Department of Resources Recycling and Recovery. 2022. *2022 SARC Annual Report*. Available: https://www2.calrecycle.ca.gov/StateAgency/WasteMgmt/AnnualReports/Agency/218/Year/2022. Accessed March 4, 2024.

_____. 2024a. SWIS Facility/Site Activity Details, West Miramar Sanitary Landfill (37-AA-0020). Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1795?siteID=2868. Accessed March 4, 2024.

_____. 2024b. SWIS Facility/Site Activity Details, Sycamore Landfill (37-AA-0023). Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1798?siteID=2871. Accessed March 5, 2024.

California State University. 2022 (May). *California State University Sustainability Policy*. Available: https://pstat-live-media.s3.amazonaws.com/pdf_cache/policy/11699668/bcdfc0d1-5ea0-42e4-9f38-dae219778641/California%20State%20University%20Sustainability%20Policy.pdf. Accessed March 6, 2024.

California State University, San Marcos. 2016 (April). *CSUSM Commissions New Campus Fuel Cell System*. Available: https://news.csusm.edu/csusm-commissions-new-campus-fuel-cell-system/. Accessed March 5, 2024.

_____.2018a (March). *California State University San Marcos Campus Master Plan*. Available: https://www.csusm.edu/pdc/campus-master-plan/2019masterplan.pdf. Accessed January 24, 2024.

_____. 2018b (December). *Sustainability Master Plan*. Available: https://www.csusm.edu/sustainability/docs/sustainabilitymasterplan.pdf. Accessed January 24, 2024.

_____. 2024a. *Utility Consumption Charts*. Available: https://www.csusm.edu/energy/metrics.html. Accessed March 5, 2024.

_____. 2024b. *Water Conservation*. Available: https://www.csusm.edu/sustainability/operational_goals/water/index.html. Accessed March 6, 2024.

_____. 2024c (February). *Sewer System Management Plan*. Available: https://www.csusm.edu/shs/documents/ssmp_02082024.pdf. Accessed March 4, 2024.

Olivenhain Municipal Water District. 2023. *Overview*. Available: https://www.olivenhain.com/about-us/overview/. Accessed March 4, 2024.

OMWD. *See* Olivenhain Municipal Water District.

Vallecitos Water District. 2021 (June). *2020 Urban Water Management Plan*. Retrieved from: https://www.vwd.org/departments/engineering/capital-facilities/urban-water-management-plan-uwmp-copy. Accessed March 4, 2024.

VWD. *See* Vallecitos Water District.

3.20 Wildfire

California Department of Forestry and Fire Protection. 2021. FHSZ Viewer. Available: https://egis.fire.ca.gov/FHSZ/. Accessed February 28, 2024.

CALFIRE. *See* California Department of Forestry and Fire Protection.

California State University, San Marcos. 2019. *Campus Evacuation Plan*. Available: https://www.csusm.edu/em/documents/evacuationplan.pdf. Accessed March 12, 2024.

_____. 2022. *Campus Evacuation Procedures*. Available: https://www.csusm.edu/em/procedures/evacuation.html. Accessed February 28, 2024.

City of San Marcos. 2012. *General Plan*. Retrieved from: https://www.san-marcos.net/work/economic-development/general-plan. Accessed March 12, 2024.

CSUSM. *See* California State University, San Marcos.

Federal Emergency Management Agency. 2012 (May). *Flood Insurance Rate Map, Map Number 06073C0793G*. Retrieved from: https://msc.fema.gov/portal/home. Accessed March 5, 2024.

FEMA. *See* Federal Emergency Management Agency.

Geocon, Inc. 2023. Geotechnical Investigation, California State University, San Marcos, Integrated Science and Engineering Building (SM-1050), San Marcos, California. Prepared for California State University, San Marcos, San Marcos, California.

3.21 Mandatory Findings of Significance

No references are cited in this section.

This page intentionally left blank.

5 REPORT PREPARERS AND CONTRIBUTORS

5.1 CALIFORNIA STATE UNIVERSITY SAN MARCOS

Rayanne Weber ..... Director

Michelle Alves ..... Campus Planner

Bryan Licht ..... Project Manager

5.2 ASCENT

Eric Ruby ..... Principal-in-Charge

Nicole Greenfield ..... Project Manager

Eric Cohen ..... Environmental Planner

Alta Cunningham ..... Director of Cultural Resources

Scott Gressard ..... Senior Biologist

Taelor Whittington ..... Biologist

Dimitri Antoniou ..... Senior Air Quality, Greenhouse Gas, and Noise Specialist

Matthew McFalls ..... Senior Air Quality and Greenhouse Gas Specialist

Jing Qian ..... Air Quality and Greenhouse Gas Analyst

Peter Hoholick ..... Noise Analyst

Jazmin Amini ..... Transportation Analyst

Alyssa Luna ..... GIS Specialist

Riley Smith ..... Publishing Specialist

Brian Perry ..... Senior Publications and Graphics Specialist

5.3 ASM AFFILIATES

Shelby Castells, M.A. ..... Director

Terrence Luévano, M.A. ..... Senior Archaeologist

5.4 C.W. DRIVER

Jamie Macartney ..... Project Director

5.5 HGA

Christina Delgado ..... Associate Vice President & Project Manager

This page intentionally left blank.