MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY
CALIFORNIA STATE UNIVERSITY
SAN DIEGO STATE UNIVERSITY (SDSU)
ENGINEERING AND INTERDISCIPLINARY SCIENCES BUILDING PROJECT

California State University
San Diego State University
Facilities Planning, Design and Construction
5500 Campanile Drive
San Diego, CA 92182

February 2015

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[PROPOSED] MITIGATED NEGATIVE DECLARATION

Project Name: California State University, San Diego State University ("SDSU") Engineering and Interdisciplinary Sciences Building Project ("Proposed Project").

Lead Agency/Project Proponent: Board of Trustees of the California State University ("Board"), 401 Golden Shore, Long Beach, California 90802 / SDSU Facilities Planning, Design and Construction, 5500 Campanile Drive, San Diego, CA 92182

Brief Project Description: The Proposed Project is the construction of a new, five-story instructional building (four levels above grade and one subterranean level) on the main campus of SDSU. The new building, which would be referred to as the "Engineering and Interdisciplinary Sciences Building," will include teaching and research laboratory space and will provide SDSU with state-of-the art research facilities to attract significant research projects and funding. The need for the new building stems from outdated facilities and growth in enrollment in the engineering disciplines. The new building would be located to the south of the existing Engineering Building, and would replace the existing Engineering Labs and Industrial Technology buildings.

Development of the Proposed Project includes demolition of the existing Engineering Lab and Industrial Technology buildings (approximately 47,000 gross square feet ("GSF")), followed by construction of the new building, which would be approximately 95,000 GSF. The Proposed Project also includes modifications to the existing Engineering Building to connect the existing building to the new building on one or more floors. The new building would include a landscaped quadrangle for the science, technology, engineering, and mathematics (STEM) disciplines. Once the new building is completed, the Proposed Project also includes demolition of the existing CAM Labs and Quonset Hut/Facilities Services buildings, which are located to the north of the existing Engineering Building and would no longer be necessary.

The target date for occupancy of the new Engineering and Interdisciplinary Sciences Building is January (Spring semester) 2018; completion of all components of the Proposed Project is scheduled for Fall semester 2018. Once completed, the new building would accommodate a capacity increase of 200 full-time equivalent ("FTE") students, or 224 "headcount" students. While the increased capacity may be filled by the transfer of students from other disciplines where growth has been flat, and is expected to remain flat or slightly decrease, for purposes of analysis, the capacity increase is assumed to represent an increase in enrollment of 200 FTE students. The new engineering building also would accommodate up to 80 additional research staff members over current levels.

Project Location: On the SDSU main campus, south of Canyon Crest Drive, west of College Avenue, in the College Area community of San Diego, California. A map depicting the location of the Proposed Project is included in the attached Initial Study.

Initial Study: An Initial Study has been prepared in accordance with the California Environmental Quality Act ("CEQA;" Pub. Resources Code, §21000 et seq.), in order to ascertain

whether the Proposed Project may have a significant effect on the environment. A copy of the Initial Study is attached to this Mitigated Negative Declaration and is incorporated herein by this reference.

The Initial Study determined that construction and operation of the Proposed Project would result in potentially significant impacts related to Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Transportation/Traffic. The Study identifies mitigation measures, listed below, that would reduce all identified significant impacts to a level that is less than significant. The Initial Study also determined that the Proposed Project would result in either no impacts or less than significant impacts to the following environmental impact categories: Agriculture and Forest Resources, Air Quality, Energy, Greenhouse Gas Emissions, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Utilities and Service Systems, and Mandatory Findings of Significance.

Mitigation Measures: The following mitigation measures would be implemented as part of the Project:

AESTHETICS

AES-1 During construction activities associated with the Proposed Project, CSU/SDSU shall ensure that temporary construction-related security lighting is arranged so that direct rays will not shine on or produce glare for adjacent street traffic and residential uses.

AES-2 In order to minimize impacts from lighting, CSU/SDSU shall ensure that all permanent light fixtures installed as part of the Proposed Project are shielded and directed away from sensitive viewers. Motion-sensor lighting with bi-level switching features shall be used in order to reduce the amount of constant light, especially during the late evening and early morning hours, and at times in which the facilities are not occupied. Lighting fixtures shall be designed and implemented to provide illumination appropriate for the level of activity. Project lighting also shall be consistent with the lighting policies contained in San Diego State University's Physical Master Plan.

BIOLOGICAL RESOURCES

BIO-1 CSU/SDSU, or its designee, shall conduct pre-construction nesting bird surveys prior to commencing ground-disturbing construction activities or the removal of on-site vegetation or building eaves. If any nesting birds are found during these surveys, a 300-foot buffer (or a buffer deemed appropriate by a qualified biologist) shall be established around the nest where no construction activities can occur until the young have fledged. Once the young have fledged, construction activities can resume without the buffer.

CULTURAL RESOURCES

CUL-1 **Protection of the Adjacent San Diego State College Historic District.** Prior to the commencement of construction activities associated with the Proposed Project, CSU/SDSU, or its designee, shall develop and incorporate into all demolition and construction plans specific measures to protect the portions of the historic district adjacent to the project site. The measures shall be developed in compliance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (the "Secretary of the Interior's Standards"). Such measures shall include stabilization of historic windows to protect them from the effects of vibration; protection of historic building materials; protection of walkways and landscaped areas within the district from construction equipment by ensuring that they are not used as staging areas or as access routes; and preservation of the National Register of Historic Places (NRHP) district contributing Works Progress Administration benches (some of which are currently situated near buildings proposed for demolition).

Of particular importance is the existing Physical Sciences Building (an NRHP-listed district contributor), which connects directly to the Engineering Laboratory Building and Industrial Technology Building (proposed for demolition). Care shall be taken to ensure that the adjacent elements of the original district buildings, including the exposed wooden posts, Spanish roof tiles, and other connecting materials, are not damaged or altered during demolition and construction of the adjacent buildings. Additionally, the existing Power Plant Building (an NRHP-listed district contributor) is very close to the Facilities Services Building / Quonset Hut (proposed for demolition). Demolition and construction plans shall detail how these elements will be protected and shall comply with the Secretary of the Interior's Standards. Contractors shall be given a brief worker awareness training to ensure that all individuals working on the project are aware of the historic district and understand which areas should be avoided during construction.

Finally, all design plans for new construction shall be compatible with the architectural character of the district in order to protect its historic integrity and setting, and shall be consistent with the Secretary of the Interior's Standards.

CUL-2 **Unanticipated Discovery of Archaeological Resources.** Subsequent to demolition and removal of existing structures and pavement from the site of the Proposed Project, CSU/SDSU, or its designee, shall retain a qualified archaeologist (i.e., one listed on the Register of Professional Archaeologists) to complete an archaeological survey of ground surfaces within the project area. In the event the survey identifies potentially intact concentrations of prehistoric

archaeological materials, focused data recovery archeological excavations shall be undertaken prior to the commencement of construction in the area of concern. A qualified Native American representative shall be retained to observe all focused data recovery excavations, if any. The focused excavations shall characterize: horizontal and vertical dimensions; chronological placement; site function; artifact/ecofact density and variability; presence/absence of subsurface features; research potential extent; and the integrity of the resources.

If the archaeological site is determined to be a historical resource within the meaning of CEQA Guidelines Section 15064.5(a), the archaeologist shall comply with CEQA Guidelines Section 15126.4(b)(3)(A), which notes that preservation in place, where feasible, is the preferred mitigation approach, or, alternatively, CEQA Guidelines Section 15126.4(b)(3)(C), which requires preparation and adoption of a data recovery plan, as well as the submittal of all plans and studies to the California Historical Resources Regional Information Center. Alternatively, if the archaeological site qualifies as a unique archaeological resource (see CEQA Guidelines Section 15064.5(c)(3)), the archaeologist shall treat the site in accordance with the provisions of Public Resources Code Section 21083.2.

All excavations and excavation and monitoring reports shall be completed consistent with California Office of Historic Preservation's Archeological Resources Management Reports: Recommended Contents and Format. The archaeological excavation and monitoring reports shall include all appropriate graphics, describing the results, analysis, and conclusions of the monitoring and excavation. All original maps, field notes, non-burial related artifacts, catalog information, and final reports shall be curated at a qualified institution within San Diego County, that complies with the State Historic Resource Commission's 1993 Guidelines for the curation of archaeological collections, as applicable.

CUL-3 **Unanticipated Discovery of Paleontological Resources.** Prior to the commencement of construction activities associated with the Proposed Project, CSU/SDSU, or its designee, shall retain a qualified paleontologist. The qualified paleontologist shall coordinate with the grading and excavation contractors, acting in accordance with the Society of Vertebrate Paleontology's Guidelines, and monitor all on-site activities associated with the original cutting of previously undisturbed sediments of Moderate to High resources sensitivity in order to inspect such cuts for contained fossils.

In the event that the monitoring results in the discovery of potentially unique paleontological resources within the meaning of Public Resources Code Section 21083.2, the qualified paleontologist will have the authority to halt excavation at that location and immediately evaluate the discovery. Following evaluation, if the resource is determined to be "unique" within the meaning of Public Resources Code Section 21083.2, the site shall be treated in accordance

with the provisions of that section. Mitigation appropriate to the discovered resource, including recovery, specimen preparation, data analysis, and reporting, shall be carried out in accordance with the Society of Vertebrate Paleontology guidelines prior to resuming grading activities at that location. Grading activities may continue on other parts of the building site while appropriate mitigation is implemented.

Recovered fossils, along with copies of pertinent field notes, photographs, and maps, shall be deposited in an accredited paleontological collections repository. A final summary report that discusses the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils also shall be prepared in a manner that is consistent with the Society of Vertebrate Paleontology guidelines.

CUL-4 **Unanticipated Discovery of Human Remains.** If, during any phase of construction of the Proposed Project, there is the discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps, which are based on Public Resources Code Section 5097.98, shall be taken (Cal. Code Regs., tit. 14, §15064.5(e)(1)):

1. There will be no further excavation or disturbance of the site or any nearby area reasonably susceptible to overlying adjacent human remains until:
    a. The San Diego County Coroner is contacted to determine that no investigation of the cause of death is required; and
    b. If the Coroner determines the remains to be Native American:
        i. The Coroner shall contact the Native American Heritage Commission within 24 hours.
        ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendant from the deceased Native American; and
        iii. The most likely descendent may make recommendations to CSD/SDSU for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or,
2. Where the following conditions occur, CSU/SDSU, or its designee, shall rebury the Native American human remains and associated grave good with appropriate dignity on the property in a location not subject to further subsurface disturbance (Cal. Code Regs., tit. 14, §15064.5(e)(2)):
    a. The Native American Heritage Commission is unable to identify a most likely descendant or the most likely descendant failed to make

a recommendation within 24 hours after being notified by the Commission.

b. The descendant identified fails to make a recommendation; or

c. CSU/SDSU, or its designee, rejects the recommendation of the descendant, and mediation by the Native American Heritage Commission fails to provide measures acceptable to CSU/SDSU.

GEOLOGY AND SOILS

GEO-1 Prior to the commencement of design and construction activities relating to the Proposed Project, CSU/SDSU, or its designee, shall conduct, or cause to be conducted, a geotechnical investigation in conformance with the requirements of the California Building Code ("CBC") and International Building Code ("IBC"). The site-specific geotechnical investigations will include, to the extent required by the CBC and IBC, subsurface exploration, laboratory testing, and geotechnical analysis. The investigations will address the potential for landslides/slope instability, erosion, unconsolidated soils, expansive soils, groundwater seepage, flood inundation and seismic shaking. An evaluation of the suitability of the on-site soils and rock for use as fill also shall be made during the site-specific geotechnical studies. (Reference shall be made to Section 300 of the "Greenbook," which provides specifications of typical fill materials and their typical maximum allowed dimensions.)

Based on the results of the site-specific investigations, geotechnical design recommendations shall be developed and included in the design and construction of the Proposed Project in conformance with applicable regulatory guidelines, including CBC and IBC requirements.

GEO-2 During project design and construction activities, CSU/SDSU, or its designee, shall use proper grading techniques (with appropriate compaction efforts) and stormwater pollution prevention devices (per regulatory agency guidelines), revegetate disturbed areas, and construct appropriate drainage provisions to reduce the potential for erosion on the Project site, in conformance with applicable regulatory guidelines, including CBC and IBC requirements. Additionally, CSU/SDSU, or its designee, shall periodically remove accumulated eroded soils and debris from surface drains, as needed.

GEO-3 During grading activities associated with development of the Proposed Project, CSU/SDSU, or its designee, shall require that compressible soils present on the site be removed where structural fill areas are underlain by unconsolidated soils and replaced with properly compacted or deep foundation systems, which extend through the compressible soils and are supported by the underlying firm natural soils, in conformance with applicable regulatory guidelines, including CBC and IBC requirements.

GEO-4 During grading activities associated with development of the Proposed Project, CSU/SDSU, or its designee, shall prohibit the placement of expansive soils within the upper few feet of finished grade, or mandate that "special" deepened and/or stiffened foundation systems for proposed structures be utilized, in conformance with applicable regulatory guidelines, including CBC and IBC requirements. Surface and subsurface drainage provisions also may be implemented to reduce moisture fluctuations in subgrade soils.

GEO-5 To the extent the geotechnical investigation conducted pursuant to Mitigation Measure GEO-1 concludes that groundwater/seepage issues are present on the Project site, CSU/SDSU, or its designee, shall design and construct subsurface and surface drains in filled areas and behind retaining walls, in conformance with applicable regulatory guidelines, including CBC and IBC requirements. In addition, the shoring and dewatering of excavations, as needed, shall be undertaken to reduce the potential for caving of excavations due to groundwater seeps.

GEO-6 During design of the Proposed Project, CSU/SDSU, or its designee, shall adhere to current design parameters of the CBC (including, but not limited to, CBC Chapters 16 and 18) in order to reduce the effects of seismic shaking.

GEO-7 During site grading activities associated with Proposed Project build-out, CSU/SDSU, or its designee, shall require the appropriate control of surface waters and soil containment on disturbed ground surfaces in conformance with applicable regulatory guidelines, including CBC and IBC requirements, in order to reduce construction-related mudflows.

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1 During construction and operational activities associated with the Proposed Project, CSU/SDSU, or its designee, (e.g., the general contractor, the SDSU Department of Environmental Health and Safety, etc.) shall require that all contractors operate in compliance with applicable hazardous materials and waste regulations, including regulations regarding the handling, storage and disposal of hazardous materials and wastes, in order to prevent accidents and ensure hazardous materials are not released into the environment and are utilized in compliance with applicable storage and containment regulations.

Hazardous materials shall not be disposed of or released onto the ground, the underlying groundwater, or any surface water. Totally enclosed containment containers shall be provided for all hazardous waste-related trash. All potentially hazardous waste shall be removed to a waste facility permitted to treat, store, or dispose of such materials. Hazardous materials spill kits shall be maintained on site for small spills.

Prior to commencement of any project construction, including grading, excavation, or trenching activities, CSU/SDSU, or its designee, shall prepare a

hazardous substance management, handling, storage, disposal, and emergency response plan specific to construction activities in compliance with all applicable federal, state and local regulations.

HAZ-2 Prior to commencement of project construction, including grading, excavation, or trenching activities, CSU/SDSU, or its designee, shall prepare a project-specific construction health and safety plan in compliance with all applicable federal, state and local regulations, to guide construction crews who may encounter previously unknown soil or groundwater contaminants. The plan shall include information about potential contaminants, protocols for reporting suspected contaminants, authority to stop work, and protocols, for conducting further study upon discovery.

HAZ-3 Prior to the commencement of project construction, including grading, excavation, or trenching activities, in the parking lot areas and beneath the Engineering Labs Building, CSU/SDSU, or its designee, shall direct the project construction contractor to implement the following practices:

1. All construction workers who would be involved with grading, excavation, or trenching work shall be trained to recognize visual and olfactory signs of soil and groundwater contamination prior to the start of such soil work activities.
2. All construction workers shall observe the exposed soil and groundwater for visual evidence of contamination throughout soil work activities.
3. If soil contamination indicators are observed during construction, the contractor shall halt work in the immediate vicinity of the discovery and consult a qualified CSU/SDSU environmental health specialist, in conjunction with the SDSU Department of Environmental Health and Safety, who has knowledge of hazardous materials, to ensure the material is properly characterized and appropriate measures are taken to protect human health and the environment, including, if applicable, preparation of a soil remediation or disposal work plan in accordance with San Diego County Department of Environmental Health guidelines for soil remediation activity.
4. In the event that contaminated groundwater is encountered during project construction activities, the construction contractor shall document the exact location of the contamination and immediately notify the SDSU Department of Environmental Health and Safety. SDSU shall then comply with all applicable federal, state, and local health and safety requirements for testing, handling, and disposing of contaminated groundwater.

HAZ-4 Prior to building demolition, CSU/SDSU, or its designee, shall require that an asbestos survey and lead-based paint survey be performed by licensed lead and asbestos contractors. The asbestos and lead-based paint surveys shall be used to define removal quantities, estimate abatement costs, and otherwise

refine the scope of work for the removal of asbestos and lead paint, in full compliance with all applicable laws during project demolition.

HAZ-5 Prior to the commencement of excavation activities at or in the vicinity of the Engineering Labs Building, CSU/SDSU, or its designee, shall require that soil samples, in an amount sufficient to adequately determine the extent of potential contamination, be collected and analyzed by a licensed analytical laboratory to determine whether soil contamination exists on the site. In the event soil contamination levels are detected above regulatory screening levels (e.g., California Human Health Screening Levels and/or Regional Screening Levels), CSU/SDSU, or its designee, shall direct that the following steps be taken:

1. A soil remediation or disposal work plan shall be prepared and approved by a qualified CSU/SDSU environmental health specialist, in conjunction with the SDSU Department of Environmental Health and Safety. The plan shall be prepared in accordance with San Diego County Department of Environmental Health guidelines for soil remediation activity.
2. All contaminated soils shall be removed and fully remediated or properly disposed of in accordance with the remediation or disposal work plan, and all applicable federal, state, and local regulations, including those of the San Diego County Department of Environmental Health.
3. The soil contamination test results shall be used to determine an appropriate construction worker health and safety plan. All contaminated soils shall be removed by personnel who have been trained through appropriate Occupational Safety and Health Administration (OSHA) programs.

HAZ-6 Prior to occupation of the new Engineering and Interdisciplinary Sciences Building, CSU/SDSU shall take those steps necessary to revise the campus Emergency Operations Plan to incorporate the Proposed Project components. The plan shall also be amended to adequately plan for evacuation of these new campus facilities.

HYDROLOGY AND WATER QUALITY

HYD-1 **Construction Stormwater Pollution Prevention Plan**. Prior to commencement of construction activities associated with the Proposed Project, CSU/SDSU, or its designee, shall develop a project-specific stormwater pollution prevention plan (SWPPP) consistent with the Construction General Permit (SWRCB Order No. 2009-0009-DWQ). The SWPPP shall be prepared by a qualified individual and must contain site maps that show the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list best management practices (BMPs) that

will be used to protect stormwater quality throughout the construction phase. The SWPPP must identify the placement of each BMP in accordance with the *San Diego Low Impact Development Design Manual*. Additionally, the SWPPP must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to monitor the effectiveness of the selected BMPs.

The following are examples of effective BMPs to be included in the SWPPP as applicable:

- Silt fences installed along limits of work and/or the project construction site
- Stockpile containment (e.g., visqueen, fiber rolls, gravel bags)
- Exposed soil stabilization structures (e.g., fiber matrix on slopes and construction access stabilization mechanisms)
- Street sweeping
- Tire washes for equipment
- Runoff control devices (e.g., drainage swales, gravel bag barriers/ chevrons, velocity check dams) shall be used during construction phases conducted during the rainy season.
- Storm drain inlet protection
- Wind erosion (dust) controls
- Tracking controls
- Prevention of fluid leaks (inspections and drip pans) from vehicles
- Dewatering operations best practices (e.g., discharge to landscaped, vegetated, or soil area or into an infiltration basin, so long as the water only contains sediment (no other pollutants); use of vacuum truck to haul the water to an authorized discharge location; or implementation of various methods of treatment on site prior to discharging the water)
- Materials pollution management
- Proper waste management
- Regular inspections and maintenance of BMPs

The SWPPP must also incorporate the hazards avoidance/minimization mitigation measures outlined in mitigation measures HAZ-1 through HAZ-5, outlined in the Hazards Technical Report (Dudek 2015; Appendix H to this Initial Study). If a cleanup action were required in the vicinity of the Engineering Lab, any discharge of accumulated groundwater or stormwater shall be made in coordination with the San Diego Regional Water Quality Control Board (RWQCB) and in accordance with applicable waste discharge

requirements. CSU/SDSU shall implement all guidelines contained in the SWPPP throughout construction of the Proposed Project.

HYD-2 **Implementation and Maintenance of Low-Impact Design**. During design of the Proposed Project, SDSU shall incorporate stormwater pollution control BMPs to reduce pollutants discharged from the project site to the maximum extent practicable. Post-construction pollution prevention shall be accomplished by implementing low-impact design, source control, and treatment control BMPs. The low-impact design features shall be identified and designed consistent with the requirements of the Phase II Small MS4 General Permit (SWRCB Order No. 2013-0001-DWQ). Examples of effective permanent project design BMPs to be incorporated into the project design as applicable include:

- A hydrodynamic separator shall be used.
- Loading dock facilities, if any, shall drain directly to the sanitary sewer.
- Interior parking garage floor drains shall be plumbed to the sanitary sewer.
- Drainage from rooftops, impervious parking lots, sidewalks, and walkways shall be directed into adjacent landscaping where possible.
- Exterior trash and/or recycling areas shall be covered, graded, and paved to preclude run-on and runoff from the area.
- Green roof or flow-through planters with sub-surface drains shall be used.

SDSU shall develop a maintenance plan to ensure that permanent design BMPs will be maintained throughout project operation. Examples of maintenance include removal of accumulated sediment and trash, thinning of vegetative brush in biotreatment swales, and maintaining the appearance and general status of the vegetation. The operation and maintenance plan shall include:

- Responsibilities for managing all stormwater BMPs
- Employee training programs and duties to ensure compliance
- Operation/routine service schedule (annual inspection of facilities, at minimum)
- Maintenance frequency
- Specific maintenance activities (including maintenance of stormwater conveyance stamps)
- Copies of resource agency permits, as applicable

NOISE

NOI-1 During construction of the Proposed Project, SDSU, or its designee, shall, to the extent feasible, comply with the City of San Diego's noise ordinance criteria relative to construction activities. Therefore, construction-related activities shall be conducted primarily between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. In order to minimize construction-related noise and ensure that the 12-hour average sound level does not exceed 75 dB at any academic building, SDSU, or its designee, shall:

- Locate noisy equipment as far as possible from the Project site boundaries and nearby occupants of academic buildings.
- Install stationary equipment in enclosures.
- Equip all construction equipment, fixed or mobile, with properly operating and maintained muffler exhaust systems.
- Locate stockpile and vehicle staging areas as far as practical from nearby occupants of academic buildings.
- Use quieter (i.e., typically smaller) pieces of equipment while working immediately adjacent to the nearby occupants of academic buildings.

TRANSPORTATION/TRAFFIC

TR-1 Upon the commencement of construction activities associated with development of the Proposed Project, CSU/SDSU shall establish an alternative transportation program to reduce the number of construction trade vehicles commuting to the Project site, e.g., a shuttle service operating between a Park n' Ride facility located along Interstate-8 and the SDSU project construction site to provide project construction workers with transportation between the off-campus parking facility and the worksite. CSU/SDSU shall direct that construction worker vehicles be parked at the designated parking facility. The shuttle shall operate during the A.M. and P.M. peak hours in such manner and frequency to accommodate up to a peak number of 155 construction workers.

Proposed Finding: The Board finds that, on the basis of the whole record before it, there is no substantial evidence showing that the Proposed Project may have a significant effect on the environment, with or without incorporation of one or more of the mitigation measures recommended herein. This Initial Study and Mitigated Negative Declaration reflects the Board's independent judgment and analysis.

INITIAL STUDY
ENVIRONMENTAL CHECKLIST

1. PROJECT TITLE

California State University, San Diego State University ("SDSU"), Engineering and Interdisciplinary Sciences Building Project

2. LEAD AGENCY / PROJECT SPONSOR NAME AND ADDRESS

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

3. CONTACT PERSON AND PHONE NUMBER

Laura V. Shinn
Director, Facilities Planning, Design and Construction
San Diego State University
5500 Campanile Drive
San Diego, California 92182-1624
(619) 594-6619

4. PROJECT LOCATION

SDSU Main Campus, south of Canyon Crest Drive, west of College Avenue, in the College Area community, San Diego, California

5. GENERAL PLAN/COMMUNITY PLAN DESIGNATION/ZONING

City of San Diego General Plan Land Use: Institutional & Public and Semi-Public Facilities
City of San Diego College Area Community Plan Land Use: "University Campus"
City of San Diego Zoning: RS-1-7, Urbanized Communities: Residential - Single Unit - 7

7. PROJECT DESCRIPTION

Overview

SDSU proposes to construct a new, five-story Engineering and Interdisciplinary Sciences classroom and laboratory building (four levels above grade and one subterranean level).

The new building would provide SDSU with state-of-the-art research facilities to attract significant research projects and funding. The need for the building stems from outdated facilities and growth in enrollment in the engineering and science disciplines. SDSU is also interested in growing its research program, particularly through interdisciplinary projects that bring the sciences and engineering together.

The new building would be located to the south of the existing Engineering Building, and would take the place of the existing Engineering Labs and Industrial Technology buildings (the existing EL&IT Buildings) on the main campus of SDSU (see Figure 1, Regional Map; Figure 2, Vicinity Map; and Figure 3, Site Map). Development of the new building would include the following components, which, collectively, are referred to as the "Proposed Project":

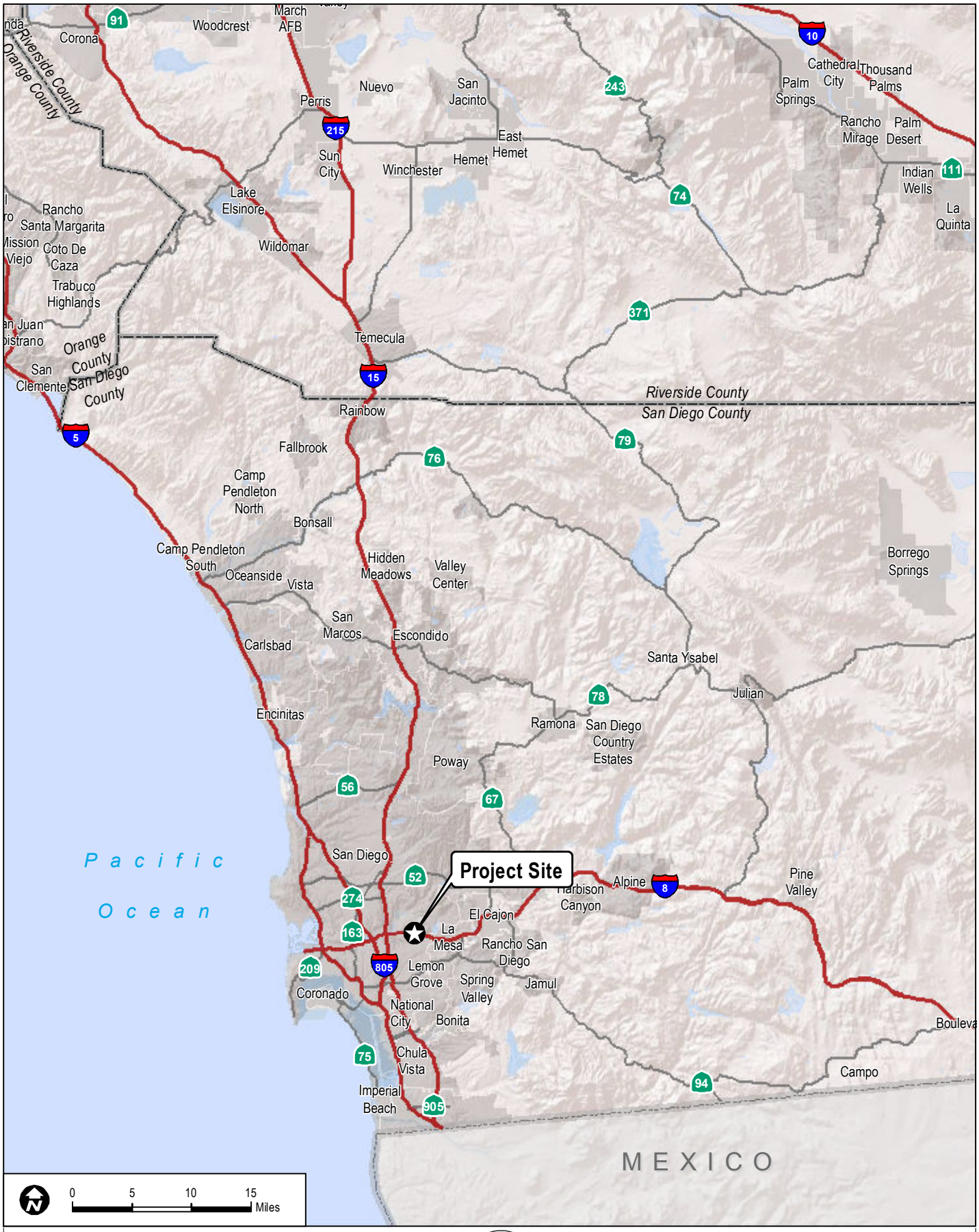
- Demolition of the existing EL&IT Buildings. (During construction, the occupants of the existing EL&IT Buildings would be temporarily relocated to various buildings on campus.)
- Construction of the new engineering building and new landscaped quadrangle for the science, technology, engineering, and mathematics (STEM) disciplines.
- Occupancy and operation of the new building.
- Modification of the existing Engineering Building, which is located to the north of the proposed new building site, to connect the existing Engineering Building to the new building on one or more floors (see Figure 3, Site Map).
- Demolition of the Facilities Services Building, referred to throughout this study as the "Quonset Hut" (see Figure 3, Site Map).
- Demolition of the CAM Lab Buildings (see Figure 3, Site Map).

The target completion date for occupancy and operational use of the new building is January (Spring Semester) 2018.

Proposed Project Details

The Proposed Project would consist of demolition of several existing buildings, construction of a new building, and modification of an existing building (see Figure 3, Site Map and Figure 4, Proposed Project Site Design). The increase in number and size of spaces in the new engineering complex would result in teaching labs that can accommodate a capacity increase of 200 full-time equivalent (FTE) students. While the increased capacity may be filled by the transfer of students from other disciplines where growth has and would remain flat or slightly decrease, for purposes of environmental analysis, it is assumed that the 200 FTE would represent an increase in enrollment of approximately 224 students. The new engineering complex also would accommodate up to 80 additional research staff members over current levels.

The details of each project component are provided below.



SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 1
Regional Map

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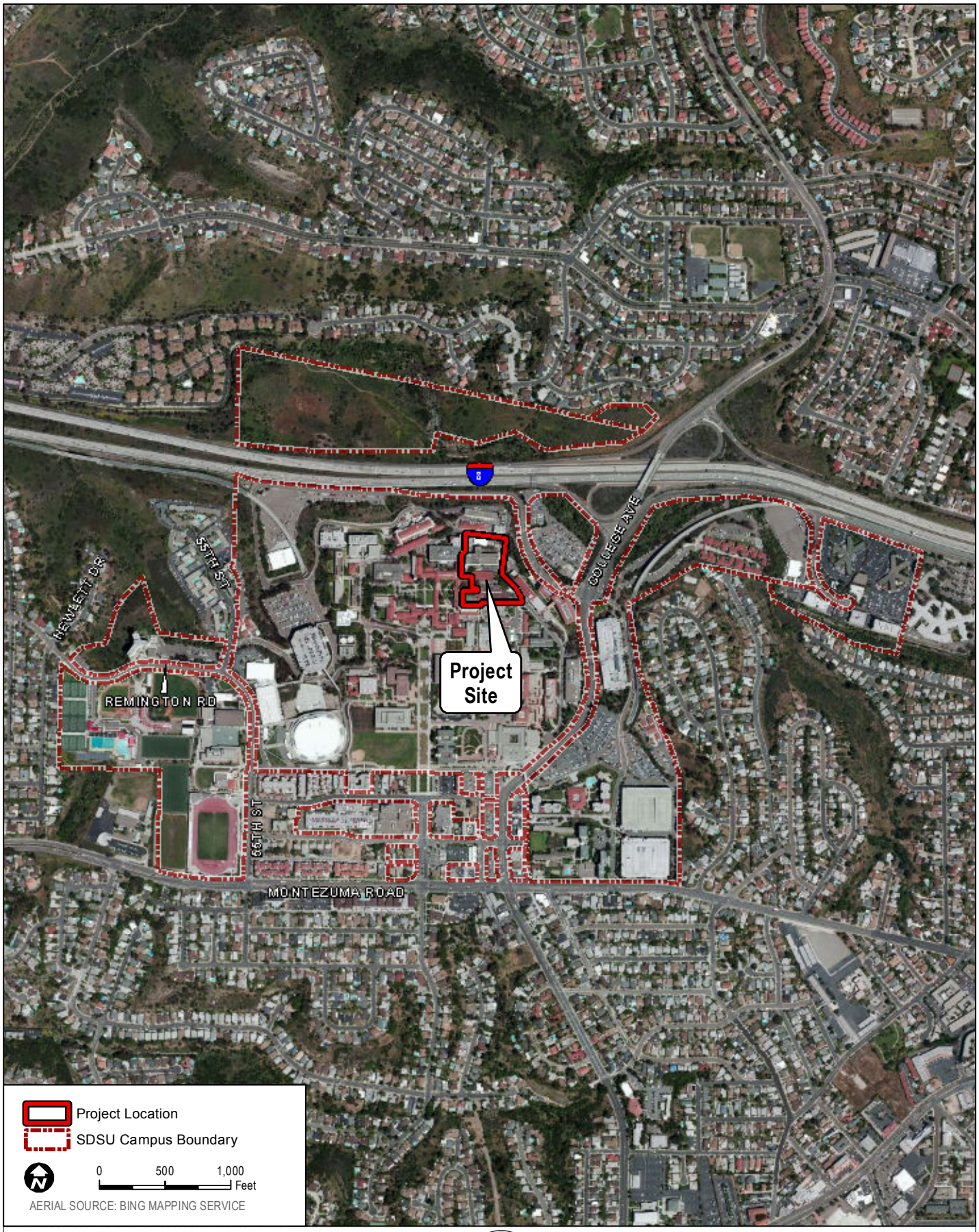

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 2
Vicinity Map

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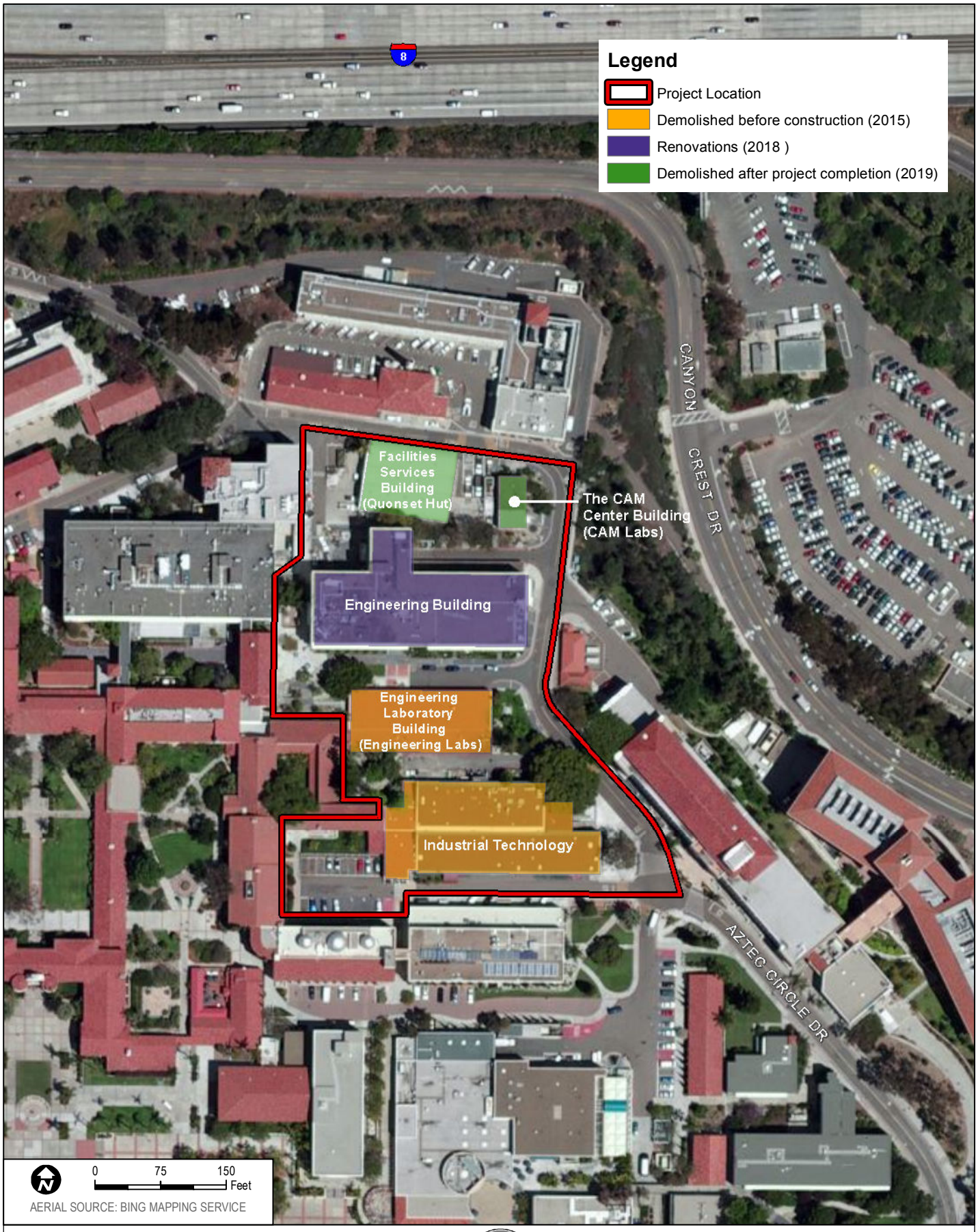

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SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 3
Project Area Map

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 4
Project Site Design

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New Engineering Building. The new Engineering and Interdisciplinary Sciences Building would be located to the south of the existing Engineering Building, at the site of the existing EL&IT Buildings. This location was selected for several reasons. First, the location provides excellent visibility from areas of the campus. Second, the location provides connectivity to the historic core of the campus (the campus core is listed on the National Register of Historic Places). Third, the location is immediately adjacent to the other STEM disciplines, which include physics, astronomy, physical and life sciences, geography, mathematics, computer science, biosciences, chemistry, and engineering.

The adjacency to the other STEM disciplines is purposeful. The Proposed Project would include a new quadrangle, the function of which would be to provide a sense of place, identity, and interaction for the STEM disciplines, and to link the new building to the SDSU original campus core. Together, the new building and new quadrangle would be planned to encourage interdisciplinary research, teaching, and interaction among the STEM disciplines. It would also provide flexible research and teaching space for the rapidly changing and increasingly competitive disciplines of engineering and the sciences. The construction of the new quadrangle is integral to the construction of the building itself and will happen simultaneously.

The new engineering building would be approximately 95,000 gross square feet ("GSF") in size, four levels above grade and one subterranean level (60 feet total height above grade), and externally reflect the architectural heritage of the campus. The new building would be designed in the mission style of architecture that is present within the core of campus. The new building would be affixed with exterior security lighting typical of other instructional buildings in the campus core.

The new engineering building would represent an increase of approximately 38,000 GSF over the existing EL&IT, CAM Lab, and Quonset Hut Buildings. The new engineering building would consist of 60,000 assignable square feet ("ASF"), which is approximately 20,000 more ASF than the existing EL&IT, CAM Lab, and Quonset Hut Buildings. The new building would consist, internally, of increased number and sizes of teaching labs and research facilities (including office and meeting spaces; bench spaces; and preparation, service, and technology spaces); a phage center; an imaging center with MRI capability; and an entrepreneurial center with laboratories and offices. The new engineering building would not contain any space for equipment maintenance, administrative offices, or lecture halls.

The new Engineering and Interdisciplinary Sciences Building would be designed to meet Leadership in Energy and Environmental Design (LEED) Silver certification or equivalent.

Table 1 illustrates the differences in additional GSF and ASF between the existing EL&IT Buildings, Quonset Hut, and CAM Lab and the new engineering building.

Table 1

Existing EL&IT, Quonset Hut, and CAM Lab Buildings and New Engineering Building Space Comparison (gross and assignable square feet)

Space	Existing Buildings	New Engineering Building	Net Gain
Total Assignable	39,737	60,000	20,263
Total Gross	56,832	95,000	38,168

Existing Engineering Building Modifications. The Proposed Project would include modifications to the existing Engineering Building, located to the north of the site of the proposed new Engineering and Interdisciplinary Sciences Building, to connect the existing building to the new building on one or more floors. Additionally, modest interior renovations, primarily paint and some replacement of finishes to selected areas, would be made to the existing Engineering Building.

Demolition of Existing EL&IT Buildings. The existing EL&IT Buildings were constructed in 1956 and 1953, respectively, and consist of a total of 47,000 GSF of space. The 47,000 GSF in the existing EL&IT Buildings consists of 29,268 ASF for teaching labs; research facilities, including office collaboration and meeting rooms, bench space, and preparation, service, and technology; equipment maintenance; administrative offices; lecture halls; and an entrepreneurial center with laboratories and offices. The existing EL&IT Buildings do not contain a phage center or imaging center.

Demolition of Existing CAM Lab Building. Once the new Engineering and Interdisciplinary Sciences Building is constructed, the CAM Lab Building will be demolished. The existing CAM Lab Building was constructed in 1962 and consists of 1,732 GSF of building space. This building has housed a variety of engineering student project labs and organization workspace since its construction. Following demolition, the site would be used for parking and open space.

Demolition of Existing Quonset Hut. Once the new Engineering and Interdisciplinary Sciences Building is constructed, the existing Quonset Hut located immediately north of the existing EL&IT Buildings would be demolished. This building was constructed in 1947, consists of 8,100 GSF, and has always housed materials for grounds and facilities maintenance for this portion of campus. Following demolition, the site would be used for parking and open space.

Operational Details

Utilities. Construction and operation of the Proposed Project would entail improvements to all wet and dry utilities within the immediate area. Improvements and modifications associated with each type of utility are described below.

Energy. Based on estimated capacity and accessory uses, Table 2 provides a summary of the proposed electrical energy needed to support each building.

Table 2

Estimated Electrical Demand (kilowatt-hours per year)

	Existing Electrical Demand	Proposed Electrical Demand	Net Change
EL&IT Buildings (existing)	1,300,000	0	(1,300,000)
Engineering Building (existing)	850,000	850,000	(0)
Engineering and Interdisciplinary Sciences Building (proposed)	0	1,900,000	1,900,000
CAM Labs (existing)	48,500	0	(48,500)
Quonset Hut (existing)	162,000	0	(162,000)
Total Net Change			**389,500**

Source: P2S 2015

The existing SDSU electrical generation system would be able to support the electrical demand of the proposed structures. Therefore, no new generation facility would be required. The proposed building would be served from an existing 15-kilovolt (kV) Substation "A" located on the east side of the building. A 15 kV vacuum breaker would be provided in an existing spare cubicle at Substation "A" to serve the proposed building. Four new 5-inch underground duct banks with two sets of 15 kV cables would be provided from Substation "A" / the existing manhole located south east of existing Substation "A" to serve a new 15 kV four-way selector switch located on the north side of the proposed building. The 15 kV selector switch in turn would serve a 15 kV, 1500-kilovolt-ampere (kVA), 277/480 V substation housed in the proposed building to meet the power demands of the building. As indicated in Table 2, a net 389,500 kWh per year of electrical energy would be necessary to support the operation of the expanded facility.

Emergency power to the Proposed Project would be provided by a centralized inverter system located in the electrical room of the building. Standby or emergency power would be provided by a natural gas–fired generator sized to meet the standby loads of the facility. The generator would be located in an outdoor enclosure adjacent to the proposed building.

The Proposed Project would require the use of natural gas to serve domestic hot water needs and any laboratory needs. Based on estimated capacity and accessory uses, Table 3 provides a summary of the proposed natural gas demand of each of the subject buildings.

Table 3

Estimated Natural Gas Use (peak cubic feet per hour)

	Existing Natural Gas Use	Proposed Natural Gas Use	Net Change
EL&IT Buildings (existing)	2,325	0	(2,325)
Engineering Building (existing)	870	870	0
Engineering and Interdisciplinary Sciences Building (proposed)	0	2,325	2,325
CAM Labs (existing)	0	0	0
Quonset Hut (existing)	0	0	0
Total Net Change			**0**

Source: P2S 2015

The Proposed Project would not result in a net change in the natural gas usage from the existing conditions; therefore, the existing 4-inch natural gas line located along Aztec Circle Drive would have adequate capacity to convey the natural gas to the Proposed Project. Thus, the Proposed Project would be served by the existing campus medium-pressure gas loop. A new gas connection system would be provided for the project including a sub-gas meter assembly, a gas pressure regulator, and an automatic gas seismic shutoff valve. The sub-gas meter would give the Campus Facilities Department the ability to monitor the building's gas consumption separate from the rest of the campus. Gas supply into the building, downstream of the regulator assembly, would be distributed at low pressure to all natural gas appliances and any other equipment with gas requirements inside the laboratory classrooms (Cannon Design 2014).

The proposed building would be supported by a domestic hot water system. Domestic hot water would be generated using high-efficiency, gas-fired, tank-type water heaters that would provide for all domestic hot water needs to the Proposed Project. This system would be located inside a common shared room with the building's heating, ventilation, and air conditioning equipment (Cannon Design 2014).

Water. Based on estimated capacity, accessory uses, and surrounding landscaping, water use projected for each of the subject buildings is summarized in Table 4. The water service line and proposed backflow prevention system for the building would provide for all project-related fire sprinkler service and domestic cold water demands (Cannon Design 2014).

Table 4

Estimated Water Use (gallons per day)

	Existing Water Use	Proposed Water Use	Net Change
EL&IT Buildings (existing)	5,952[1]	0	(5,952)
Engineering Building (existing)	4,150[1]	4,150	0
Engineering and Interdisciplinary Sciences Building (proposed)	0	4,800[1]	4,800
CAM Labs (existing)	341[1]	0	(341)
Quonset Hut (existing)	1,528[1]	0	(1,528)
Total Net Change			**(3,021)**

Source: Jacobs Carter Burgess 2008a

Domestic and fire water are currently supplied to the existing site via a combined 6-inch private looped main in the campus loop road, which runs along the south side of the existing building to a point of connection at the southwest corner. Domestic cold water would be supplied from the existing on-site system with minor modifications (Cannon Design 2014). The existing facilities maintain a current water demand of approximately 11,971 gallons per day (gpd). The Proposed Project, including modifications to the existing Engineering Building, would require approximately 8,950 gpd, resulting in a net decrease in water demand of 3,021 gpd following project implementation.

Sanitary Sewer. A complete sanitary sewer, waste, and vent system would serve the restrooms, general classrooms, mechanical equipment, and floor drains for the Proposed Project. The system would be run by gravity wherever feasible. Building drains or floor sinks that cannot be discharged by gravity flow, if any, would be collected into a duplex sewage ejector system from which the effluent would be lifted and discharged into the gravity drainage system (Cannon Design 2014). Based on estimated capacity and accessory uses, wastewater generation for each of the subject buildings is summarized in Table 5.

Table 5

Estimated Wastewater Generation (gallons per day)

	Existing Wastewater Generation	Proposed Wastewater Generation	Net Change
EL&IT Buildings (existing)	5,356[1]	0	(5,356)
Engineering Building (existing)	3,735[1]	3,735	0
Engineering and Interdisciplinary Sciences Building (proposed)	0	4,320[1]	4,320
CAM Labs (existing)	307[1]	0	(307)

Quonset Hut (existing)	1,375[1]	0	(1,375)
Total Net Change			**(2,718)**

Source: Jacobs Carter Burgess 2008b

A 6-inch sewer line located east of the project site in the campus loop road currently serves the existing Engineering Building. This sewer line flows north out of the project site. The existing facilities generate approximately 10,773 gpd or 0.017 cubic feet per second (cfs) of wastewater, which is conveyed by the existing sewer line. The Proposed Project would generate approximately 4,320 gpd or 0.007 cfs, for a total proposed flow of 8,055 gpd or 0.015 cfs including the existing Engineering Building, which would be modified. As shown in Table 5, the Proposed Project would result in an overall net decrease in wastewater flow of 2,718 gpd. Therefore no improvements to the existing sewer infrastructure system are necessary to accommodate the Proposed Project.

Stormwater. The existing Engineering Building drains in a southwest to northwest direction, which is funneled to an underground pipe, and exits the site in an 8-inch storm drain. This storm drain flows east from the northeast corner of the site. The site is located at the end of the drainage system, with no off-site flows entering the system at the site's location. Stormwater runoff from this area of campus runs off into a gravity collection system, which ultimately drains to a City of San Diego facility downstream.

On-site stormwater collection and conveyance facilities would include Low Impact Design (LID) systems to provide stormwater treatment and would consist of bioretention planters and/or modular wetlands. The Proposed Project would not increase total impervious surface area compared to existing site conditions (Cannon Design 2014).

Cooling System Chilled Water. Based on anticipated occupancy building square footage and accessory uses, the diversified chilled water needs of the Proposed Project and existing buildings are summarized in Table 6.

Table 6

Estimated Chilled Water Demand (million gallons per day)

	Existing Chilled Water Demand	Proposed Chilled Water Demand	Net Change
EL&IT Buildings (existing)	65	0	(65)
Engineering Building (existing)	135	135	0
Engineering and Interdisciplinary Sciences Building (proposed)	0	215	215
CAM Labs (existing)	0	0	0
Quonset Hut (existing)	0	0	0
Total Net Change			**150**

Source: P2S 2015

Two chilled water lines serve the project site on the west and east sides of the site. On the west side, an 8-inch chilled water main connects to the Life Sciences facility with a 6-inch lateral feeding the existing Engineering Lab Building. On the east side, a 6-inch chilled water line taps off of a 16-inch main to connect to the existing Industrial Technology Building southeast of the project site. An 8-inch chilled water line also serves the existing Physics Building on the north side of the site, which would remain in place (Cannon Design 2014).

The existing SDSU Central Plant has adequate capacity to supply the entirety of the 150 tons of peak chilled water capacity necessary for the Proposed Project.

Heating System—Steam. Based on anticipated occupancy, building square footage, and accessory uses, the diversified steam needs of the Proposed Project are summarized in Table 7. The Proposed Project would require approximately 2,375 thousand British thermal units (MBH) of steam capacity.

Table 7

Estimated Steam Diversified Peak Demand (MBH of Heating)

	Existing Heating Demand	Proposed Heating Demand	Net Change
EL&IT Buildings (existing)	950	0	(950)
Engineering Building (existing)	1,500	1,500	0
Engineering and Interdisciplinary Sciences Building (proposed)	0	2,375	2,375
CAM Labs (existing)	0	0	0
Quonset Hut (existing)	0	0	0
Total Net Change			**1,425**

Source: P2S 2015

The existing EL&IT Buildings are currently served steam from west of the project site under the campus core buildings. Both buildings tap off of a 5-inch steam and 2.5-inch condensate branch that also feeds the Physics, Physics Astronomy, and Physical Sciences Buildings. There is also an 8-inch steam and 6-inch condensate line to the east of the

project site along Aztec Circle Drive. A new manhole would be installed to connect to these lines.

The existing SDSU Central Plant has adequate capacity to supply the full 1,425 MBH of peak steam capacity necessary for the Proposed Project.

Solid Waste. Based on anticipated occupancy and accessory uses, solid waste generation of the Proposed Project is summarized in Table 8.

Table 8

Estimated Solid Waste Generation (tons per year)

	Existing Solid Waste Generation	Proposed Solid Waste Generation	Net Change
EL&IT Buildings (existing)	61	0	(61)
Engineering Building (existing)	120	120	0
Engineering and Interdisciplinary Sciences Building (proposed)	0	124	124
CAM Labs (existing)	2	0	(2)
Quonset Hut (existing)	11	0	(11)
Total Net Change			**50**

Note: Solid waste estimates were derived from the CalEEMod Version 2013.2.2 air emissions model, which assumes a solid waste generation factor of 1.3 tons/year/1,000 sf for university buildings.

As shown in Table 8, the Proposed Project would result in a net increase of approximately 50 tons per year of solid waste.

Construction

The first element of construction would entail demolition of the existing Engineering Labs and Industrial Technology buildings. Based on the preliminary project schedule, this element of construction would occur from June 2015 to August 2015. This demolition activity would require a crew of 15 workers and use of concrete/industrial saws, track hoe with breaker, dozers and loaders.

The second element of the project would involve construction of the new engineering building. It is anticipated that this construction effort would start in November 2015 and last approximately 26 months.

The first phase of construction of the new engineering building would entail site preparation and excavation, which would take 3 months and necessitate a crew of 15 workers. Equipment required during this phase would include graders, dozers, a drill rig and backhoes. This phase would require approximately 7,000 cubic yards of export over a 3-week period resulting in approximately 700 export truck loads. Pile driving (for building foundation) and/or blasting of rock is not anticipated as part of project

construction. The second phase would entail foundation establishment (six weeks), underground utilities at building footprint and slab on grade (2 months), and structural framing (5 months). The first and second phases of building construction phase would take approximately 12 months total, necessitate a peak construction crew of 100 workers and involve the use of a crane, forklifts, a generator set, loaders, backhoe, concrete pumps and welders.

The third phase of construction would entail constructing the building envelope and mechanical, electrical and plumbing rough-in. This phase would be approximately eight months and would require a peak crew of 150 workers. Equipment employed during this phase would include the use of forklifts, scissors lifts, boom lifts, a mixer and pump for plaster, and a bobcat. The next phase would involve interior finishes, which would last about 6 months, require a crew of 140 workers and forklifts. Simultaneously, the final phase of construction would include exterior landscaping treatment and would take approximately four months and a crew of approximately 15 workers. This phase would involve the use of forklift, backhoe, bobcat, pump trailer.

The third element of construction would involve renovations to the existing Engineering Building to tie it into the new building. This effort is anticipated to occur between January 2018 and June 2018, and would necessitate a crew of 10 workers utilizing a crane, forklifts, a generator set, loaders, and welders.

The fourth element of construction would involve the demolition of the existing CAM Laboratories and Quonset Hut. Based on the preliminary project schedule, this element of construction would occur from January 2018 to March 2018. This demolition activity would require a crew of seven workers and use of concrete/industrial saws, dozers and loaders.

8. SURROUNDING LAND USES AND SETTING

The Proposed Project site is located on the SDSU main campus, approximately 8 miles east of downtown San Diego. The SDSU campus is located within the urban College Area Community Planning Area of the City of San Diego. The new Engineering and Interdisciplinary Sciences Building would be located in the northern portion of the campus, to the south of the existing Engineering Building. Other buildings near the proposed site include the five-story Chemical Sciences Laboratory, the five-story Geology, Mathematics, and Computer Science Building, the five-story Shirley Bioscience Center; and the four-story Life Sciences building.

9. PROJECT APPROVALS; OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

Approval of the Proposed Project by the Board of Trustees of California State University, or its delegated authority, would include approval of a master plan revision or minor amendment, approval of related schematic plans, and other related actions.

Development of the Proposed Project also may require permits and/or approvals issued by public agencies other than the CSU Board of Trustees. The following is a list of other

permits or approvals that may be required by state, regional, or local agencies in connection with the Proposed Project:

(1) Division of the State Architect (accessibility compliance);

(2) State Fire Marshall (approval of facility fire and life safety review);

(3) San Diego Air Pollution Control District (authority to construct and/or permits to operate);

(4) Water, wastewater, and sanitation special district approval, if any; and

(5) Other agencies and related approvals as may be necessary.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project. As indicated by the checklist on the following pages, for each factor in which a potentially significant impact is identified, revisions to the Project in the form of mitigation measures are identified that would reduce the impact to less than significant.

- ☒ Aesthetics
- ☐ Agricultural and Forestry 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/Traffic
- ☒ Utilities/Service System
- ☐ Mandatory Findings of Significance

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ENVIRONMENTAL DETERMINATION

On the basis of this evaluation:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ 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.

☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ 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.

☐ 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.

By: _____

Laura V. Shinn
Director, Facilities Planning, Design and Construction
California State University, San Diego State University

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ENVIRONMENTAL ISSUES ASSESSMENT

In accordance with CEQA, this Initial Study has been prepared to analyze the Proposed Project to determine whether any potential significant impacts upon the environment would result from implementation of the project. In accordance with section 15063 of the CEQA Guidelines, this Initial Study is a preliminary analysis prepared by the lead agency, California State University, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the Proposed Project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with implementation of the Proposed Project.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (*e.g.*, the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (*e.g.*, the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. (CEQA Guidelines Section 15063(c)(3)(D).) In this case, a brief discussion should identify the following:

(a) *Earlier Analysis Used*. Identify and state where they are available for review.

(b) *Impacts Adequately Addressed*. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

(c) *Mitigation Measures*. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (i.e., general plans, zoning ordinances.) Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   (a) the significance criteria or threshold, if any, used to evaluate each question; and

   (b) the mitigation measure identified, if any, to reduce the impact to a level less than significant.

AESTHETICS				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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) Substantially degrade the existing visual character or quality of the site and its surroundings?			✔	
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		✔		

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Visual Quality Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix A to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project have a substantial adverse effect on a scenic vista?

There are no designated scenic vistas in the immediate project area and the SDSU campus is located within an existing developed community that is not known or noted for scenic vistas. (See Figures 5, and 5a through 5d.) Therefore, the Proposed Project would not have a substantial adverse effect on a scenic vista.

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

The Proposed Project site is not within the viewshed of a designated state scenic highway. Furthermore, there are no scenic resource trees, rock outcroppings, or historic buildings within a state scenic highway that would be impacted due to the project implementation. The project

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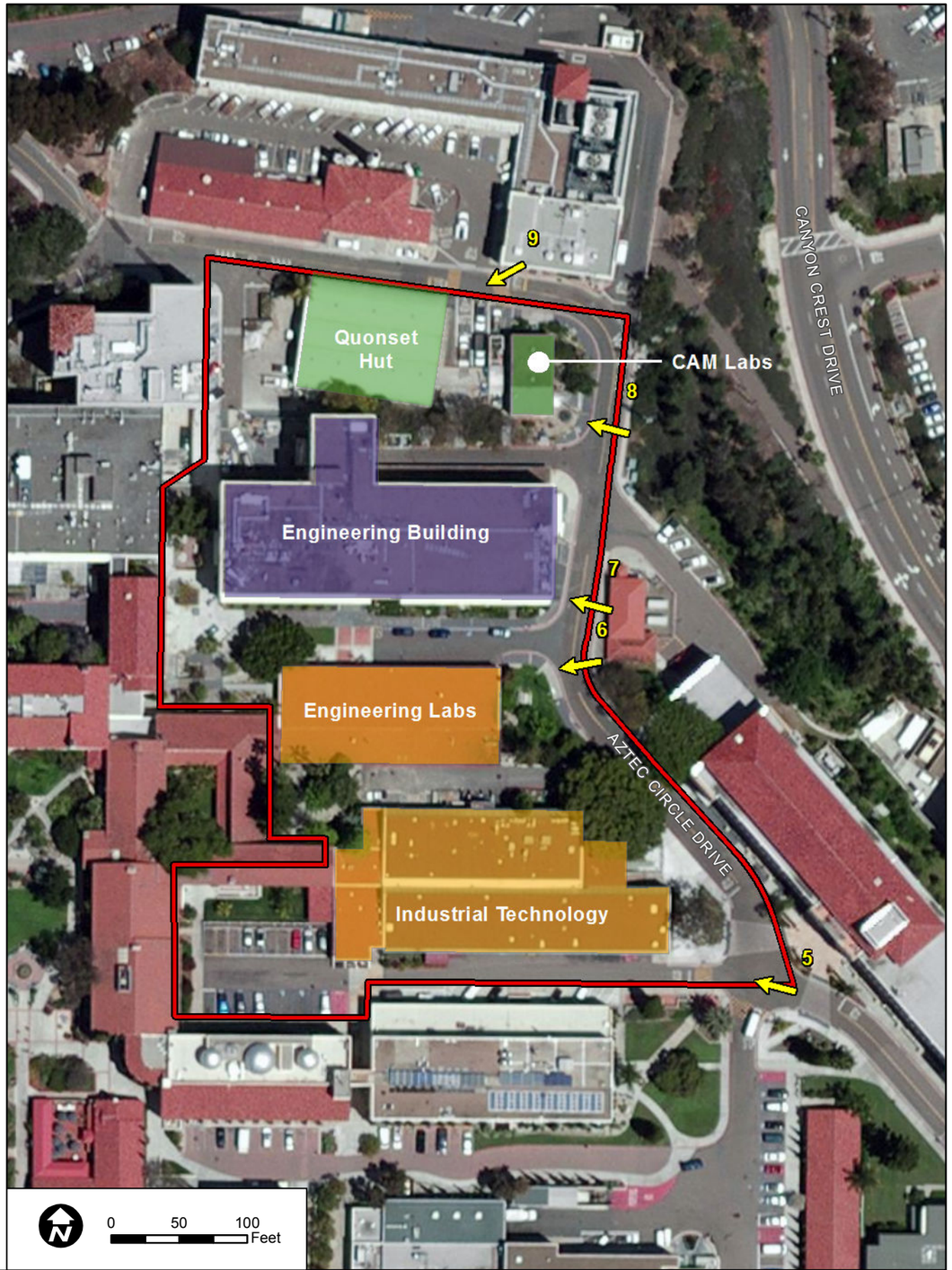

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SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 5
Viewpoint Locations

View 1 – View of Project Site for motorists traveling southbound on College Avenue

View 2: View of the Project Site for motorists from the southern terminus of Mill Peak Road

Source: DUDEK 2015

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 5a
Existing Site Views

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View 3 – View of Project Site for motorists and pedestrians travelling eastbound on Del Cerro Boulevard

View 4 – View of the Project Site for motorists and pedestrians travelling south on Madra Avenue

Source: DUDEK 2015

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 5b
Existing Site Views

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View 5 – View of Industrial Technology Building From Aztec Circle Drive

View 6 – View of Engineering Labs From Aztec Circle Drive

Source: DUDEK 2015

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 5c
Existing Site Views

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View 7 – View of Engineering Building from Aztec Circle Drive

View 8 – View of CAM Labs from Aztec Circle Drive

View 9 – View of Facilities Services Quonset Huts from Aztec Circle Drive

Source: DUDEK 2015

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 5d
Existing Site Views

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entails the demolition of existing campus buildings and construction of a new Engineering and Interdisciplinary Sciences Building at the same location. The project would have no impact on scenic resources within the project area.

Threshold (c): Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Construction-related impacts would cause a temporary visual change by removing and altering existing campus buildings that are part of the campus visual environment. Examples of visual changes include the demolition of the existing Engineering Lab and Industrial Technology buildings and the presence of construction equipment, materials, signs, and staging areas.

Construction-related activities would be briefly visible from public roads including I-8, College Avenue, Mill Peak Road, Del Cerro Boulevard, and Madra Avenue. In addition, views of construction-related activities would be afforded to receptors at private residences. Views of graded surfaces would generally be limited to on-campus viewers but construction materials, equipment, and truck traffic would be visible from off-campus roads and private residences. Soil would be stockpiled and equipment for grading activities would be staged at various locations. Regarding visual character, on-campus views would be the most affected and could entail implementation of detoured routes to classes, and temporary classrooms, during the construction phase. Building frames and tall equipment such as cranes may be visible from off-site locations; however, these features would be partially screened by existing campus buildings and landscaping and tall equipment would be located on site for a limited duration. Because visual impacts associated with construction activities would be temporary and short-term, and would not be present following the completion of the project, impacts would be less than significant and no mitigation is required.

General Visual Character

Development of the Proposed Project would result in a change in the visual appearance of the project site. As stated previously, the project site encompasses the Engineering Lab and Industrial Technology buildings, the existing Engineering Building, the Quonset Hut, and the CAM Labs. Unlike the majority of surrounding academic buildings, the existing buildings on the project site lack the Mission and Spanish Colonial architectural style and instead display themes and elements of a Modern style. As a result, there is a lack of intactness and unity between the existing structures on the project site and surrounding campus development. The project includes the demolition of the existing Industrial Technology and Engineering Lab buildings and construction of a new four-story/sixty feet above-grade Engineering and Interdisciplinary Sciences Building. Once construction of the new Engineering and Interdisciplinary Sciences Building is completed, the existing Quonset Hut and the CAM Labs would be demolished. Demolition of these structures would ultimately enhance the overall visual character of the northeastern portion of the SDSU campus through a relatively unified display of consistent and compatible architectural themes and character in campus buildings. The project design also includes modifications to the existing Engineering Building to create a connection to the new Engineering and Interdisciplinary Sciences Building, connecting pathways, and a landscaped courtyard area. Although the new Engineering and

Interdisciplinary Sciences Building would be constructed in an architectural style distinct from that of the Modern style displayed by the existing Engineering Building, the connection between the existing and the new building would exhibit a rectangular form and a color - colored and smooth façade that would be compatible with the south elevation of the existing Engineering building. Also, while a complete redesign of the Engineering Building is not proposed, modifications to the south elevation of the structure and design elements displayed by the new connection would attempt to visually integrate two architectural styles and create a highly connected and functional environment for the STEM disciplines. Furthermore, at four stories and approximately 95,000 GSF, the new Engineering and Interdisciplinary Sciences Building would display a scale and mass consistent with that of existing development near the site, including the five-story Chemical Sciences Laboratory; the five-story Geology, Mathematics, and Computer Science Building; the five-story Shiley Bioscience Center; the four-story Engineering Building; and the four-story Life Sciences buildings. Therefore, the Proposed Project would not substantially degrade the existing visual character or quality of the project site and its surroundings; impacts would be less than significant and no mitigation is required.

Architectural Style

The Proposed Project would use elements of the Mission Revival architectural style currently present in the central campus core and displayed by the majority of existing campus development. Interior and exterior design themes would strengthen and unify the existing visual character at the project site for all viewers, and design features would enhance the long-term student experience. In addition to a consistent architectural style and theme expressed by exterior design elements and style, the Proposed Project would provide strong pedestrian connections to new uses and spaces through the continuation of existing pathways and creation of a new entry plaza and gateway entrance to the Engineering and Interdisciplinary Sciences Building. The Proposed Project would also entail redesigning the existing courtyard between the Engineering Lab Building and the Engineering Building to address overcrowding. Although the Proposed Project would represent a significant architectural change compared to the existing conditions, this change would be positive. Therefore, the Proposed Project would not substantially degrade the existing visual character or quality of the project site and its surroundings; impacts would be less than significant and no mitigation is required.

Public Views

Figures 5b and 5c provide existing representative views available for mobile viewers in the project area. Figures 6a and 6b, Architectural Renderings, provide renderings of the Proposed Project design to demonstrate the visual appearance of the project upon completion. Figure 7, Mobile Viewer Travelling South along College Avenue – Visual Simulation, provides an existing photo of the project site and a visual simulation of the Proposed Project for mobile viewers on College Avenue near the I-8 crossing. Project impacts to existing visual character from public views are summarized below.

Source: CANNON DESIGN 2014

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 6a
Architectural Renderings

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Source: CANNON DESIGN 2014

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 6b
Architectural Renderings

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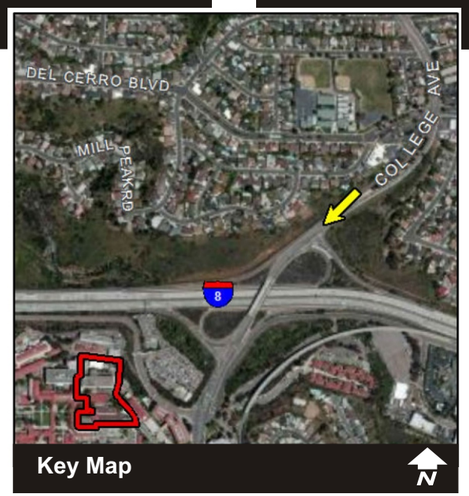
Existing View
Mobile viewer traveling south along College Avenue

Visual Simulation
Mobile viewer traveling south along College Avenue



Source: DUDEK 2015

SDSU Engineering and Interdisciplinary Sciences Building Project

SAN DIEGO STATE UNIVERSITY

Figure 7
Mobile Viewer Traveling South Along College Avenue – Visual Simulation

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Mobile Viewers (Roadways)

Views of the project site are available from the following public roadways: College Avenue, Del Cerro Boulevard, Mill Peak Road, and Madra Avenue. Views of the project may also extend to other roads in the project viewshed; however, the roads identified above are representative of the various distances, viewing angles, and viewing conditions from off-site locations in the local area to the project site. The following discussion identifies the visual changes that would occur for mobile viewers along these roadways.

College Avenue (Viewpoint 1)

College Avenue is a four-lane roadway with a north–south orientation. Starting northeast of the project site, just north of the I-8/College Avenue overpass, the Proposed Project would be visible to southbound travelers (Figures 5, 5a and 7, Existing View). As shown on Figure 7, in addition to tall pine trees on the steep slope located southwest of Parking Lot A and along Aztec Circle Drive near the existing Geology, Mathematics, and Computer Science Building, existing campus development would shield a large percentage of the structure from mobile viewers, resulting in mostly obstructed views of the proposed building. The vertical scale and wide, rectangular form of the five-story Geology, Mathematics, and Computer Science Building and the four-story Engineering Building would screen the majority of the east- and north-facing elevations of the new building, and as shown on Figure 7, only portions of the east-elevation exterior and the structures' roof would be visible. Similar to existing campus development in the area, including the Geology, Mathematics, and Computer Science Building and the Chemical Science Laboratory, the east-facing project façades would include rectangular window elements, cool-colored exteriors, and pitched, clay-colored rooflines. Continuity in architectural elements would be apparent between the new Engineering and Interdisciplinary Sciences Building and the existing Geology, Mathematics, and Computer Science Building and Chemical Science Laboratory, and the Engineering and Interdisciplinary Sciences Building would display an exterior color consistent with that of the existing Engineering Building. Although the proposed building would be constructed at a height greater than that of the existing Engineering Lab and Industrial Technology buildings, the scale of the four-story structure would be compatible with adjacent campus development in the immediate area. Therefore, the Proposed Project would not substantially degrade the existing visual character or quality of the project site and its surroundings; as a result, impacts would be less than significant and no mitigation is required.

Mill Peak Road (Viewpoint 2)

Mill Peak Road is a two-lane roadway with a north–south orientation. The majority of the project site is obscured from the view of motorists and pedestrians at Viewpoint 2 due to the presence of existing campus development and landscaping (see Figure 5a). The two- to three-story Facilities Services buildings south of I-8 at the canyon rim, the four-story Engineering Building, and tall, mature trees installed along Aztec Circle Drive entirely block the CAM Labs, Quonset Hut, and Engineering Lab Building and block all but a section of the Industrial Technology Building roof from view. As such, demolition of the Engineering Lab and Industrial Technology buildings would not be overly apparent from this vantage point. Tall construction equipment such as cranes may be intermittently visible above the rooflines of existing campus

development; however, construction activities would be temporary and short-term and would not continue following project completion. As the terrain on the mesa top gradually rises from north to south, the roof of the new four-story Engineering and Interdisciplinary Sciences Building may be visible from Viewpoint 2. This new feature would rise above the flat roofline of the Engineering Building and display a similar form and color to the roofs of the existing Geology, Mathematics, and Computer Science and Chemical Science Laboratory buildings located to the east. Further, the new four-story building would be compatible with existing two- to five-story campus development in the immediate area and would exhibit elements of the Mission Revival architectural style prevalent in the majority of buildings on the main SDSU campus. Due to the presence of the two- to three-story Facilities Services buildings located at the northwest campus perimeter and north of the CAM Labs and Quonset Hut, demolition of the CAM Labs and Quonset Hut would not be visible and would not affect the existing visual character or quality of the site as viewed from Viewpoint 2. Therefore, the Proposed Project would not substantially degrade the existing visual character or quality of the project site and its surroundings. Impacts would be less than significant and no mitigation is required.

Del Cerro Boulevard (Viewpoint 3)

Del Cerro Boulevard is a two-lane roadway with an east–west orientation. From Viewpoint 3, the Proposed Project site is obscured from view by existing campus development (i.e., the four-story Life Sciences North Building and the five-story Shiley Bioscience Center) and a small grove of tall eucalyptus trees located east of the Art North Building (see Figure 5b). Due to the screening effect of these existing structures, demolition and construction activities on the project site would not be visible. Portions of the roof of the new four-story Engineering and Interdisciplinary Sciences Building may be visible from Viewpoint 3; however, because the roof would display a similar form, color, and architectural style to the roof of the Shiley Bioscience Center and the Chemical Science Laboratory Building (both currently visible from Viewpoint 3), the potential for visual contrast would be minimized. Visible features of the Engineering and Interdisciplinary Sciences Building would display a similar visual character and architectural style to existing campus development in the northwestern corner of the main SDSU campus. Therefore, the Proposed Project would not substantially degrade the existing visual character or quality of the project site and its surroundings. Impacts would be less than significant and no mitigation is required.

Madra Avenue (Viewpoint 4)

Madra Avenue is a two-lane roadway with a winding but generally north–south orientation. Although located at a middleground viewing distance and at a lower elevation, views to the project site are available from Viewpoint 4. From the elevated vantage point of Madra Avenue, campus development appears as a clumped mass of large, rectangular, and vertical forms displaying light-colored exteriors and some red-tiled roofs. With the exception of the 11-story Chapultepec Hall and Hardy Tower, existing campus development exhibits a similar scale and mass when viewed from Viewpoint 4 (see Figure 5b). Due to distance and the relatively low vertical scale of the Engineering Lab and Industrial Technology buildings, the visual effects of construction activities at the Proposed Project site would be muted. The Engineering Lab and

Industrial Technology buildings are partially screened from view by existing campus landscaping; therefore, demolition activities would not be overly apparent. Building frames associated with the new four-story Engineering and Interdisciplinary Sciences Building may be visible from Viewpoint 4; however, the new structure would be backscreened by existing campus development and landscaping and would not be skylined. In addition, the new building would be surrounded by existing campus development displaying similar scale, mass, and architectural style. Therefore, the Proposed Project would not substantially degrade the existing visual character or quality of the project site and its surroundings; impacts would be less than significant and no mitigation is required.

Campus Views

Views of the project site are available for campus viewers located within the northeastern corner of campus near the project site and, more specifically, along Aztec Circle Drive (see Figure 5c). Upon implementation of the Proposed Project, views would change from those of the one- and two-story Engineering Lab and Industrial Technology buildings, paved parking areas and landscaping, to views of the new four-story Engineering and Interdisciplinary Sciences Building, which would physically connect to the existing four-story Engineering Building and would also include landscaped courtyards and a plaza. Upon completion of the Engineering and Interdisciplinary Sciences Building, the pre-fabricated Quonset Hut and the rectangular, white-plaster-wall exterior CAM Labs would be demolished. Although the Proposed Project would include demolition of existing structures and construction of a new building, the new Engineering and Interdisciplinary Sciences Building would display a similar height and mass to existing buildings in the surrounding campus landscape. Furthermore, the Proposed Project would enhance the visual character and unity of the site through the display of consistent scale, architectural elements, and style. Therefore, because the Proposed Project would not substantially degrade the existing visual character or quality of the project site and its surroundings, impacts would be less than significant and no mitigation is required.

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

Lighting

Short-term temporary lighting impacts associated with construction activities would be limited to nighttime lighting necessary for security purposes. Residential uses are located to the north of the project site in the community of Del Cerro and mobile viewers on College Avenue and I-8 are located relatively close to the Proposed Project site. Views to the project site from off-site locations would be partially screened by existing campus development and landscaping. Additionally, the SDSU campus is located in an urbanized setting, and in the absence of shielding of lighting fixtures, construction lighting could affect existing nighttime views in the project area and/or generate glare. Therefore, lighting effects to residences or mobile viewers resulting from construction activities could occur. These impacts would be considered significant; therefore, mitigation is provided (see mitigation measure AES-1).

The project would be located within the urbanized College Area community. Existing night lighting sources in the area include residential (primarily single-family residential, but also multi-family and student housing), institutional uses (SDSU campus), motor vehicle lighting, interstate lighting, and streetlights. In addition to the introduction of new interior and exterior lighting fixtures associated with the new Engineering and Interdisciplinary Sciences Building, new lighting fixtures and elements would be included for the proposed plaza and courtyard areas.

The Proposed Project would use illumination levels that would conform to the latest edition of the Illuminating Engineering Society guidelines. Lighting would include an appropriate amount and intensity associated with each area use. With the exception of necessary security lighting, illumination of project structures and outdoor spaces would be limited. In addition, lighting controls would be implemented and designed to meet current Title 24 requirements with a distributed digital lighting control system that would incorporate interior dimming and occupancy controls in classrooms, offices, restrooms, and corridors and would include photocells and time clock controls for exterior fixtures. Dimming and occupancy sensors would be required if fixtures are mounted lower than 24 feet and support a lamp of more than 75 watts. However, given the relatively large footprint and increased scale of the new building compared to the existing Engineering Lab and Industrial Technology buildings and because nighttime illumination of proposed public spaces is anticipated, the amount of lighting at the project site would increase compared to the existing condition. These impacts would be considered significant; therefore, mitigation is provided (see mitigation measure AES-2).

Glare

The Mission Revival architectural style proposed for the new Engineering and Interdisciplinary Sciences Building would incorporate cool-colored stucco façades, clay tile roofs, and punched windows. The Mission Revival architectural style generally consists of non-reflective exterior surfaces and finishes and is not known for incorporating large expanses of glass or metal exteriors. Additionally, the Proposed Project would be required to demonstrate compliance with SDSU's Physical Master Plan to ensure structures would not contain large expanses of reflective glass or reflective metal surfaces that would cause undue glare to passing mobile viewers and/or present a visual hazard to adjacent land uses during construction or permanently. With considerations of architectural building materials and implementation of associated regulations, impacts related to glare would be less than significant.

Cumulative Analysis

The effects of the Proposed Project, when considered with other projects in the region, would not result in cumulative impacts to: existing views from scenic vistas and highways; the existing visual character and quality of the SDSU main campus and surrounding College Area community; and daytime and nighttime views from the introduction of new sources of lighting and glare on campus. Due to the screening effect of existing campus development and landscaping, views to the project site are limited and are generally made in passing by motorists on local area roadways, including but not limited to College Avenue and I-8. Where views of

the project are available, elements of the new Engineering and Interdisciplinary Sciences Building would display a similar architectural style to existing buildings located in the surrounding area.

In addition, all proposed and planned development located on the SDSU campus will be reviewed for compliance with the lighting and glare policies contained in SDSU's Physical Master Plan (SDSU Physical Master Plan, Phase I, pp. 157–160) to ensure compatibility with the existing campus environment and surrounding community. Therefore, because the project site and surrounding SDSU campus are located in an urban environment, and because the Proposed Project and other development on the SDSU campus would be required to comply with existing lighting regulations, there would be no significant cumulative impacts associated with the introduction of new sources of substantial light or glare that would adversely affect daytime or nighttime views in the area.

MITIGATION:

The Proposed Project would not have a substantial adverse effect on a scenic vista, would not substantially damage scenic resources, and would not substantially degrade the existing visual character or quality of the site and its surroundings. However, construction and operational impacts of the Proposed Project relative to on-site lighting were determined to be potentially significant; therefore, the following mitigation measures are identified and incorporated into the Project:

AES-1 During construction activities associated with the Proposed Project, CSU/SDSU shall ensure that temporary construction-related security lighting is arranged so that direct rays will not shine on or produce glare for adjacent street traffic and residential uses.

AES-2 In order to minimize impacts from lighting, CSU/SDSU shall ensure that all permanent light fixtures installed as part of the Proposed Project are shielded and directed away from sensitive viewers. Motion-sensor lighting with bi-level switching features shall be used in order to reduce the amount of constant light, especially during the late evening and early morning hours, and times in which the facilities are not occupied. Lighting fixtures shall be designed and implemented to provide illumination appropriate for the level of activity. Project lighting also shall be consistent with the lighting policies contained in San Diego State University's Physical Master Plan.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of mitigation measures AES-1 and AES-2, impacts associated with construction and operational lighting would be reduced to a less than significant level.

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AGRICULTURE AND FOREST RESOURCES

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Governmental 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?				✔

ANALYSIS:

Thresholds (a) - (e):

The Proposed Project would be developed in an urban area on the main campus of SDSU. The Project would not convert Farmland to non-agricultural use; would not conflict with existing zoning for agricultural use or a Williamson Act contract; would not conflict with existing zoning for, or cause rezoning of, forest land; would not result in the loss or conversion of forest land to non-forest use; and would not involve other changes that could result in the conversion of Farmland to non-agricultural use or the conversion of forest land to non-forest use. Therefore, the Proposed Project would have no impact on agricultural and forest resources.

MITIGATION:

No significant impacts would occur; therefore, no mitigation is required.

AIR QUALITY				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Conflict with or obstruct implementation of the applicable air quality plan?			✔	
(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			✔	
(c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			✔	
(d) Expose sensitive receptors to substantial pollutant concentrations?			✔	
(e) Create objectionable odors affecting a substantial number of people?			✔	

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Air Quality Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix B to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project conflict with or obstruct implementation of the applicable air quality plan?

The San Diego Air Pollution Control District ("SDAPCD") and San Diego Association of Governments ("SANDAG") are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the San Diego Air Basin ("SDAB")—specifically, the State Implementation Plan ("SIP") and Regional Air Quality

Standards ("RAQS").[1] The federal Ozone ("O_3") maintenance plan, which is part of the SIP, was adopted in 2012. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the SDAB based on the National Ambient Air Quality Standards ("NAAQS"). The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2009). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The SIP and RAQS rely on information from the California Air Resources Board ("CARB") and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the county, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by San Diego County and the cities in the county as part of the development of their general plans.

If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality. The site and surrounding area is located within the SDSU main campus, and the Proposed Project would consist of modifications to the existing engineering building; demolition of the existing Engineering Lab and Industrial Technology buildings, CAM Lab buildings, and Quonset Hut; and the construction of a new engineering sciences building. The Proposed Project would be consistent with the existing land use designation and university educational use for the site. In addition, the Proposed Project would be relatively small in scale and would not result in significant regional growth that is not accounted for within the RAQS. Specifically, the Proposed Project would not generate a significant amount of vehicle trips that would conflict with the projected emission trends provided in the RAQS. Therefore, the Proposed Project would be consistent at a regional level with the underlying growth forecasts in the RAQS. Impacts would be less than significant.

Threshold (b): Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Construction of the Proposed Project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Fugitive dust (PM_{10} and $PM_{2.5}$) emissions would primarily result from grading and site

[1] For the purpose of this discussion, the relevant federal air quality plan is the ozone maintenance plan (SDAPCD 2012). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the SDAB.

preparation activities. Nitrogen Oxides ("NO_x") and Carbon Monoxide ("CO") emissions would primarily result from the use of construction equipment and motor vehicles.

Emissions resulting from the construction phase of the project were estimated using the CalEEMod analytic model. For the purposes of emissions modeling, it was assumed that construction of the Proposed Project would commence in June 2015. Construction would occur intermittently over an approximately 3-year period and consist of the following phases, some of which would overlap and occur simultaneously:

- Demolition of existing Engineering Lab and Industrial Technology buildings (3 months)
- Site preparation and excavation (3 months)
- Foundation, underground utilities, and structural framing (12 months)
- Construction of building envelope and utility rough-in (8 months)
- Architectural coating (6 months)
- Landscaping (4 months)
- Renovation of existing Engineering Building (6 months)
- Demolition of existing CAM Lab and Quonset Hut (3 months).

A detailed depiction of the construction schedule—including information regarding subphases, demolition, and equipment used during each subphase—is included in Section 1.2 and Appendix A of the Air Quality Technical Report . The information contained in Section 1.2 and Appendix A of the Air Quality Technical Report was used as CalEEMod inputs.

CalEEMod defaults were used for construction equipment specifications, and the equipment mix represents a reasonably conservative estimate of construction activity. For the analysis, it was assumed that heavy construction equipment would be operating at the site for approximately 8 hours per day, 5 days per week (22 days per month), during project construction. Construction worker estimates by construction phase were provided by SDSU, and traffic estimates for construction worker trips provided by Linscott, Law and Greenspan were applied to peak building construction periods. Demolition activities associated with the Engineering Laboratories and Industrial Technology building, Quonset Hut, and CAM Laboratories would result in the generation of approximately 5,258 cubic yards of demolition waste generated over a total 19-week period and result in approximately 263 haul trips. Grading and excavation activities would require approximately 7,000 cubic yards of export over a 3-week period resulting in approximately 700 export truck loads.

The Proposed Project is subject to SDAPCD Rule 55, Fugitive Dust Control. This rule requires that the project take steps to restrict visible emissions of fugitive dust beyond the property line. Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during grading and construction activities. To account for dust control measures in the calculations, it was assumed that the active sites would be watered at least two times daily, resulting in an approximately 55% reduction of particulate matter. The Proposed Project is also subject to SDAPCD Rule 67.0, Architectural Coatings. This rule requires manufacturers, distributors, and

end users of architectural and industrial maintenance coatings to reduce volatile organic compounds ("VOC") emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories. VOC content restrictions, which include 150 grams per liter for exterior coatings and 100 grams per liter for interior coatings, are reflected in the emissions estimates.

Table 9 shows the estimated maximum daily construction emissions associated with the construction phases of the Proposed Project. Complete details of the emissions calculations are provided in Appendix A of the Air Quality Technical Report.

Table 9
Estimated Maximum Daily Construction Emissions
(pounds/day)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2015	3.97	43.13	27.86	0.04	5.24	3.62
2016	8.69	96.84	65.87	0.12	11.41	7.54
2017	17.43	27.22	35.28	0.07	4.48	2.35
2018	5.18	46.68	39.27	0.06	3.23	2.68
Maximum Daily Emissions	*17.43*	*96.84*	*65.87*	*0.12*	*11.41*	*7.54*
Emission Threshold	*137*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2013.2.2. See Appendix A of the Air Quality Technical Report for complete results.

VOC = volatile organic compound; NO_x = oxides of nitrogen; CO carbon monoxide = ; SOx = oxides of sulfur; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns

As shown in Table 9, daily construction emissions would not exceed the significance thresholds for VOC, NO_x, CO, Sulfur Oxides ("SO_x"), PM_{10}, or $PM_{2.5}$; therefore, impacts during construction would be less than significant.

Operation

Following the completion of construction activities, the Proposed Project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile and stationary sources, including vehicular traffic and area sources (water heating and landscaping). Because operation of the existing buildings also generates air pollutant emissions, the emissions associated with the existing buildings were subtracted from those resulting from the Proposed Project, and the net change in emissions was compared to the significance thresholds.

Vehicular Traffic

The Proposed Project would impact air quality through the vehicular traffic generated by the Proposed Project. According to the Proposed Project's traffic report prepared by Linscott, Law and Greenspan, the Proposed Project would result in a total of 525 trips per day (LLG 2015). See Appendix B of the Air Quality Technical Report for detailed trip generation information.

Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2018 were used to estimate emissions associated with full buildout of the Proposed Project.

Energy

In addition to estimating mobile source emissions, CalEEMod was also used to estimate emissions from the project's energy use, which includes natural gas consumption. Natural gas consumption estimates were provided by P2S Engineering Inc. (P2S 2015). The energy input ratios for Title 24 and non-Title 24 natural gas consumption as provided in CalEEMod were revised to reflect the natural gas consumption estimates provided. Refer to Appendix A of the Air Quality Technical Report for additional information.

Area Sources

CalEEMod was also used to estimate emissions from the project's area sources, which include landscaping, consumer products, and architectural coatings for building maintenance. Refer to Appendix A of the Air Quality Technical Report for additional information.

Table 10 presents both the maximum daily emissions associated with existing on-site buildings and the operation of the Proposed Project after all phases of construction have been completed. The net increase in emissions for each criteria pollutant is provided. The values shown for motor vehicles and area sources are the maximum summer or winter daily emissions results from CalEEMod. Complete details of the emissions calculations are provided in Appendix A of the Air Quality Technical Report.

Table 10
Estimated Daily Maximum Operational Emissions
(pounds/day)

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Existing Buildings						
Area Sources	4.13	0.00	0.02	0.00	0.00	0.00
Energy	0.84	7.67	6.44	0.05	0.58	0.58
Mobile Sources	6.99	14.67	68.38	0.16	11.19	3.11
Total	**11.96**	**22.34**	**74.84**	**0.21**	**11.77**	**3.70**
Proposed Project						
Area Sources	4.54	0.00	0.02	0.00	0.00	0.00
Energy	0.84	7.67	6.44	0.05	0.58	0.58

Table 10
Estimated Daily Maximum Operational Emissions
(pounds/day)

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Mobile Sources	8.78	18.43	85.92	0.20	14.06	3.91
Total	**14.16**	**26.10**	**92.38**	**0.25**	**14.64**	**4.49**
Net Change	***2.20***	***3.76***	***17.54***	***0.04***	***2.87***	***0.79***
Emission Threshold	*137*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: See Appendix A of the Air Quality Technical Report for complete results.

Emissions represent maximum of summer and winter. "Summer" emissions are representative of the conditions that may occur during the ozone season (May 1 to October 31), and "Winter" emissions are representative of the conditions that may occur during the balance of the year (November 1 to April 30).

VOC = volatile organic compound; NO_x = oxides of nitrogen; CO carbon monoxide = ; SOx = oxides of sulfur; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns

As shown in Table 10, the net change in daily operational emissions from the Proposed Project would not exceed the significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$. Operational emissions would be less than significant.

Threshold (c): Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

In analyzing cumulative impacts from the Proposed Project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the California Ambient Air Quality Standards ("CAAQS") and NAAQS. If the Proposed Project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, the project would only be considered to have a significant cumulative impact if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

The SDAB has been designated as a federal nonattainment area for O_3 and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. PM_{10} and $PM_{2.5}$ emissions associated with construction generally result in near-field impacts. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the

SDAB. As discussed previously, the emissions of all criteria pollutants would be below the significance levels. Construction would be short term and temporary in nature. Once construction is completed, construction-related emissions would cease. Operational emissions generated by the Proposed Project would not result in a significant impact. As such, the Proposed Project would result in less-than-significant impacts to air quality relative to operational emissions.

The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the county as part of the development of their general plans. The Proposed Project would be relatively small in scale and would not result in significant regional growth that is not accounted for within the RAQS. Specifically, the Proposed Project would not generate a significant amount of vehicle trips that would conflict with the projected emission trends provided in the RAQS. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS. The Proposed Project is consistent with the existing use for the site; thus, it would be consistent at a regional level with the underlying growth forecasts in the SIP and RAQS. As a result, the Proposed Project would not result in a cumulatively considerable contribution to regional O_3 concentrations. Cumulative impacts would be less than significant.

Threshold (d): Would the project expose sensitive receptors to substantial pollutant concentrations?

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants ("TACs") or hazardous air pollutants (HAPs). State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal HAPs, and is adopting appropriate control measures for sources of these TACs.

The greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks and the associated health impacts to sensitive receptors. The closest sensitive receptors are single-family and multifamily residences located adjacent to the SDSU campus, over 1,000 feet from the project site.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SDAPCD recommends an incremental cancer risk threshold of 10 in a million. "Incremental cancer risk" is the likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. The Proposed Project would not require the extensive use of heavy-duty construction equipment, which is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions, and would not involve extensive use of diesel trucks, which are also subject to a CARB Airborne Toxics Control Measure. Construction of the Proposed Project would last approximately 2 ½ years, after which project-related TAC emissions would cease. Thus, the Proposed Project would

not result in a long-term (i.e., 70-year) source of TAC emissions. No residual TAC emissions and corresponding cancer risk are anticipated after construction, nor are any long-term sources of TAC emissions anticipated during operation of the Proposed Project. As such, the exposure of project-related TAC emission impacts to sensitive receptors would be less than significant.

Threshold (e): Would the project create objectionable odors affecting a substantial number of people?

Odors would be generated from vehicles and/or equipment exhaust emissions during construction of the Proposed Project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors are temporary and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be considered less than significant.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Proposed Project involves educational uses similar to those that currently exist on site and would not result in the creation of a land use that is commonly associated with odors. Therefore, project operations would result in an odor impact that is less than significant.

MITIGATION:

No significant impacts would occur; therefore, no mitigation is required.

BIOLOGICAL RESOURCES				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 Game or 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, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✔
(c) Have a substantial adverse effect on federally-protected wetlands, as defined by Section 404 of the Clean Water Act (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?				✔

BIOLOGICAL RESOURCES				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(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?				✔

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Biological Resources Technical Memorandum for the San Diego State University Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix C to this Initial Study and is incorporated herein by this reference.

Threshold (a): ***Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?***

No candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (referred to as "special-status species") were observed during the biological field investigation conducted February 17, 2015. No habitat for special-status species is present on the project site.

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

Based upon the February 17, 2015 biological field investigation, there are no riparian habitats or other sensitive natural communities identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service present on the Project site. No impacts to riparian or other sensitive natural communities would result from the Proposed Project.

Threshold (c): Would the Project have a substantial adverse effect on federally-protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to,

marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The Proposed Project would not have a substantially adverse effect on federally protected wetlands. The site is located in an urban setting and is currently developed, and there are no jurisdictional waters of the U.S., including wetlands, on or near the Project site. No impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act would result from the Proposed Project.

Threshold (d): Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Proposed Project would not interfere with migratory wildlife corridors or wildlife dispersal. With respect to wildlife nursery sites, the site of the Proposed Project is located in an urban setting and is fully developed. However, there are ornamental trees and shrubs that may provide suitable nesting habitat for urban-adapted birds. During the February 17, 2015 site visit, there was evidence of bird nests in building eaves. Removal of breeding habitat or disruption to nests could occur if on-site ornamental vegetation or buildings with nesting birds are removed, which may result in direct impacts to breeding birds.

Additionally, breeding birds can be affected by short-term construction-related noise, which can result in the disruption of foraging, nesting, and reproductive activities. Because project construction may result in short-term construction-related noise in close proximity to breeding birds, impacts may occur. Mitigation is identified that requires pre-construction nesting bird surveys prior to ground-disturbing activities or the removal of on-site vegetation or building eaves. If any nesting birds are found during these surveys, a 300-foot buffer (or a buffer deemed appropriate by a qualified biologist) would be established around the nest where no construction would occur until the young have fledged. With implementation of the mitigation, impacts would be less than significant.

Threshold (e): Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The City of San Diego has a Tree Protection Policy that regulates the removal of designated tree resources that meet certain criteria (landmark tree, heritage tree, parkway resource tree, or preservation grove). None of the trees on the Project site meet these criteria. Therefore, the Proposed Project would not conflict with any local policies or ordinances protecting biological resources. No impacts would result.

Threshold (f): Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The City of San Diego is a participant in the San Diego Multi-Species Conservation Program and has, therefore, adopted a Subarea Plan that implements the program within the jurisdictional limits of the city of San Diego. Although SDSU is not a "permittee" under this umbrella plan/Subarea Plan, the Proposed Project is within the Subarea Plan boundary, but is

not located within the Multi-Habitat Planning Area. Therefore, the Proposed Project would not conflict with conservation planning outlined in any formal habitat conservation plans or natural community conservation plans. No impacts would result.

MITIGATION:

The Proposed Project would have a potentially significant impact relative to nesting birds. Therefore, the following mitigation measure is incorporated into the Project:.

BIO-1 CSU/SDSU, or its designee, shall conduct pre-construction nesting bird surveys prior to commencing ground disturbing construction activities or the removal of on-site vegetation or building eaves. If any nesting birds are found during these surveys, a 300-foot buffer (or a buffer deemed appropriate by a qualified biologist) shall be established around the nest where no construction activities can occur until the young have fledged. Once the young have fledged, construction activities can resume without the buffer.

CULTURAL RESOURCES				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?		✔		
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?		✔		
(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✔		
(d) Disturb any human remains, including those interred outside of formal cemeteries?		✔		

Under CEQA guidelines section 15064.5, "historical resources" includes resources listed in or determined to be eligible for listing in the California Register of Historical Resources ("CRHR"), resources included in a local register of historical resources, or a "historically significant" resource that meets the following criteria for listing on the CRHR:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, although SDSU as a state agency is not required to follow the City's historical resources evaluation protocol, SDSU has chosen to use this guidance due to its relationship to the San Diego built environment. Under the City's Historical Resources Guidelines, any improvement, building, structure, sign, interior element and fixture, site, place, district, area, or

object may be designated a historical resource by the City Historical Resources Board if it meets one or more of the following designation criteria:

a. Exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;

b. Is identified with persons or events significant in local, state or national history;

c. Embodies distinctive characteristics of a style, type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;

d. Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist or craftsman;

e. Is listed or has been determined eligible by National Park Service for listing on the National Register of Historic Places ("NRHP") or is listed or has been determined eligible by the State Historical Preservation Office for listing on the State Register of Historical Resources; or

f. Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Cultural Resources Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix D to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5?

Five historic-age buildings were identified within the Proposed Project area from the cultural resources survey (shown on Figure 3, Appendix D):

- The Facilities Services Building (built in 1947)
- The Industrial Technology Building (built in 1953)
- The Engineering Laboratory Building (built in 1956)
- The Engineering Building (built in 1962)
- The CAM Center Building (built in 1962)

Of the five buildings identified, four are currently proposed for demolition and one (the Engineering Building) is proposed to be kept, but altered.

In addressing Threshold (a), the initial inquiry is to determine whether any/all of the structures are considered a "historical resource" within the meaning of CEQA. To that end, a detailed physical description, photographs, background information, and a formal evaluation of historic and architectural significance and integrity relative to the CRHR and City of San Diego criteria for each of the five buildings are provided in the section that follows.

Facilities Services Building (Quonset Hut)

The Facilities Services Building is a pre-fabricated, three-span Multiple Utility style Quonset hut (Figure 8). The building sits on a concrete block foundation and is sheathed in corrugated metal siding. It features groupings of multi-pane windows with awning sash openings on both the north and south elevations. Additional multi-pane windows are located on the east and west sides of the buildings, although some have been replaced with double-hung windows. The building features industrial metal roll-up doors on both the west and east elevations. SDSU building records indicate that the building was constructed and occupied by June 1947 for use as a temporary building.

Figure 8 Facilities Services Building (view to SW)

Evaluation of the Facilities Services Building considered national, state, and local-level eligibility criteria. Archival research on the building failed to indicate any associations with important events. Although the building is associated with the post-World War II influx of students on college campuses in California that resulted from the G.I. Bill, and it represents a

period in Southern California when colleges and universities were scrambling to create space for their drastically growing student bodies, it is not known to be associated with any specific events that have contributed to the history of the region or the university. Unlike Quonset huts found on other nearby college campuses that once had a military function (e.g., the Quonset huts associated with Camp Matthews at the University of California, San Diego), the Facilities Services Building appears to have always functioned as temporary classroom/campus storage, and does not have any connection to San Diego's military history. As shown on Figure 9, Appendix D, the building was once surrounded by numerous steel temporary buildings, including other Quonset huts and Butler buildings, none of which had a military function. For these reasons, the Facilities Services Building does not appear eligible for listing under CRHR Criterion 1.

Additionally, archival research failed to uncover any association with persons important to our past, and the property does not appear eligible for listing under CRHR Criterion 2.

The Stran-Steel style Quonset hut was an extremely common kit during the 1940s, with extant examples in both a military and non-military context found all over the world. The Quonset hut does not represent an architectural style, nor does it represent the notable work of a master architect. In addition, the Facilities Services Building has been slightly altered from its original appearance. For these reasons, the subject building does not appear eligible for listing under CRHR Criterion 3.

The subject building is unlikely to yield any information important to prehistory or history, and does not appear eligible for listing under CRHR Criterion 4.

In consideration of City local-level designation criteria, the subject building does not appear to exemplify or reflect special elements of the city's cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development. It was constructed for use as a temporary building to support the post-war influx of students on campus. Therefore, the building does not appear eligible under City Criterion A. As detailed above in consideration of national and state criteria, the subject building is not known to be associated with any significant persons or events, and does not appear eligible under City Criterion B. As described above, the subject building does not embody the distinctive characteristics of a style and is not the work of a master architect or builder. Therefore, the building does not appear eligible under City Criteria C or D. The subject building has never been determined eligible for listing in the NRHP or CRHR and is therefore not eligible under City Criterion E. Finally, the subject building is not part of a historic district or group of resources and does not appear eligible under City Criterion F.

Industrial Technology Building

The Industrial Technology Building is a two-story building, roughly rectangular in plan, with a composition roof and concrete bulkhead, and is clad in cement plaster. Irregularly shaped end walls reflect the Modern style. The south elevation features a series of multi-pane windows with awning sash openings, covered by metal grilles (added at a later date). The easternmost portion of the south elevation features an original overhead door with square glass panes, and an added

metal roll-up door. The westernmost portion of the south elevation features two entrances composed of standard glass pull doors and fabric awnings (added). The north elevation features wall-to-ceiling multi-pane opaque glass (replaced at unknown date) and standard doors that were once industrial metal roll-up or overhead doors. The east elevation features an outside covered patio area that was originally enclosed. The west elevation features an addition to the original 1930 Teacher's Training School Building (present-day Physics Building) in Spanish Colonial Revival style. This addition features a Spanish tile roof, an arcade walkway that connects the Industrial Technology Building to the Physics Building, and multi-pane windows with awning sash openings. This addition creates a transition between the Modern style Industrial Technology Building with the original Spanish Colonial Revival style that comprises the NRHP-listed historic district on campus. Where the two buildings meet, there is a courtyard with two of the original concrete–and-wood WPA benches from the 1940s. These are contributing elements of the NRHP-listed historic district.

Figure 9 South Elevation of Industrial Technology Building in 2015 (view to NW)

Figure 10 North Elevation of Industrial Technology Building in 2015 (view to SE)

Evaluation of the Industrial Technology Building considered national, state, and local-level eligibility criteria. Archival research on the building failed to indicate any associations with important events or patterns of development. The Industrial Arts Building was constructed as part of the 1950s SDSC Master Plan, which included the construction of many other buildings designed by different architects. Although construction of the building falls against the backdrop of the Cold War and the nation's/state's pursuit of education/advancement, it is not associated with any specific national, state, or local events. Therefore, the Industrial Technology Building does not appear eligible for listing under CRHR Criterion 1.

Additionally, archival research failed to uncover any association with persons important to our past, and the property does not appear eligible for listing under CRHR Criterion 2.

The Industrial Technology Building represents the work of master architect William Templeton Johnson and George C. Hatch, who have undoubtedly had a profound influence on the design of public buildings in San Diego, respectively. However, as described above, the building has been altered from its original form. Some of the more major alterations include the replacement of all of the original glazing on the north elevation with opaque glass (which has greatly affected the overall look and feel of the building, which was designed to be completely transparent on the north elevation); reconfiguration and enclosing of the original loading dock on the north elevation; installation of two sets of commercial glass pull doors on the south elevation; removal of the original sawdust collector on the south elevation; and conversion of the original eastern elevation from an enclosed space with multi-pane windows and overhead door to a covered patio area.

In addition to having been subject to multiple exterior alterations, the Industrial Technology Building does not appear to be a principal work of either architect. Johnson and Hatch were known for designing some of the most important public buildings in the city (particularly Johnson), including many of the buildings located in Balboa Park. Johnson's primary period of influence was from 1918 through the mid-1930s, when he designed some of his most important buildings, and although he was a master of many styles of architecture, he was best known for his period revival style architecture. The Industrial Arts Building represents one of his later works and was designed during a period when the firm was designing many school buildings. The Industrial Arts Building was designed to meet the needs of a budding industrial arts major at SDSC in the 1950s. Johnson and Hatch also designed other buildings on campus as part of the SDSC Master Plan in the 1950s, including the Engineering Laboratory Building (located directly to the north), and the no longer extant Campus Laboratory School Building, which was demolished in the 1990s to make way for the present-day Student Services Building. Other important local architects designed many of the SDSC buildings in the 1950s, including Samuel Hamill and Frank L. Hope.

The Industrial Arts Building has been subject to numerous alterations over the years. Additionally, it is a very late and relatively unremarkable example of Johnson's work, and was designed during a period when his firm was designing many other school buildings. Therefore, the building does not appear eligible for listing under CRHR Criterion 3.

The subject building is unlikely to yield any information important to prehistory or history, and does not appear eligible for listing under CRHR Criterion 4.

In consideration of City local-level designation criteria, the subject building does not appear to exemplify or reflect special elements of the city's cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development. Therefore, the building does not appear eligible under City Criterion A. As detailed above in consideration of national and state criteria, the subject building is not known to be associated with any significant persons or events, and does not appear eligible under City Criterion B. As described above, the Industrial Arts Building has been subject to numerous alterations over the years. Additionally, it is a late, and not a particularly notable work of Johnson, and was designed during a period when his firm was designing many other school buildings. Therefore, the building does not appear eligible under City Criterion C or D. The subject building has never been determined eligible for listing in the NRHP or CRHR and is therefore not eligible under City Criterion E. Finally, the subject building is not part of a historic district of resources and does not appear eligible under City Criterion F.

Engineering Laboratory Building

The Engineering Laboratory Building (originally known as the Industrial Arts and Engineering Building Addition) is single story and rectangular in plan, with a composition roof and cement plaster-clad exterior. The south elevation (see Figures 11 and 17, Appendix D) features a series of single-panel glazed doors with upper transoms and multi-pane windows with awning sash openings (all appear to be original). Some of the original panes have been punched out for installation of window air-conditioning units. The roof on the south elevation has a shed roof

extension supported by metal posts, creating a covered walkway. The north elevation (Figures 12 and 19, Appendix D) features a concrete bulkhead at the base with a wall of multi-pane windows with awning sash openings, and two of the original overhead doors with decorative square glass panes. The westernmost portion of the covered walkway on the south elevation, and a patio area outside the north elevation, feature original concrete and wood WPA benches from the 1940s. These are contributing elements of the NRHP-listed SDSC Historic District. The eastern-southeasternmost corner of the building features a small segment of the original 1930s cobblestone-set-in-concrete-mortar retaining walls (Figure 20, Appendix D), which represent the last remaining architectural elements of the 1930 Training School Building playground (Wade et al. 1997). These walls were removed in the 1950s for construction of the new Industrial Arts and Engineering Building addition and parking lot. A large segment of the original cobblestone wall can be seen in Figure 13 just outside the Industrial Arts Building during construction of the addition.

Figure 11 South Elevation of Engineering Laboratory Building in 2015 (view to NW)

Figure 12 North Elevation of Engineering Laboratory Building in 2015 (view to SW)

Evaluation of the Engineering Laboratory Building considered national, state, and local-level eligibility criteria. Archival research on the building failed to indicate any associations with important events or patterns of development. The Engineering Laboratory Building was constructed as part of the 1950s SDSC Master Plan, which included the construction of many other buildings designed by different architects. While construction of the building falls against the backdrop of the Cold War and the nation's/state's pursuit of education/advancement, it is not associated with any specific national, state, or local events. Therefore, the Engineering Laboratory Building does not appear eligible for listing under CRHR Criterion 1.

Additionally, archival research failed to uncover any association with persons important to our past, and the Engineering Laboratory Building does not appear eligible for listing under CRHR Criterion 2.

The Engineering Laboratory Building was designed by the firm Johnson, Hatch, and Wulff. All three men, Johnson most significantly, have had a profound influence on the design of public buildings in San Diego, respectively. However, the Engineering Laboratory Building does not appear to be a principal work of any of the architects. Johnson was known for designing some of the most important public buildings in the City, including many of the buildings located in Balboa Park. Johnson's primary period of influence was from 1918 through the mid-1930s, when he designed some of his most important buildings, and although he was a master of many styles of architecture, he was best known for his period revival style architecture. The Engineering Laboratory Building represents one of his later works and was designed during a

period when the firm was designing many school buildings. Johnson died just 1 year after its completion. Johnson and Hatch also designed other buildings on campus as part of the SDSC Master Plan in the 1950s, including the Industrial Arts Building (located directly to the south) and the no longer extant Campus Laboratory School Building, which was demolished in the 1990s to make way for the present-day Student Services Building. Hatch and Wulff, on the other hand, would go on to design many public buildings within and around San Diego in the years that followed, making a name for themselves outside the sphere of their association with Johnson. Other important local architects designed many of the SDSC buildings in the 1950s, including Samuel Hamill and Frank L. Hope. Unlike the Industrial Arts Building, which has been subject to numerous alterations over the years, the Engineering Laboratory Building has only been subject to minor exterior alterations (the extent of interior alterations is unknown). However, the building does not appear to be a principal work of the three architects and is a particularly late and relatively unremarkable example of master architect Johnson. In addition, the Engineering Laboratory Building was designed during a period when the firm was designing many other school buildings. For all of these reasons, the building does not appear eligible for listing under CRHR Criterion 3.

The subject building is unlikely to yield any information important to prehistory or history, and does not appear eligible for listing under CRHR Criterion 4.

In consideration of City local-level designation criteria, the subject building does not appear to exemplify or reflect special elements of the City's cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development. Therefore, the building does not appear eligible under City Criterion A. As detailed above in consideration of national and state criteria, the subject building is not known to be associated with any significant persons or events, and does not appear eligible under City Criterion B. Although the building largely maintains its integrity, it is a late and not a particularly notable work of Johnson, and was designed during a period when his firm was designing many other school buildings. Therefore, the building does not appear eligible under City Criterion C or D. The subject building has never been determined eligible for listing in the NRHP or CRHR and is therefore not eligible under City Criterion E. Finally, the subject building is not part of a historic district or group of resources and does not appear eligible under City Criterion F.

Engineering Building

The Engineering Building is four stories, T-shaped in plan, with a flat roof, concrete block walls, and a smooth stucco-clad exterior (Figures 13 and 23, Appendix D). The south elevation features three horizontal bands of windows composed of aluminum-sash horizontal sliders, situated beneath a sharply projecting overhang that spans the length of the windows. At the center of the south elevation, there is a break in the ribbon windows with a thick band of textured stucco running from the roofline to the top the front entrance, which is recessed into a cutout opening. The entrance on the south elevation features two original concrete and wood WPA benches from the 1940s, which are contributing elements of the NRHP-listed SDSC Historic District. The north side of the building also features bands of aluminum-sash sliding windows but without the projecting overhang seen on the south elevation. There is

also a covered carport area along the first floor of the northeast wall, and three metal roll-up doors. The building is accessed via a main entrance on the northwest wall. The east and west end walls feature a broad expanse of smooth stucco surface with decorative vertical bands of beige, textured stucco running from the roofline to the awning above the side entrances. Overall, the exterior of the building appears to be largely unaltered from its original form. The west elevation contains an outside patio area created in 2003, known as L^3 Memorial Park, which commemorates three engineering professors who were shot and killed by a graduate student in 1996 (Daily Aztec 2002). The memorial includes three circular emblems on concrete tables that memorialize the engineers and their work.

Figure 13 South Elevation of Engineering Building in 2015 (view to NW)

Evaluation of the Engineering Building considered national, state, and local-level eligibility criteria. Archival research on the building failed to indicate any associations with important events or patterns of development. Although the Engineering Building does represent an important development in the advancement of engineering education on campus, the big Cold War-era push to develop science, technology, and engineering facilities in the San Diego area is most significantly tied to the establishment of UCSD in 1960 (City of San Diego 2007). Therefore, the Engineering Building does not appear eligible for listing under CRHR Criterion 1.

Additionally, archival research failed to uncover any association with persons important to our past, and the Engineering Building does not appear eligible for listing under CRHR Criterion 2.

The Engineering Building is a Modern style building exhibiting International style design elements, including its rectangular plan, horizontal bands of windows, strong right angles,

and use of simple building materials such as concrete, smooth stucco, brick, and glass. It is a late example of these stylistic elements, which have a period of significance in the San Diego region between 1935 and 1955 (City of San Diego 2007). At the time of its construction in 1962, project architect Roland M. Foreman from Sacramento had designed several other education buildings, including the science building on the campus of San Fernando Valley State College and the administration building at California State Polytechnic College (Bowker LLC 1962). No information was found regarding the other project architect, A. Dennis. Neither Foreman nor Dennis appear to be considered master architects. Although the Engineering Building appears to maintain the integrity of its original design, it does not appear to be a particularly notable example of the International style, of which extant examples can be found throughout college campuses in Southern California, often designed by master architects. For these reasons, the Engineering Building does not appear eligible for listing under CRHR Criterion 3.

The subject building is unlikely to yield any information important to prehistory or history, and does not appear eligible for listing under CRHR Criterion 4.

In consideration of City local-level designation criteria, the subject building does not appear to exemplify or reflect special elements of the City's cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development. The City's historic context statement on modernism describes the establishment of UCSD in 1960 as fulfilling the region's need for "a world class science and engineering graduate school in the La Jolla area," and does not make mention of the developments at SDSC during this time. Therefore, the building does not appear eligible under City Criterion A. As detailed above in consideration of national and state criteria, the subject building is not known to be associated with any significant persons or events, and does not appear eligible under City Criterion B. The Engineering Building exhibits elements of the International style; however, it is not a "true" example of the style and it falls outside the period of significance for the style in San Diego. It is also not the product of a master architect in the region. Therefore, the building does not appear eligible under City Criterion C or D. The subject building has never been determined eligible for listing in the NRHP or CRHR and is therefore not eligible under City Criterion E. Finally, the subject building is not part of a historic district or group of resources and does not appear eligible under City Criterion F.

CAM Center

The Computer Applied Mechanics (CAM) Center is a small single-story building, rectangular in plan, with a flat roof and painted concrete block walls (Figure 14). Fenestration consists of steel casement windows throughout, two metal entry doors located on the west elevation, and a metal roll-up door adjacent to a parking space on the east elevation. The building is very plain and contains no ornamentation. Portions of the north and east elevations are landscaped with a variety of succulent plants. The building was designed by the same state architects who designed the Engineering Building (Foreman and Dennis). Alterations include an addition to the south elevation in the late 1960s (to include the section with the roll-up door and driveway).

Evaluation of the CAM Center Building considered national, state, and local-level eligibility criteria. Archival research on the building failed to indicate any associations with important

events or patterns of development. Therefore, the CAM Center Building does not appear eligible for listing under CRHR Criterion 1.

Figure 14 CAM Center (view to west)

Additionally, archival research failed to uncover any association with persons important to our past, and the CAM Center Building does not appear eligible for listing under CRHR Criterion 2.

The CAM Center Building is a simple, ubiquitous utility building that is not indicative of any particular style. This type of building was not designed to be noticed. Rather, it was designed to blend in with its surroundings, as evidenced by a total lack of ornamentation. It is not the notable work of a master architect, and it was altered in the late 1960s to incorporate an addition to the south elevation. For these reasons, the CAM Center Building does not appear eligible for listing under CRHR Criterion 3.

The subject building is unlikely to yield any information important to prehistory or history, and does not appear eligible for listing under CRHR Criterion 4.

In consideration of City local-level designation criteria, the subject building does not appear to exemplify or reflect special elements of the City's cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development. Therefore, the building does not appear eligible under City Criterion A. As detailed above in consideration of national and state criteria, the subject building is not known to be associated with any significant persons or events, and does not appear eligible under City Criterion B. As described above, the CAM Center Building is a ubiquitous utility building and does not represent the notable work of a master architect. Therefore, the building does not appear eligible under City Criterion C or D. The subject building has never been determined eligible for listing in the NRHP or CRHR

and is therefore not eligible under City Criterion E. Finally, the subject building is not part of a historic district or group of resources and does not appear to be eligible under City Criterion F.

SDSC Historic District

The Proposed Project would be constructed and directly adjacent to the existing SDSC Historic District on campus. In 1997, 14 elements consisting of 10 buildings, 1 site, 1 structure, and 2 objects were determined eligible as contributors to the historic district and became officially listed in the NRHP under Criteria A, B, and C. A brief description of the district's historical significance is provided below (Christenson et al. 2005).

> San Diego State University's Historic District is an important and unique representation of evolving twentieth-century educational philosophies, architecture, and the significant accomplishments of the Works Progress Administration (WPA) in Southern California. The district's plan, layout, and design are directly associated with the goals of the early leaders of this institution who sought to move its educational philosophy from that of a curriculum based on rote memorization and drill to a more holistic approach of educating and developing the complete person's mind and body. Under the direction of these visionary presidents, San Diego Teachers College developed into a comprehensive modern university with the Historic District as its core, and this district remains the symbolic center of San Diego State University today.

Figure 15 provides an overview of the NRHP-listed SDSC Historic District buildings (highlighted in orange) and demonstrates their proximity to the buildings proposed for demolition as part of the current project (highlighted in green). Due to close proximity, the project has the potential to indirectly impact an NRHP-listed historical resource; therefore, mitigation is provided (see mitigation measure CUL-1, Mitigation Measures).

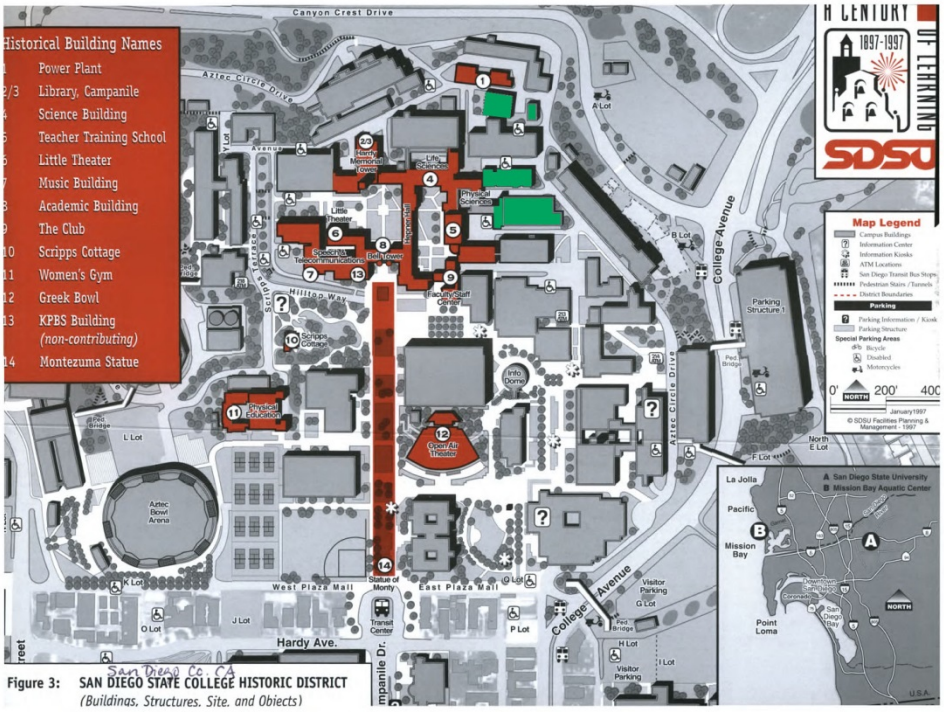

Figure 3: SAN DIEGO STATE COLLEGE HISTORIC DISTRICT
(Buildings, Structures, Site, and Objects)

Figure 15 SDSC Historic District Overview

Summary

All five buildings prepared to be demolished or physically altered were recorded and evaluated for national, state, and local significance, and were found not eligible for inclusion in the NRHP, CRHR, or as a City-designated historic resource. Therefore, none of the buildings within the Proposed Project area are considered a historical resource under CEQA. However, the buildings are located adjacent to the NRHP-listed SDSC Historic District. Potential indirect impacts to the historic district would be considered significant; therefore, mitigation is provided (see mitigation measure CUL-1).

Threshold (b): Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

No archaeological resources were identified within the Proposed Project area as a result of the California Historical Resources Information System records search or the Native American Heritage Commission (NAHC) Sacred Lands File search. An intensive-level survey was not conducted because of the heavily developed nature of the Proposed Project area. Although there are no surface indicators of archaeological resources, and the Proposed Project area has been developed for many years, it is possible that intact archaeological deposits may be encountered during ground-disturbing activities associated with construction of the Proposed Project. For these reasons, the Proposed Project area should be treated as potentially sensitive for archaeological resources. These impacts would be considered significant; therefore, mitigation is provided (see mitigation measure CUL-2).

Threshold (c): Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Published geological mapping (Kennedy 1975) and unpublished geotechnical investigations such as the geotechnical report prepared for the Proposed Project (Southland Geotechnical Consultants 2015), indicate that the site is underlain by the Stadium Conglomerate and the Mission Valley Formation, which have produced Eocene age vertebrate fossils in the region. Therefore, these geological units should be considered to have a high potential to contain significant paleontological resources (City of San Diego, 1996; County of San Diego, 2007). Following the recommendations of the San Diego Natural History Museum, mitigation in the form of a paleontological mitigation program is provided to reduce any potential impacts to significant paleontological resources (see mitigation measure CUL-3).

Threshold (d): Would the project disturb any human remains, including those interred outside of formal cemeteries?

There is no indication that human remains are present within the boundaries of the Proposed Project site. However, previously unidentified human remains may be uncovered during ground-disturbing activities such as foundation excavation. These impacts would be considered significant; therefore, mitigation is provided (see mitigation measure CUL-4).

Cumulative Analysis:

Potential unanticipated impacts to the integrity of previously unknown cultural resources may contribute to the overall regional decline in paleontological, archaeological, and historical evidence of past peoples and/or regional events. However, implementation of avoidance and minimization measures that are consistent with regionally accepted protocols and standards, such as described in mitigation measures CUL-1 through CUL-4, would avoid potential cumulative impacts to cultural resources.

MITIGATION:

CUL-1 **Protection of the Adjacent San Diego State College Historic District.** Prior to the commencement of construction activities associated with the Proposed Project, CSU/SDSU, or its designee, shall develop and incorporate into all demolition and construction plans specific measures to protect the portions of the historic district adjacent to the project site. The measures shall be developed in compliance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (the "Secretary of the Interior's Standards"). Such measures shall include stabilization of historic windows to protect them from the effects of vibration; protection of historic building materials; protection of walkways and landscaped areas within the district from construction equipment by ensuring that they are not used as staging areas or as access routes; and preservation of the National Register of Historic Places (NRHP) district contributing Works Progress Administration benches (some of which are currently situated near buildings proposed for demolition).

Of particular importance is the existing Physical Sciences Building (an NRHP-listed district contributor), which connects directly to the Engineering Laboratory Building and Industrial Technology Building (proposed for demolition). Care shall be taken to ensure that the adjacent elements of the original district buildings, including the exposed wooden posts, Spanish roof tiles, and other connecting materials, are not damaged or altered during demolition and construction of the adjacent buildings. Additionally, the existing Power Plant Building (an NRHP-listed district contributor) is very close to the Facilities Services Building / Quonset Hut (proposed for demolition). Demolition and construction plans shall detail how these elements will be protected and shall comply with the Secretary of the Interior's Standards. Contractors shall be given a brief worker awareness training to ensure that all individuals working on the project are aware of the historic district and understand which areas should be avoided during construction.

Finally, all design plans for new construction shall be compatible with the architectural character of the district in order to protect its historic integrity and setting, and shall be consistent with the Secretary of the Interior's Standards.

CUL-2 **Unanticipated Discovery of Archaeological Resources.** Subsequent to demolition and removal of existing structures and pavement from the site of the Proposed Project, CSU/SDSU, or its designee, shall retain a qualified archaeologist (i.e., one listed on the Register of Professional Archaeologists) to complete an archaeological survey of ground surfaces within the project area. In the event the survey identifies potentially intact concentrations of prehistoric archaeological materials, focused data recovery archeological excavations shall be undertaken prior to the commencement of construction in the area of concern. A qualified Native American representative shall be retained to observe all focused data recovery excavations, if any. The focused excavations shall characterize: horizontal and vertical dimensions; chronological placement; site function; artifact/ecofact density and variability; presence/absence of subsurface features; research potential extent; and the integrity of the resources.

If the archaeological site is determined to be a historical resource within the meaning of CEQA Guidelines Section 15064.5(a), the archaeologist shall comply with CEQA Guidelines Section 15126.4(b)(3)(A), which notes that preservation in place, where feasible, is the preferred mitigation approach, or, alternatively, CEQA Guidelines Section 15126.4(b)(3)(C), which requires preparation and adoption of a data recovery plan, as well as the submittal of all plans and studies to the California Historical Resources Regional Information Center. Alternatively, if the archaeological site qualifies as a unique archaeological resource (see CEQA Guidelines Section 15064.5(c)(3)), the

archaeologist shall treat the site in accordance with the provisions of Public Resources Code Section 21083.2.

All excavations and excavation and monitoring reports shall be completed consistent with California Office of Historic Preservation's Archeological Resources Management Reports: Recommended Contents and Format. The archaeological excavation and monitoring reports shall include all appropriate graphics, describing the results, analysis, and conclusions of the monitoring and excavation. All original maps, field notes, non-burial related artifacts, catalog information, and final reports shall be curated at a qualified institution within San Diego County, that complies with the State Historic Resource Commission's 1993 Guidelines for the curation of archaeological collections, as applicable.

CUL-3 **Unanticipated Discovery of Paleontological Resources.** Prior to the commencement of construction activities associated with the Proposed Project, CSU/SDSU, or its designee, shall retain a qualified paleontologist. The qualified paleontologist shall coordinate with the grading and excavation contractors, acting in accordance with the Society of Vertebrate Paleontology's Guidelines, and monitor all on-site activities associated with the original cutting of previously undisturbed sediments of Moderate to High resources sensitivity in order to inspect such cuts for contained fossils.

In the event that the monitoring results in the discovery of potentially unique paleontological resources within the meaning of Public Resources Code Section 21083.2, the qualified paleontologist will have the authority to halt excavation at that location and immediately evaluate the discovery. Following evaluation, if the resource is determined to be "unique" within the meaning of Public Resources Code Section 21083.2, the site shall be treated in accordance with the provisions of that section. Mitigation appropriate to the discovered resource, including recovery, specimen preparation, data analysis, and reporting, shall be carried out in accordance with the Society of Vertebrate Paleontology guidelines prior to resuming grading activities at that location. Grading activities may continue on other parts of the building site while appropriate mitigation is implemented.

Recovered fossils, along with copies of pertinent field notes, photographs, and maps, shall be deposited in an accredited paleontological collections repository. A final summary report that discusses the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils also shall be prepared in a manner that is consistent with the Society of Vertebrate Paleontology guidelines.

CUL-4 **Unanticipated Discovery of Human Remains.** If, during any phase of construction of the Proposed Project, there is the discovery or recognition of any human remains in any location other than a dedicated cemetery, the

following steps, which are based on Public Resources Code Section 5097.98, shall be taken (Cal. Code Regs., tit. 14, §15064.5(e)(1)):

1. There will be no further excavation or disturbance of the site or any nearby area reasonably susceptible to overlying adjacent human remains until:
    a. The San Diego County Coroner is contacted to determine that no investigation of the cause of death is required; and
    b. If the Coroner determines the remains to be Native American:
        i. The Coroner shall contact the Native American Heritage Commission within 24 hours.
        ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendant from the deceased Native American; and
        iii. The most likely descendent may make recommendations to CSD/SDSU for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or,
2. Where the following conditions occur, CSU/SDSU, or its designee, shall rebury the Native American human remains and associated grave good with appropriate dignity on the property in a location not subject to further subsurface disturbance (Cal. Code Regs., tit. 14, §15064.5(e)(2)):
    a. The Native American Heritage Commission is unable to identify a most likely descendant or the most likely descendant failed to make a recommendation within 24 hours after being notified by the Commission.
    b. The descendant identified fails to make a recommendation; or
    c. CSU/SDSU, or its designee, rejects the recommendation of the descendant, and mediation by the Native American Heritage Commission fails to provide measures acceptable to CSU/SDSU.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the identified mitigation measures would reduce potential impacts to cultural resources to less than significant levels.

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ENERGY				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Result in wasteful, inefficient, or unnecessary consumption of energy.			✔	
(b) Conflict with existing energy standards and regulations.			✔	
(c) Place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity.			✔	

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Energy Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix E to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project result in wasteful, inefficient, or unnecessary consumption of energy?

Implementation of the Proposed Project would increase the demand for electricity at the project site and gasoline consumption in the region during construction and operation; however, the new Engineering and Interdisciplinary Sciences Building would use energy (electricity) more efficiently. The Proposed Project is not anticipated to result in additional natural gas demand. In addition, petroleum use in motor vehicles would become more efficient as older vehicles are replaced over time.

Electricity

The operation of the Proposed Project would require electricity for multiple purposes including, but not limited to, lighting, appliances, equipment, and electronics. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage.

Electricity estimates were provided by P2S Engineering and are also discussed in the Greenhouse Gas Analysis. It was estimated that the Proposed Project would result in a net increase of approximately 389,500 kilowatt-hours per year in electricity demand compared to existing building operations.

Additionally, although the Proposed Project would result in a net increase in total square footage, the existing annual electrical demand for the project site is approximately 15.9 kilowatt-hours per square foot, whereas the Proposed Project's annual electricity demand would be approximately 14.7 kilowatt-hours per square foot. Therefore, as measured against the existing environmental condition, the Proposed Project would result in a 7% net decrease in annual electricity demand per square foot as a result of newer, energy-efficient building design.

The new Engineering and Interdisciplinary Sciences Building would be designed to meet LEED Silver certification or equivalent. To meet the prerequisite energy performance design standards for LEED certification, the project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems). No reductions for these energy-efficiency measures were accounted for in the energy usage calculations because the LEED design standards do not correspond to a particular reduction in energy use. It should be noted that these energy-efficiency measures are required prerequisites under the LEED certification system; however, the Proposed Project could potentially exceed these standards to achieve additional credits under the LEED certification program, which would result in additional on-site electricity use reductions.

The project would also meet the 2013 California Building Energy Efficiency Standards (24 CCR, Part 6) which improve the energy efficiency of nonresidential buildings by 30% beyond the previous 2008 standards.

Additionally, LED lighting would be installed throughout the Proposed Project in both interior and exterior spaces including offices, main lobby, corridors, restrooms, mechanical and electrical rooms, classrooms, stairwells, and all exterior spaces. It is estimated that installation of LED lighting results in an approximately 50% to 80% reduction in lighting-related energy use . It was conservatively estimated that LED installation for the Proposed Project would reduce lighting-related energy demand by 50%. A distributable digital lighting control system would also be installed, which would further reduce energy associated with indoor and outdoor lighting.

Although electricity consumption would increase due to the implementation of the project, the Proposed Project would go beyond the 2013 California Building Energy Efficiency Standards and would implement features that would reduce energy usage through the LEED certification program. Additionally, the Proposed Project would result in a 7% net decrease in annual electricity demand per square foot, as compared to the existing condition. Electricity consumption would not be inefficient or wasteful; therefore, impacts would be less than significant and no mitigation is required.

Natural Gas

The operation of the Proposed Project would require natural gas for water heating, as well as laboratory equipment (i.e., autoclaves, Bunsen burners). Natural gas is also required for space

heating, and chilled and steamed water, which would be provided by the on-campus cogeneration plant.

Natural gas estimates were provided by P2S Engineering. It was estimated that there would be a zero net change in the peak natural gas demand required for the Proposed Project as compared to existing building operations. The zero net change in natural gas demand is attributed to the fact that the majority of the existing Engineering Lab and Industrial Technology Building's and the Engineering Building's natural gas demand is from the use of laboratory equipment (i.e., autoclaves, Bunsen burners) and the majority of the Proposed Project's natural gas consumption would also be through the use of laboratory equipment. Considering that the overall use of laboratory equipment would not change, the Proposed Project would not result in additional natural gas demand.

Additionally, the existing peak natural gas demand for the project site is approximately 0.0230 cubic feet per hour per square foot, whereas the Proposed Project's annual natural gas demand would be approximately 0.0171 cubic feet per hour per square foot. Therefore, the Proposed Project would result in a 26% net decrease in the peak natural gas demand per square foot.

A new gas connection will be provided for the building, comprising a sub-gas-meter assembly, a gas pressure regulator, and an automatic gas seismic shutoff valve. The sub gas meter will give Campus Facilities the capability to monitor the gas consumption associated with the Proposed Project. Gas supply into the building, downstream of the regulator assembly, will be distributed at low pressure to all natural gas appliances and any other equipment with gas requirements inside the lab classrooms.

The project would also meet the 2013 California Building Energy Efficiency Standards (24 Cal.Code Regs., Part 6). Additionally, the new Engineering and Interdisciplinary Sciences Building would be designed to meet LEED Silver certification or equivalent. To meet the prerequisite energy performance design standards for LEED certification, the project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of CFC-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems (USGBC 2015b)). No reductions for these energy efficiency measures were accounted for in the energy usage calculations because the LEED design standards do not correspond to a particular reduction in energy use. These energy efficiency measures are required prerequisites under the LEED certification system; however, the Proposed Project could potentially exceed these standards to achieve additional credits under the LEED certification program, which would result in additional on-site natural gas use reductions.

The Proposed Project would not result in an additional peak natural gas demand compared to existing building operations. Additionally, the Proposed Project would result in a 26% net decrease in peak natural gas demand per square foot as compared to existing building operations. Natural gas consumption would not be inefficient or wasteful; therefore, impacts would be less than significant and no mitigation is required.

Petroleum

During operations, the majority of fuel consumption resulting from the Proposed Project would involve the use of motor vehicles traveling to and from the project site.

According to the Proposed Project's traffic report, the Proposed Project would result in a total of 525 trips per day. Petroleum fuel consumption associated with the project is a function of the vehicle miles traveled as a result of project construction and operations.

The Pavley motor vehicle regulations include measures aimed at reducing GHG emissions associated with transportation. These regulations are part of California's commitment to a nationwide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB has estimated that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency. In response to SB 375, CARB established targets for the SANDAG planning area, which are a 7% reduction in GHG emissions per capita by 2020 and a 13% reduction by 2035 as established in SANDAG's Regional Transportation Plan (SANDAG 2011). This reduction would occur by reducing vehicle miles traveled through the integration of land use planning and transportation. As such, petroleum usage is anticipated to decrease due to a reduction in vehicle miles traveled in the region and due to advances in fuel economy over time.

In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of criteria air pollutants and GHGs and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the Advanced Clean Cars rules are fully implemented, one in seven new cars sold in California (1.4 million) will be non-polluting or nearly so, including plug-in hybrids, fully electric battery-powered cars, and hydrogen-powered fuel cell vehicles. Meanwhile, gasoline and diesel-powered passenger vehicles would grow ever cleaner and more efficient. A variety of new technologies, from direct fuel injection to lower rolling resistance tires, will also cut pollution and create more energy-efficient vehicles.

Although the Proposed Project would see an increase in vehicle trips and CSU/SDSU does not have control over the choice of vehicles used by students and staff, vehicles associated with the project are expected to use less petroleum due to advances in fuel economy over time. Given these considerations, the Proposed Project would not contribute to inefficient or wasteful consumption of petroleum. Therefore, impacts related to wasteful, inefficient, or unnecessary consumption of petroleum would be less than significant and no mitigation measures are required.

Threshold (b): Would the project conflict with existing energy standards and regulations?

The Proposed Project would be subject to and would comply with, at a minimum, the 2013 California Building Energy Efficiency Standards (24 CCR, Part 6). Additionally, the Proposed Project would go beyond the requirements of the 2013 California Building Energy Efficiency Standards because the new Engineering and Interdisciplinary Sciences Building would be designed to meet LEED Silver certification or equivalent. The Proposed Project would not conflict with existing energy standards and regulations; therefore, impacts would be less than significant and no mitigation is required.

Threshold (c): Would the project place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity?

As discussed under the previous thresholds, the Proposed Project would result in an increased demand for electricity and petroleum, and would not result in an additional demand for natural gas. Design features would reduce the project's energy consumption by more than is required by the 2013 California Building Energy Efficiency Standards because the new Engineering and Interdisciplinary Sciences Building would be designed to meet LEED Silver certification or equivalent.

As previously discussed, the Proposed Project would not result in a net increase in natural gas demand. SDSU is able to produce 14 MW of power through the cogeneration plant and solar panels on campus. Natural gas is required to power the cogeneration plant; however, the two natural gas turbines combined have a maximum power generation of 10.4 MW. Therefore, the gas turbines would not create a significant additional demand on natural gas because natural gas intake is limited by the maximum power output of the turbines.

In addition, the current campus electricity demand is variable. Depending on the demand, either the cogeneration plant provides all of the campus's electricity, or some electricity needs to be provided by San Diego Gas & Electric (SDG&E). During the 2011 blackout that left much of the southwestern United States without electricity, SDSU's cogeneration plant remained in operation. SDSU was able to send 2 MW of electricity back to the grid and provided approximately 1,300 SDG&E residential customers with electricity. Therefore, the Proposed Project would not create a significant demand on SDG&E, because the majority of the campus's electricity needs are already provided by the cogeneration plant.

As previously discussed, although the Proposed Project would result in a net increase in square footage, the existing annual electrical demand for the project site is approximately 15.9 kilowatt-hours per square foot, whereas the Proposed Project's annual electricity demand would be approximately 14.7 kilowatt-hours per square foot. Therefore, as compared to the existing environmental conditions, the Proposed Project would result in a 7% net decrease in annual electricity demand per square foot as a result of newer, energy-efficient building design. As such, the Proposed Project would not create a significant demand for electricity.

According to the traffic report prepared for the Proposed Project, the Proposed Project would result in a total of 525 trips per day. Vehicles traveling to and from the project site would be the primary source of petroleum consumption. In response to SB 375, CARB established targets for the SANDAG planning area that are a 7% reduction in GHG emissions per capita by 2020 and a 13% reduction by 2035 as established in SANDAG's Regional Transportation Plan. This reduction would occur by reducing vehicle miles traveled through the integration of land use planning and transportation. In addition, it is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency. By 2025, when the Advanced Clean Cars rules are fully implemented, one in seven new cars sold in California (1.4 million) will be non-polluting or nearly so, including plug-in hybrids, fully electric battery-powered cars, and hydrogen-powered fuel cell vehicles. Meanwhile, gasoline- and diesel-powered passenger vehicles would

grow ever cleaner and more efficient. A variety of new technologies, from direct fuel injection to lower rolling resistance tires, will also cut pollution and create more energy-efficient vehicles. As such, petroleum usage associated with operation of the Proposed Project is anticipated to decrease due to a reduction in vehicle miles traveled in the region and due to advances in fuel economy over time. In addition, discounted passes for the public bus system and the San Diego Trolley are available to students at the Viejas Arena Ticket Office, which encourages students to use public transit options available in the area. Although the project would see an increase in vehicle trips, vehicles associated with the project are expected to use less petroleum due to reduced vehicle miles traveled and advances in fuel economy over time.

Therefore, impacts related to energy supplies and capacity would be less than significant, and no mitigation is required.

Cumulative Analysis:

The Proposed Project would result in an incremental increase in demand for electricity, natural gas, and petroleum. However, the Proposed Project would be subject to the 2013 California Building Energy Efficiency Standards (24 CCR, Part 6). Additionally, the Proposed Project would go beyond the requirements of the 2013 California Building Energy Efficiency Standards because the new Engineering and Interdisciplinary Sciences Building would be designed to meet LEED Silver certification or equivalent. Additionally, for the purposes of estimating the net change in energy use between existing structures and the Proposed Project, it was assumed that existing on-site buildings are currently operating under the previous 2008 Title 24 standards. Due to the age of the existing buildings, it is highly likely these structures do not meet 2008 Title 24 energy efficiency standards; as such, this analysis is considered conservative for the purposes of analyzing the net change in on-site energy use. The Proposed Project would result in a net decrease of 52 kilowatt-hours per square foot in electricity demand per year and would result in a minor increase of 5 kBtu per square foot in natural gas demand per year, as compared to the existing condition. Therefore, the Proposed Project is not anticipated to create a significant local or regional demand on electricity that would result in a cumulative impact. In addition, SDSU plans for its long-term energy use, which is evaluated within their Utility Master Plan. The Utility Master Plan discusses campus growth, anticipated utility demand, and how this demand will be met.

Although the Proposed Project would result in a total of 525 trips per day, which would increase petroleum consumption; the Pavley regulations would reduce GHG emissions while improving fuel efficiency. Additionally, once the Advanced Clean Cars rules are fully implemented, one in seven new cars sold in California (1.4 million) will be non-polluting or nearly so, including plug-in hybrids, fully electric battery-powered cars, and hydrogen-powered fuel cell vehicles. Meanwhile, gasoline- and diesel-powered passenger vehicles would grow ever cleaner and more efficient. Cumulative impacts would be less than significant.

MITIGATION:

The Proposed Project would not result in significant impacts; therefore, no mitigation is required.

GEOLOGY AND SOILS				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Expose people or structures to 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 Division of Mines and Geology 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), creating substantial 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				✔

GEOLOGY AND SOILS				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
disposal of waste water?				

ANALYSIS:

The following analysis is based on the technical report prepared by Southland Geotechnical Consultants, entitled *Geotechnical Input for CEQA-Compliant Document Engineering and Interdisciplinary Sciences Building Project San Diego State University San Diego, California*, (February 2015). The report is included in its entirety as Appendix F to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

Ground rupture is typically associated with moderate to large earthquakes occurring on active faults. The hazard associated with ground rupture is potential damage to structures situated across a ruptured fault trace.

A review of geologic maps and literature pertaining to the general study area indicates that there are no known major or "active" faults on or in the immediate vicinity of the project area. The project area is not located within a State-delineated “Alquist-Priolo Earthquake Fault Zone”. An "active" fault is defined by the California Geological Survey (CGS) as one which has "had surface displacement within Holocene time (about the last 11,000 years)".

Evidence of active faulting at the SDSU campus was not identified or reported during the previous geologic/geotechnical studies performed on and near the project areas. The nearest known active faults are the Rose Canyon fault located approximately 6 miles west of the SDSU campus, the Coronado Bank fault located offshore approximately 20 miles west of the campus, and the Elsinore fault located approximately 35 miles northeast of the campus. The San Andreas fault is located approximately 80 miles east-northeast of SDSU. A map showing the regional faults in southern California is provided in Appendix F, Geotechnical Report, Figure 3.

Based on a review of the City of San Diego's Seismic Safety Study maps (City of San Diego, 2008), the SDSU campus is located approximately 0.3 mile east-northeasterly of a mapped trace of the La Nacion fault. The La Nacion fault is generally not known to displace Quaternary deposits, and, therefore, the La Nacion fault is currently interpreted by most geologists not to be

an "active" fault based on CGS criteria. Surficial evidence of onsite active faulting was not observed during site visits.

Since no mapped active fault traces are known to cross the Proposed Project area, the potential for surface rupture (ground breakage along fault traces) is considered very low and impacts would be less than significant. (See Appendix F, Geotechnical Report, Figures 3 and 4.)

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Southern California is a seismically active region. Ground shaking due to earthquakes on active regional faults should be expected at the Proposed Project site and may impact the proposed improvements (see Appendix F, Geotechnical Report, Figures 3 and 4). However, as noted above, the nearest known fault (La Nacion) is not known as an active fault. Moreover, the new building and all related improvements would be considered in compliance with all applicable building standards relative to seismic effects. Nonetheless, mitigation is recommended that would reduce any potential impacts related to seismic shaking to less than significant.

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Liquefaction is caused by strong vibratory motion (typically due to earthquakes) and may occur in areas underlain by loose granular soils and a near-surface groundwater table. Soils that liquefy may settle. Improvements underlain by soils that liquefy may also settle and suffer damage. The potential for seismically-induced liquefaction at the Proposed Project site is considered very low due to the density and grain-size characteristics of the geologic/soil units in the Proposed Project area and the depth to a static groundwater surface (likely greater than approximately 100 feet below the existing ground surface). Therefore, impacts would be less than significant.

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Based on the geotechnical studies, there are no known or suspected landslides in the Proposed Project area. The Proposed Project area is located on a relatively level to gently northeast-sloping mesa area. The geologic formations underlying the Proposed Project area are generally not known to be susceptible to landslides (see Appendix F, Geotechnical Report, Figure 2). The Mission Formation underlies the majority of the mesa area of the northern SDSU campus and the SDSU-EIS project area. The Mission Valley Formation is described as light olive gray, silty fine to medium sandstone with interbeds of gravel/cobble conglomerate. Well-cemented zones locally occur within the Mission Valley Formation. The sedimentary formations exposed on the SDSU campus and on adjacent areas are interpreted to be generally flat-lying to very gently dipping with respect to their sedimentary bedding. No major folding of the onsite geologic units has been previously reported and is not anticipated in the general SDSU vicinity.

Temporary slopes may be excavated during project construction activities and may expose adverse geologic conditions, such as adversely-oriented joints or loosely embedded

cobbles/boulders. Temporary slope failures could potentially damage project improvements under construction and adjacent structures/improvements.

The depth of the static groundwater surface likely exceeds approximately 100 feet below the existing ground surface. Perched groundwater seeps have been reported in some of previous excavations on the SDSU campus. Perched groundwater conditions may impact the Proposed Project, especially during excavation for the below-grade level. The likely sources of the groundwater seepage are the infiltration of landscape irrigation waters and precipitation. Seasonal fluctuations of the onsite groundwater conditions may occur.

Flood inundation of the Proposed Project area is not likely due to its site elevation (higher than approximately 425 feet) and distance from natural drainage channels susceptible to flooding during precipitation events, and due to its site elevation and distance from projected areas of inundation by a dam failure (such as Lake Murray).

Threshold (b): Would the project result in substantial soil erosion or the loss of topsoil?

Disturbance of the ground surface during construction of the Proposed Project may increase or decrease the erosion potential of a site. Erosion of exposed soils is as a potential concern if not anticipated and mitigated.

Threshold (c): Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Unconsolidated soils on the Proposed Project area generally consist of existing fill soils. These soils are typically considered potentially compressible and may possess unacceptable settlement characteristics under structural and fill loads. The SDSU campus and surrounding areas have included placement of fill in various locations and included the infilling of previously existing canyons. Some fill soils likely exist on portions of the SDSU-EIS project area. These fill soils were likely placed during previous grading to construct relatively level building pads for the existing IT and EL buildings and associated improvements. Fill also exists as backfill behind retaining walls and in existing underground utility trenches in the project area.

The fill soils in the project area are likely to be primarily comprised of locally-derived materials. The fill soils generally range in composition from sandy clays to silty and clayey sands, commonly with abundant gravel/cobbles. Some fill areas may include boulder-sized rock fragments, concrete/asphalt chunks and debris.

If not mitigated, improvements built on potentially compressible, unconsolidated soils may crack as a result of soil settlement. Excavations exposing unconsolidated soils may be subject to sloughing.

Threshold (d): Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) , creating substantial risks to life or property?

Expansive soils primarily consist of clayey soils that have a potential for significant volume changes (shrinking and swelling) with moisture fluctuations. Expansive soils in the Proposed Project area may include clayey existing fill soils and the clayey portions of the onsite geologic

formations. If not mitigated, near-surface expansive soils may cause uplift and cracking of slabs, pavements and other improvements. Other expansive soil-related problems include poor drainage and poor establishment of vegetation. Expansive soils may be a potential geotechnical concern, if not mitigated at the Proposed Project site.

Threshold (e): Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where severs are not available for the disposal of waste water?

Project wastewater would be disposed of through a sanitary sewer system discharging to the existing sewer infrastructure. Therefore, the Proposed Project would have no impact relative to septic tanks or alternative wastewater disposal systems.

Cumulative Analysis:

Impacts related to geology and soils are largely site-specific in that they are confined to the project site. As such, with implementation of the proposed mitigation, the Proposed Project would not result in significant cumulative impacts.

MITIGATION:

Based on the analysis conducted, the geotechnical conditions in the Project area would not significantly impact the development and implementation of the Proposed Project if appropriate geotechnical design recommendations developed from site-specific geotechnical investigations are included in the design and construction of the Proposed Project. The incorporation of these site-specific recommendations into the design and construction of the Project components would reduce any potentially significant impacts to a level below significant. On that basis, the following mitigation measures are identified and incorporated into the Proposed Project to reduce the potentially significant geotechnical effects of the Proposed Project to a less-than-significant level:

GEO-1 Prior to the commencement of design and construction activities relating to the Proposed Project, CSU/SDSU, or its designee, shall conduct, or cause to be conducted, a geotechnical investigation in conformance with the requirements of the California Building Code ("CBC") and International Building Code ("IBC"). The site-specific geotechnical investigations will include, to the extent required by the CBC and IBC, subsurface exploration, laboratory testing, and geotechnical analysis. The investigations will address the potential for landslides/slope instability, erosion, unconsolidated soils, expansive soils, groundwater seepage, flood inundation and seismic shaking. An evaluation of the suitability of the on-site soils and rock for use as fill also shall be made during the site-specific geotechnical studies. (Reference shall be made to Section 300 of the "Greenbook," which provides specifications of typical fill materials and their typical maximum allowed dimensions.)

Based on the results of the site-specific investigations, geotechnical design recommendations shall be developed and included in the design and

construction of the Proposed Project in conformance with applicable regulatory guidelines, including CBC and IBC requirements.

GEO-2 During project design and construction activities, CSU/SDSU, or its designee, shall use proper grading techniques (with appropriate compaction efforts) and stormwater pollution prevention devices (per regulatory agency guidelines), revegetate disturbed areas, and construct appropriate drainage provisions to reduce the potential for erosion on the Project site, in conformance with applicable regulatory guidelines, including CBC and IBC requirements. Additionally, CSU/SDSU, or its designee, shall periodically remove accumulated eroded soils and debris from surface drains, as needed.

GEO-3 During grading activities associated with development of the Proposed Project, CSU/SDSU, or its designee, shall require that compressible soils present on the site be removed where structural fill areas are underlain by unconsolidated soils and replaced with properly compacted or deep foundation systems, which extend through the compressible soils and are supported by the underlying firm natural soils, in conformance with applicable regulatory guidelines, including CBC and IBC requirements.

GEO-4 During grading activities associated with development of the Proposed Project, CSU/SDSU, or its designee, shall prohibit the placement of expansive soils within the upper few feet of finished grade, or mandate that "special" deepened and/or stiffened foundation systems for proposed structures be utilized, in conformance with applicable regulatory guidelines, including CBC and IBC requirements. Surface and subsurface drainage provisions also may be implemented to reduce moisture fluctuations in subgrade soils.

GEO-5 To the extent the geotechnical investigation conducted pursuant to Mitigation Measure GEO-1 concludes that groundwater/seepage issues are present on the Project site, CSU/SDSU, or its designee, shall design and construct subsurface and surface drains in filled areas and behind retaining walls, in conformance with applicable regulatory guidelines, including CBC and IBC requirements. In addition, the shoring and dewatering of excavations, as needed, shall be undertaken to reduce the potential for caving of excavations due to groundwater seeps.

GEO-6 During design of the Proposed Project, CSU/SDSU, or its designee, shall adhere to current design parameters of the CBC (including, but not limited to, CBC Chapters 16 and 18) in order to reduce the effects of seismic shaking.

GEO-7 During site grading activities associated with Proposed Project build-out, CSU/SDSU, or its designee, shall require the appropriate control of surface waters and soil containment on disturbed ground surfaces in conformance with applicable regulatory guidelines, including CBC and IBC requirements, in order to reduce construction-related mudflows.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Incorporation of the site-specific geotechnical mitigation measures into the design and construction of the project components would reduce any potential geology/soils impacts to a level of "less than significant".

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GREENHOUSE GAS EMISSIONS				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?			✔	

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Greenhouse Gas Analysis for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix G to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Impacts

Greenhouse Gas ("GHG") emissions would be associated with the construction phase of the Proposed Project through use of construction equipment and vehicle trips. Emissions of carbon dioxide ("CO_2") and other GHGs were estimated using the CalEEMod model. A detailed description of the construction schedule is provided above in the Project Description. The information contained therein was used as CalEEMod inputs.

CalEEMod defaults were used for construction equipment specifications, and the equipment mix is meant to represent a reasonably conservative estimate of construction activity. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site for approximately 8 hours per day, 5 days per week (22 days per month), during project construction. Construction worker estimates by construction phase were provided by SDSU, and traffic estimates for construction worker trips provided by LLG were applied to peak building construction periods. Peak building construction also included grading and excavation activities that would require approximately 7,000 cubic yards of export over a 3-week period resulting in approximately 700 export truck loads.

Table 11, Estimated Construction GHG Emissions, shows the estimated annual GHG construction emissions associated with the Proposed Project, as well as the annualized construction emissions over a 30-year "project life."

Table 11
Estimated Construction GHG Emissions

Construction Year	GHG Emissions (metric tons CO_2E/year)
2015	165
2016	621
2017	451
2018	256
Total construction emissions	**1,493**
Annualized construction emissions	**50**

Source: CalEEMod Version 2013.2.2. See Appendix A of the Greenhouse Gas Analysis Report for complete results.

Operational Impacts

Operation of the Proposed Project would result in GHG emissions from vehicular traffic, area sources (architectural coatings, consumer products and landscaping), electrical generation, natural gas consumption, water supply (including wastewater generation), and solid waste. Because operation of the existing buildings also generates GHG emissions, the emissions associated with the existing buildings were subtracted from those resulting from the Proposed Project, and the net change in GHG emissions was compared to the significance threshold, which includes a "screening threshold" of 900 metric tons ("MT") CO_2E per year; emissions below that level are less than significant. Please see Appendix G to this Initial Study, Section 4, for additional information regarding the significance threshold.

Transportation: Vehicular Traffic

The Proposed Project would impact air quality through the vehicular traffic generated by the Proposed Project. According to the Proposed Project's traffic report (LLG 2015), the Proposed Project would result in a total of 525 trips per day. Annual GHG emissions from motor vehicle trips for full project buildout were quantified using CalEEMod. Please see Appendix G to this Initial Study, Appendix A, for additional details and model assumptions).

Energy Consumption

Natural Gas

In addition to estimating mobile source emissions, CalEEMod was used to estimate emissions from the natural gas combustion. Natural gas estimates were provided by P2S Engineering Inc. It was determined that there would be no additional peak natural gas demand for the Proposed Project compared to existing building operations. Existing and projected annual natural gas

consumption is not currently available; therefore, for the purpose of conservatively analyzing natural gas demand for the existing facilities and the Proposed Project, annual usage was calculated as follows:

Existing and proposed annual natural gas consumption = (3,195 cubic feet per hour x 1020 Btu/cubic feet)/1000 Btu/kBtu) x 8760 hours/year = 28,547,964 kBtu/year.

Total kBtu per year was used as the model input. The default energy input ratios for Title 24 and non-Title 24 natural gas consumption as provided in CalEEMod were revised to reflect the natural gas consumption estimates for the existing facilities and Proposed Project. Please see Appendix G to this Initial Study, Appendix A, for additional information.

Electricity

The generation of electricity through combustion of fossil fuels typically results in emissions of CO_2 and, to a smaller extent, CH_4 and N_2O. Annual electricity emissions were estimated using CalEEMod. It was estimated that the Proposed Project would result in a net increase of approximately 389,500 kilowatt hours per year (kWh/yr) in electricity demand compared to existing building operations. The default energy input ratios for Title 24 and non-Title 24 electricity use and lighting as provided in CalEEMod were revised to reflect the existing and Proposed Project energy estimates.

The Proposed Project would meet the 2013 California Building Energy Efficiency Standards (Title 24, Part 6, of the California Code of Regulations). Additionally, the new Engineering and Interdisciplinary Sciences Building would be designed to meet Leadership in Energy and Environmental Design (LEED) Silver certification or equivalent. To meet the prerequisite energy performance design standards for LEED certification, the project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems. No reductions for these energy efficiency measures were accounted for in the GHG emission calculations because the LEED design standards do not correspond to a particular reduction in energy use. It should be noted that these energy efficiency measures are required prerequisites under the LEED certification system; however, the Proposed Project could potentially exceed these standards to achieve additional credits under the LEED certification program, which would result in additional on-site energy use reductions.

Additionally, light emitting diode (LED) lighting would be installed throughout the Proposed Project in both interior and exterior spaces including offices, main lobby, corridors, restrooms, mechanical and electrical rooms, classrooms, stairwells, and all exterior spaces. It is estimated that installation of LED lighting results in an approximately 50% to 80% reduction in lighting-related energy use. It was conservatively estimated that LED installations for the Proposed Project would reduce lighting-related energy demand by 50%. A distributable digital lighting control system would also be installed which would further reduce energy associated with indoor and outdoor lighting.

Water Supply

Water supplied to, and wastewater generated as a result of, the Proposed Project requires the use of electricity. Accordingly, the supply, conveyance, treatment, and distribution of water would indirectly result in GHG emissions through use of electricity. Similarly, wastewater generated by the Proposed Project requires the use of electricity for conveyance and treatment, along with some GHG emissions generated during wastewater treatment. Water consumption and wastewater generation estimates were provided by P2S Engineering Inc. As shown in Section 1.2, Table 12, water use associated with the Proposed Project would decrease compared to existing on-site building water use. Associated electricity consumption from water use and wastewater generation were estimated using CalEEMod. The default water input ratios for indoor and outdoor water use as provided in CalEEMod were applied to the existing and Proposed Project water estimates.

Table 12

Estimated Water Use (gallons per day)

	Existing Water Use	Proposed Water Use	Net Change
Engineering Lab and Industrial Technology Buildings (existing)	5,952[1]	0	(5,952)
Engineering Building (existing)	4,150[1]	4,150	0
Engineering and Interdisciplinary Sciences Building (proposed)	0	4,800[1]	4,800
CAM Labs (existing)	341[1]	0	(341)
Quonset Hut (existing)	1,528[1]	0	(1,528)
Total Net Change			**(3,021)**

Source: Jacobs Carter Burgess 2008a

As discussed previously, the new Engineering and Interdisciplinary Sciences Building would be designed to meet LEED Silver certification or equivalent. To meet the prerequisite water conservation and efficiency design standards for LEED certification, the project would be required to demonstrate a 20% reduction in indoor water use from baseline water consumption for a building of this type, and either an elimination of outdoor irrigation or a 30% reduction in outdoor irrigation water use. Reductions associated with these measures were accounted for in the water-related GHG emission calculations. These water efficiency measures are required prerequisites under the LEED certification system; however, the Proposed Project could potentially exceed these standards to achieve additional credits under the LEED certification program, which would result in additional on-site water reductions and associated use of electricity.

Solid Waste

The Proposed Project would generate solid waste and would therefore result in CO_2E emissions associated with landfill off-gassing. Solid waste generation was derived from the CalEEMod default rate of 1.3 tons per 1,000 square feet of building space. Emission estimates associated with solid waste were estimated using CalEEMod. It is estimated that the Proposed Project would result in a net increase of approximately 50 tons per year compared to existing on-site building waste generation.

SDSU operates an extensive recycling and waste diversion program on campus, which includes composting, construction and demolition waste reuse and recycling, automotive product recycling, and electronic recycling programs. These programs divert more than 70% of campus waste from landfills. It was conservatively estimated that the Proposed Project would result in an approximately 50% solid waste diversion rate.

Area Sources

CalEEMod was also used to estimate GHG emissions from the project's area sources, which include landscaping. Additional details and model assumptions regarding operational utility demand estimates and associated emissions are provided in Appendix G to this Initial Study, Appendix A.

As shown in Table 13, the net change in estimated GHG emissions resulting from the Proposed Project relative to existing emissions would be 378 MT CO_2E per year. CalEEMod accounts for motor vehicle reduction standards that include Pavley and the Low Carbon Fuel Standard. However, the estimate provided in Table 13 does not include other reductions from state and federal regulations to reduce GHG emissions. Complete details of the emissions calculations are provided in Appendix G to this Initial Study, Appendix A.

Table 13
Proposed Project Estimated GHG Emissions
(metric tons CO_2E/year)

Source	Existing Buildings	Proposed Project	Net Change
Motor vehicles	1,646	2,068	422
Area sources	<1	<1	0
Natural gas combustion	1,533	1,533	0
Electrical generation	774	720	(54)
Water supply	18	11	(7)
Solid waste	88	55	(33)
Annualized construction emissions	N/A	50	50
Total	**4,059**	**4,437**	**378**

Source: See Appendix A of the Greenhouse Gas Analysis Report for complete results.

Emissions from the Proposed Project would be below the City of San Diego's 900 $MTCO_2E$ screening threshold. As such, impacts would be less than significant.

Threshold (b): Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Scoping Plan, approved by the California Air Resources Board ("CARB") on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Relatedly, in the Final Statement of Reasons for the amendments to the CEQA Guidelines, the California Natural Resources Agency observed that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others. The Proposed Project will comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Additionally, as discussed in Section 3.2.2, Executive Order S-3-05 established a goal to reduce statewide GHG emissions to the 1990 level by 2020; and to reduce statewide GHG emissions to 80% below the 1990 level by 2050.[2] The Proposed Project would support achievement of the Executive Order's near-term 2020 goal (as codified in AB 32) and the long-term 2050 goal through a number of sustainability design features that would be implemented as part of the project, including meeting LEED Silver certification or equivalent (see discussion of GHG emission calculations for specific design elements and utility demand reductions). Moreover, the project would result in a net reduction in overall water demand, and a net reduction in electricity use per square foot compared to the existing on-site facilities as a result of the demolition of old, inefficient structures and the construction of a newer, energy-efficient structure and associated improvements.[3]

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[2] In adopting AB 32, the Legislature did not adopt the 2050 horizon-year goal from Executive Order No. S-3-05; and, in the last legislative session (2013-2014), the Legislature rejected bills proposing to enact the Executive Order's 2050 goal. (See *Cleveland National Forest Foundation v. San Diego Association of Governments* (2014) 231 Cal.App.4th 1056, 1096; *Professional Engineers in California Government v. Schwarzenegger* (2010) 50 Cal.4th 989, 1015; and see Office of Planning and Research, *Guide to the California State Executive Branch* (Oct. 2004), p. 8.)

[3] CARB, in its 2008 Scoping Plan, determined that retrofitting existing State, school, residential and commercial buildings could achieve a reduction of 20 million metric tons of CO_2E by 2020. The importance of retrofitting existing buildings also was recognized via the enactment of AB

As discussed above, the project would not exceed the City of San Diego's screening threshold of 900 MT CO_2E per year. The project would also be well below the Bay Area Air Quality Management District's interim threshold of 1,100 MT CO_2E per year for commercial, industrial and public land-use projects (BAAQMD 2010)[4]; the Sacramento Metropolitan Air Quality Management District's threshold of 1,100 MT CO_2E per year for projects with construction or operational phases (SMAQMD 2014); and the South Coast Air Quality Management District's draft, interim threshold of 3,000 MT CO_2E per year for residential and commercial projects (SCAQMD 2008). Because the project would not exceed the screening thresholds of the City of San Diego and other air districts with expertise in the area, this provides support for the conclusion that the project would not conflict with Executive Order S-3-05's GHG reduction goals for the State of California.

At the regional level, SANDAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) has been adopted for the purpose of reducing GHG emissions attributable to passenger vehicles in the San Diego region. While the RTP/SCS does not regulate land use or supersede the exercise of land use authority by SANDAG's member jurisdictions (i.e., the County of San Diego and cities therein), the RTP/SCS is a relevant regional reference document for purposes of evaluating the intersection of land use and transportation patterns, and the corresponding GHG emissions. Here, the RTP/SCS is not directly applicable to the Proposed Project because the underlying purpose of the RTP/SCS is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout San Diego County as stipulated under SB 375. The Proposed Project would maintain the existing engineering academic land use through the removal and/or improvement of existing on-site facilities and programming. However, for reasons outlined above, the project would support the goals and policies of the RTP/SCS. The project would also improve the efficiency and programming of an existing facility located on the SDSU main campus within a currently urban development context. Therefore, the infill development nature of the project would support the overarching intent of the RTP/SCS.

Finally, neither SDSU, the local jurisdictions, nor the San Diego Air Pollution Control District has adopted GHG reduction measures that would apply to the GHG emissions associated with

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758 in 2009. (See http://www.arb.ca.gov/cc/greenbuildings/greenbuildings.htm and http://www.arb.ca.gov/cc/greenbuildings/retrofits. htm, accessed on Feb. 7, 2015.) The project's proposal to create a more energy-efficient facility for the College of Engineering and Interdisciplinary Sciences is consistent with the State's recognition that the relative inefficiencies of existing structures need to be remedied through the renovation, retrofit and upgrade of those buildings.

[4] On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the Air District had failed to comply with CEQA when it adopted the Thresholds. The court did not determine whether the Thresholds were valid on the merits, but found that the adoption of the Thresholds was a project under CEQA. After multiple appeals, the decision was appealed to the California Supreme Court where the matter is currently pending.

the Proposed Project. CSU/SDSU has implemented sustainability strategies and programs to reduce energy consumption, water consumption, and solid waste generation, which indirectly reduce GHG emissions associated with activities throughout the CSU system and the SDSU campus. The Proposed Project would be consistent and compliant with these programs and initiatives. These programs and initiatives, however, were not adopted with the specific purposes of reducing GHG emissions. At this time, no mandatory GHG regulations or finalized agency guidelines would apply to implementation of this project, and no conflict would occur. Therefore, this impact would be less than significant.

Cumulative Analysis:

GHG emissions are said to result in an increase in the Earth's average surface temperature, commonly referred to as "global climate change." Global climate change, by definition, is cumulative as it is the result of combined worldwide contributions of GHGs to the atmosphere over many years. Impacts associated with the project discussed above also serve as the project's cumulative impact analysis.

CalEEMod was used to estimate cumulative GHG emissions from various project components, such as construction, vehicular trips, area sources, electricity, water supply, and solid waste (please see Appendix G to this Initial Study, Appendix A). The estimated net change in combined GHG emissions would be 378 MT CO_2E per year. This estimate does not include reductions from state and federal regulatory programs to reduce GHG emissions, which are implemented to reduce nationwide and statewide cumulative GHG emissions. Emissions from the project would be below the City's 900 MT CO_2E screening threshold. Additionally, the project would be designed to meet LEED Silver certification or equivalent and assist in compliance with CSU and SDSU energy conservation goals. Therefore, the project would not result in a cumulative considerable contribution to global GHG emissions and would not conflict with the goals of AB 32. Cumulative impacts would be less than significant.

MITIGATION:

The Proposed Project would not result in significant impacts; therefore, no mitigation is required.

HAZARDS AND HAZARDOUS MATERIALS				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 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 the public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✔
(f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✔
(g) Impair implementation of or physically interfere with an adopted emergency		✔		

HAZARDS AND HAZARDOUS MATERIALS				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
response plan or emergency evacuation plan?				
(h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✔

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Hazards Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix H to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction/Temporary Impacts

A variety of hazardous substances and wastes would be stored, used, and generated on the Proposed Project site during construction of the Proposed Project. These would include fuels for machinery and vehicles, new and used motor oils, cleaning solvents, paints, and storage containers and applicators containing such materials. Accidental spills, leaks, fires, explosions, or pressure releases involving hazardous materials represent a potential threat to human health and the environment if not properly treated. Therefore, a potentially significant impact related to the unintended release of hazardous materials during routine transport, use, or disposal might occur during project construction. (See mitigation measures HAZ-1, HAZ-2, and HAZ-3.)

Due to the age of the buildings planned for demolition and/or renovation, asbestos and/or lead-based paint materials may be encountered. Potential release of these materials to the environment would result in a significant impact; therefore, mitigation is provided (see mitigation measure HAZ-4).

Operational/Permanent Impacts

The project would entail the introduction of a new building and new landscaped courtyard. The new building would consist, internally, of increased number and sizes of teaching labs and research facilities (including office and meeting spaces; bench spaces; and preparation, service, and technology spaces); a phage center; imaging center with MRI capability; and entrepreneurial center with laboratories and offices. These proposed land uses would entail the introduction of a use that would result in the routine transport, use, or disposal of hazardous materials. In order to reduce this potential impact, mitigation is provided (see mitigation measure HAZ-1).

Threshold (b): Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction/Temporary Impacts

Portions of the Proposed Project site are currently used as parking spaces. A portion of the Engineering Labs Building was used as a garage, and it is likely that the soil in the trenches contains residual automotive and hydraulic fuel. Currently, steel plates cover the trenches.

Impacted soil may be encountered during grading and redevelopment activities at these properties; therefore, a potentially significant impact related to unintended release of contaminated soils into the environment may occur during project construction. In order to reduce this potential impact, mitigation is provided (see mitigation measures HAZ-1, HAZ-2, HAZ-3, and HAZ-5).

The investigation described in this report found no indication that impacted groundwater or surface water may be encountered during grading and redevelopment activities at the project site. Nonetheless, mitigation is provided requiring all construction workers involved with grading, excavation, or trenching work to be trained to recognize signs of groundwater contamination, to observe any exposed groundwater for evidence of contamination, and to halt work in the immediate area of the discovery and follow required procedures in the event groundwater contamination indicators are observed (see mitigation measure HAZ-3).

Operational/Permanent Impacts

The project would entail the introduction of a new Engineering and Interdisciplinary Sciences Building and new landscaped courtyard. The proposed land uses would not result in foreseeable upset and accident conditions involving the release of hazardous chemicals into the environment.

Threshold (c): Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction/Temporary Impacts

The Proposed Project is associated with the SDSU campus, an existing university. Construction activities may result in exposure of contaminated soils, which may result in unintended release of hazardous materials or wastes into the environment within 0.25 mile of this school. These potential impacts would be significant. Mitigation is provided (see mitigation measures HAZ-1, HAZ-2, HAZ-3, and HAZ-5).

Operational/Permanent Impacts

The project would entail the introduction of a new building and new landscaped courtyard. These proposed land uses would not entail the introduction of a new hazardous emission or hazardous material source on the SDSU campus.

Threshold (d): Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment?

Construction/Temporary Impacts and Operational/Permanent Impacts

The site of the Proposed Project is listed in the following databases: CA LUST, CA UST, CA SWEEPS UST, and CA SAN DIEGO CO. SAM.

The CA LUST, CA UST, and SAN DIEGO CO. SAM listings indicate one soil-only release related to the site of the proposed project (the Engineering Labs Building). DEH files indicate that diesel fuel/boiler fuel oil was released; the release was discovered on June 23, 1988, and the case was closed on December 15, 1989. Two documents (a LUST case report and a Site Assessment Report) that contained information regarding this release case were obtained from DEH. The Site Assessment Report stated that all constituent concentrations, except for total fuel hydrocarbons as diesel, were below the detection limit. According to the report, the soil contamination in the shallow soils suggests minimal horizontal and vertical migration and does not pose a significant risk of direct exposure to potential receptors. Based on the closed case status and conclusions from the Site Assessment Report, the project site would not create a significant hazard to the public or the environment.

However, given the information provided above, impacted soil may be encountered during grading and redevelopment activities near the Engineering Labs Building; therefore, a potentially significant impact related to unintended release of contaminated soils into the environment may occur during project construction. In order to reduce this potential impact, mitigation is provided (see mitigation measures HAZ-1, HAZ-2, HAZ-3, and HAZ-5).

Nearby Sites

While nearby sites are not located on the Proposed Project site, due to their proximity to the Proposed Project site, they were evaluated because they could potentially result in a significant impact to the public or the environment at the Proposed Project site.

Fourteen nearby sites of concern were identified. Six were listed in the CA Notify 65 database, which is associated with permitting. Four sites were listed in the CA LUST, CA SLIC, SAN DIEGO CO. SAM, and/or CA HIST CORTESE databases. These databases indicate that a release had occurred at the site. Three of the four sites received case closure and are located greater than 0.30 miles from the Proposed Project. One site, Unocal #3991, has an open case status; however, according to the DEH, the site is open as a means to track potential future disposal of the impacted soil that remains in place. According to the DEH case manager, the site does not pose a threat to human health since it is currently used as a parking lot. Two sites were listed in the HRHR database. These two sites have no indication of an unauthorized release. In short, these 12 sites would not result in significant impacts to the public or environment because the release case has received case closure, the site is located greater than 0.30 miles from the Proposed Project and the contaminants are not expected to migrate that far, and/or the release case does not pose a human health risk.

Two sites identified on GeoTracker were listed with an open case status. The 7-11 Food Store #20174 at 6571 El Cajon Boulevard is located 0.85 mile southeast of the Proposed Project site. The second site, Fairlane Cleaners & Laundry at 6505 El Cajon Boulevard, is located approximately 0.95 mile southeast of the Proposed Project site. Although these cases are open, because groundwater flow is away from the Proposed Project and the sites are greater than 0.50 mile from the Proposed Project site, the two sites would not result in significant impacts to the public or environment.

Threshold (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 for people residing or working in the project area?

Construction/Temporary Impacts and Operational/Permanent Impacts

The Proposed Project site is not located within an airport land use plan (City of San Diego 2011). The closest airport to the Proposed Project site is Montgomery Field, which is located approximately 3.5 miles northwest of the Proposed Project site.

Threshold (f): For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Construction/Temporary Impacts and Operational/Permanent Impacts

The Proposed Project site is not located within the vicinity of a private airstrip. The closest airport (which is public), Montgomery Field, is located approximately 3.5 miles northwest of the Proposed Project site. The helipad associated with Sharp Grossmont Hospital is located approximately 4.1 miles east of the Proposed Project site. Construction or development of the

Proposed Project would not result in the introduction of a new hazard within the vicinity of a private airstrip that could endanger people residing or working in the Proposed Project area.

Threshold (g): Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction/Temporary Impacts

SDSU maintains an Emergency Operations Plan that would be implemented in the event an on- or off-campus emergency warrants evacuation of the campus. The plan states that in the event of an emergency, College Avenue would be used as an evacuation route and that the roadway is likely to experience heavy traffic congestion during emergencies.

Construction of the Proposed Project would result in a temporary increase in traffic volumes along College Avenue, although with implementation of recommended mitigation the related impacts to transportation and circulation would be less than significant. (See *Traffic Impact Analysis, SDSU Engineering and Interdisciplinary Sciences Building*, Linscott Law & Greenspan (February 2015).) Nonetheless, the additional traffic generated by construction activities would potentially affect campus evacuation routes thereby requiring revisions to the SDSU Emergency Operations Plan. Therefore, the Proposed Project would result in a significant impact relating to the Plan. In order to reduce this potentially significant impact, mitigation is provided (see mitigation measure HAZ-6).

Operational/Permanent Impacts

Once construction of the Proposed Project is complete, the project would accommodate a limited increase in the number of full-time students and campus staff members. The additional students and staff would result in increased traffic volumes within the project vicinity, although the increase would not result in significant impacts relative to transportation and circulation. (See Traffic Impact Analysis, SDSU Engineering and Interdisciplinary Sciences Building, Linscott Law & Greenspan (February 2015).) Nonetheless, the additional traffic generated by project operations would potentially affect campus evacuation routes, thereby requiring revisions to the SDSU Emergency Operations plan. Thus, the Proposed Project would result in a significant impact to the Plan. In order to reduce this potentially significant impact, mitigation is provided (see mitigation measure HAZ-6).

Threshold (h): Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Construction/Temporary and Operational/Permanent Impacts

The Proposed Project site is located within an existing urban area separated from the nearest urban canyon by over 0.15 mile. The Proposed Project would therefore not result in redevelopment of an area bordered by wildlands that may pose a risk of wildland fire. Therefore, no impact would result.

Cumulative Analysis:

While the Proposed Project may be located on potentially impacted soil, mitigation is proposed requiring that prior to project construction, appropriate testing be conducted to determine the extent of any soil contamination. Further, construction workers would be trained to identify any previously unknown soil contamination to ensure that any hazards are properly remediated. Prior to demolition of any building, asbestos and lead-based paint surveys must be prepared to document any potential contaminants. Should any materials be found on the site of the Proposed Project, they will be disposed of in accordance with all federal, state, and local laws in order to avoid contribution of potential hazardous materials to the environment. In order to avoid any potential emergency response plan conflicts, a mitigation measure requiring an update to the SDSU emergency evacuation plan must be completed prior to occupation of the new Engineering and Interdisciplinary Sciences Building. Therefore, any potential direct impacts of the Proposed Project would be fully mitigated and, therefore, the Proposed Project would not contribute to or result in significant cumulative impacts relative to hazards and hazardous materials.

MITIGATION:

To reduce the identified potentially significant impacts to a level below significant, the following mitigation measures are incorporated into the Proposed Project.

HAZ-1 During construction and operational activities associated with the Proposed Project, CSU/SDSU, or its designee, (e.g., the general contractor, the SDSU Department of Environmental Health and Safety, etc.) shall require that all contractors operate in compliance with applicable hazardous materials and waste regulations, including regulations regarding the handling, storage and disposal of hazardous materials and wastes, in order to prevent accidents and ensure hazardous materials are not released into the environment and are utilized in compliance with applicable storage and containment regulations.

Hazardous materials shall not be disposed of or released onto the ground, the underlying groundwater, or any surface water. Totally enclosed containment containers shall be provided for all hazardous waste-related trash. All potentially hazardous waste shall be removed to a waste facility permitted to treat, store, or dispose of such materials. Hazardous materials spill kits shall be maintained on site for small spills.

Prior to commencement of any project construction, including grading, excavation, or trenching activities, CSU/SDSU, or its designee, shall prepare a hazardous substance management, handling, storage, disposal, and emergency response plan specific to construction activities in compliance with all applicable federal, state and local regulations.

HAZ-2 Prior to commencement of project construction, including grading, excavation, or trenching activities, CSU/SDSU, or its designee, shall prepare a project-specific construction health and safety plan in compliance with all

applicable federal, state and local regulations, to guide construction crews who may encounter previously unknown soil or groundwater contaminants. The plan shall include information about potential contaminants, protocols for reporting suspected contaminants, authority to stop work, and protocols, for conducting further study upon discovery.

HAZ-3 Prior to the commencement of project construction, including grading, excavation, or trenching activities, in the parking lot areas and beneath the Engineering Labs Building, CSU/SDSU, or its designee, shall direct the project construction contractor to implement the following practices:

1. All construction workers who would be involved with grading, excavation, or trenching work shall be trained to recognize visual and olfactory signs of soil and groundwater contamination prior to the start of such soil work activities.

2. All construction workers shall observe the exposed soil and groundwater for visual evidence of contamination throughout soil work activities.

3. If soil contamination indicators are observed during construction, the contractor shall halt work in the immediate vicinity of the discovery and consult a qualified CSU/SDSU environmental health specialist, in conjunction with the SDSU Department of Environmental Health and Safety, who has knowledge of hazardous materials, to ensure the material is properly characterized and appropriate measures are taken to protect human health and the environment, including, if applicable, preparation of a soil remediation or disposal work plan in accordance with San Diego County Department of Environmental Health guidelines for soil remediation activity.

4. In the event that contaminated groundwater is encountered during project construction activities, the construction contractor shall document the exact location of the contamination and immediately notify the SDSU Department of Environmental Health and Safety. SDSU shall then comply with all applicable federal, state, and local health and safety requirements for testing, handling, and disposing of contaminated groundwater.

HAZ-4 Prior to building demolition, CSU/SDSU, or its designee, shall require that an asbestos survey and lead-based paint survey be performed by licensed lead and asbestos contractors. The asbestos and lead-based paint surveys shall be used to define removal quantities, estimate abatement costs, and otherwise refine the scope of work for the removal of asbestos and lead paint, in full compliance with all applicable laws during project demolition.

HAZ-5 Prior to the commencement of excavation activities at or in the vicinity of the Engineering Labs Building, CSU/SDSU, or its designee, shall require that soil samples, in an amount sufficient to adequately determine the extent of

potential contamination, be collected and analyzed by a licensed analytical laboratory to determine whether soil contamination exists on the site. In the event soil contamination levels are detected above regulatory screening levels (e.g., California Human Health Screening Levels and/or Regional Screening Levels), CSU/SDSU, or its designee, shall direct that the following steps be taken:

1. A soil remediation or disposal work plan shall be prepared and approved by a qualified CSU/SDSU environmental health specialist, in conjunction with the SDSU Department of Environmental Health and Safety. The plan shall be prepared in accordance with San Diego County Department of Environmental Health guidelines for soil remediation activity.
2. All contaminated soils shall be removed and fully remediated or properly disposed of in accordance with the remediation or disposal work plan, and all applicable federal, state, and local regulations, including those of the San Diego County Department of Environmental Health.
3. The soil contamination test results shall be used to determine an appropriate construction worker health and safety plan. All contaminated soils shall be removed by personnel who have been trained through appropriate Occupational Safety and Health Administration (OSHA) programs.

HAZ-6 Prior to occupation of the new Engineering and Interdisciplinary Sciences Building, CSU/SDSU shall take those steps necessary to revise the campus Emergency Operations Plan to incorporate the Proposed Project components. The plan shall also be amended to adequately plan for evacuation of these new campus facilities.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the identified mitigation measures, all potentially significant impacts relating to hazards and hazardous materials would be reduced to a less-than-significant level.

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HYDROLOGY AND WATER QUALITY				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Violate any water quality standards or waste discharge requirements?		✔		
(b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (*e.g.*, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✔	
(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?		✔		
(d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?		✔		
(e) 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?		✔		
(f) Otherwise substantially degrade water quality?		✔		

HYDROLOGY AND WATER QUALITY				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✔
(h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✔
(i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?			✔	
(j) Inundation by seiche, tsunami, or mudflow?			✔	

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Hydrology and Water Quality Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix I to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project violate any water quality standards or waste discharge requirements?

Water quality standards and waste discharge requirements are intended to protect the quality of waters of the state—generally wetlands, lakes, creeks, rivers and their tributaries, and groundwater. Because there are no natural water features (i.e., lakes, rivers, creeks, or springs) within the footprint of the Proposed Project, all impacts with respect to water quality standards or waste discharge requirements would be indirect in nature, and removed in space and/or time from the impact-causing activity.

Impacts to water quality through exceedance of water quality standards, non-conformance with waste discharge requirements, or other means, can potentially result from the short-term effects of construction activity (e.g., erosion and sedimentation due to land disturbances,

uncontained material and equipment storage areas, improper handling of hazardous materials) and long-term effects of landscaping, circulation improvements, utility infrastructure, and structural design (e.g., alteration of drainage patterns and/or increases in impervious surfaces). This discussion focuses on the short-term effects of construction activities and addresses the different types of water quality impacts in terms of the type of construction-related effects including stormwater runoff from construction sites, management of demolition activities and debris, and non-stormwater discharges. Long-term effects related to changes in topography and impervious surfaces are addressed under the thresholds that follow, because they pertain to alteration of drainage patterns.

All stormwater runoff in the Proposed Project's drainage area is collected and eventually discharged to Alvarado Creek through a 36-inch reinforced concrete pipe. The discharge outlet is located northeast of Parking Lot A. The potential to degrade water quality in this receiving water is partly a function of the Proposed Project area as compared to the total watershed area at that location. (For locational reference, see Figure 5 of Appendix I.) The watershed area for Alvarado Creek where it passes under I-8 is approximately 7,100 acres. The Proposed Project area is nearly 3 acres, or about 0.04% of the total contributing watershed area. As the project involves no non-stormwater discharges to the storm drain system (which are prohibited without prior authorization from the San Diego Regional Water Quality Control Board ("RWQCB")), contributions to flow would occur only during and immediately after rainfall events, when the creek would likewise be collecting runoff from the entire watershed. Contributions of sediment from project-related land disturbances or trace amounts of construction-related pollutants would not be measurable when considered in the context of the watershed as a whole. Nevertheless, because water quality degradation is by nature a cumulative issue, the prevailing standard is to reduce pollutant contributions to the maximum extent practicable regardless of how minor the contribution might be.

Stormwater Runoff

Construction activities such as grading, excavation, and trenching for construction, renovation, and demolition of proposed facilities would result in disturbance of soils at the project site. Construction site runoff can contain soil particles and sediments from these activities. Dust from construction sites can also be transported to other nearby locations where the dust can enter runoff or water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites can also enter runoff. Typical pollutants could include petroleum products and heavy metals from equipment, as well as products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of construction materials could result in water quality degradation if runoff containing the sediment entered receiving waters in sufficient quantities to exceed water quality objectives. Impacts from construction-related activities would generally be limited to the initial demolition and site-preparation phases of construction. These impacts would be considered significant; therefore, mitigation is provided (see mitigation measure HYD-1 below).

Because the Proposed Project would collectively result in land disturbance of more than 1 acre, it is subject to the Construction General Permit, which pertains to potential pollutant discharges resulting from grading and other construction activities. Compliance with the permit requires SDSU and/or its contractor to file a Notice of Intent with the State Water Resources Control Board ("SWRCB") and prepare a Stormwater Pollution Prevention Plan ("SWPPP") prior to construction. As indicated in mitigation measure HYD-1, the SWPPP would incorporate BMPs to prevent, or reduce to the greatest feasible extent, adverse impacts to water quality from erosion and sedimentation. A copy of the applicable SWPPP would be kept at the construction site. with preparation and implementation of a SWPPP, impacts related to stormwater runoff would be mitigated to less than significant.

Management of Demolition Activities and Debris

As discussed in the Hazards and Hazardous Materials section, demolition activities could result in the release of contaminated materials and hazardous substances such as lead-based paint or asbestos. In the process of demolition, these hazardous building materials may be released into the environment if exposed to stormwater runoff. Mitigation measure HAZ-4 would require a lead-based paint and asbestos survey prior to demolition, which would be conducted by a California Occupational Safety and Health Administration (Cal/OSHA)-certified asbestos assessor and California Department of Health Services-certified lead-based paint assessor. This mitigation measure is designed to avoid worker exposure to asbestos and lead but would also serve (along with the SWPPP discussed previously) to minimize the potential for these substances to be mobilized by stormwater runoff.

In addition, soils impacted with fuel hydrocarbons could be encountered during grading and redevelopment activities near the Engineering Lab Building. Excavation, transport, or disposal of soils from these areas could create a hazard to the public or the environment, including further exposure of ground or surface water supplies. This would result in a significant impact; therefore, mitigation is provided. Mitigation measures HAZ-1, HAZ-2, and HAZ-3 would, among other things, require (1) compliance with all applicable hazardous waste regulations (including total containment of trash and construction wastes); (2) the preparation of a hazardous substance management, handling, storage, disposal, and emergency response plan; and (3) protocols to respond to unanticipated encountering of soil or groundwater contaminants, including worker training to recognize visual and olfactory signs of soil contamination. Mitigation measure HAZ-5 would require sampling of soils at or near the Engineering Lab Building to determine whether soil contamination is present above environmental screening levels, and if so, require remediation prior to construction in accordance with the requirements of the San Diego County Department of Environmental Health. Collectively, these measures would also reduce the potential for contaminated soils to be mobilized in stormwater runoff during construction, and would be incorporated into the SWPPP as outlined in mitigation measure HYD-1.

In summary, preparation and implementation of a SWPPP (mitigation measure HYD-1), as well as implementation of mitigation measures HAZ-1 through HAZ-5, would prevent exceedance of water quality standards, non-conformance with waste discharge requirements, and

degradation of water quality due to construction and demolition activities and impacts would be less than significant with mitigation.

Non-Stormwater Discharges

Non-stormwater discharges during construction could include construction-related dewatering discharges (to keep excavations free of water) and/or dust control. There is the potential that perched groundwater exists at shallower depth on the Proposed Project site. (See Figure 6 of Appendix I, for locational reference.) That said, non-porous sand and clay materials are mixed among the strata and create groundwater "lenses," or isolated pockets of groundwater. Seasonal fluctuations of the on-site groundwater conditions are assumed. The most probable sources of groundwater within the project vicinity are infiltration of landscape irrigation water and precipitation. For this reason, construction crews may need to undertake construction-related dewatering discharges. The purpose of construction dewatering is to provide a dry work area if there is seepage of groundwater or if stormwater runoff enters excavations. Dewatering discharges are most likely during rainy periods and for deeper subgrade excavations (such as basement levels and/or utility vaults) associated with new building construction and renovations. If non-stormwater discharges enter the stormwater drainage system, they could degrade water quality and/or violate water quality objectives of the San Diego RWQCB Basin Plan. This would result in a potentially significant impact; therefore, mitigation is provided (see mitigation measure HYD-1 below).

Implementation of mitigation measure HYD-1 would ensure that non-stormwater discharges from construction site dewatering would not violate Basin Plan objectives or substantially degrade water quality. Implementation of mitigation measures HAZ-1 through HAZ-5 would further ensure that potential contaminants are identified and handled properly (i.e., treated on site or collected and disposed of at an authorized facility).

Non-stormwater discharges during construction would also include periodic application of water for dust control purposes. Because dust control is necessary during windy and dry periods to prevent wind erosion and dust plumes, water would be applied in sufficient quantities to wet the soil, but not so excessively as to produce runoff from the construction site. Water applied for dust control would either quickly evaporate or locally infiltrate into shallow surface soils. These stipulations are routine in SWPPPs and other construction contract documents, which normally state that water would only be applied in a manner that does not generate runoff. Therefore, water applied for dust control would not result in appreciable effects on groundwater or surface water features and thus has little to no potential to cause or contribute to exceedances of water quality objectives contained in the relevant Basin Plan.

In summary, with preparation of a SWPPP and implementation of mitigation measures HAZ-1 through HAZ-5, impacts associated with water quality standards and waste discharge requirements would be less than significant.

Threshold (b): Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-

existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?

Perched groundwater seeps have been reported in some of the previous excavations on the SDSU campus, likely a result of infiltrating landscape irrigation water and precipitation meeting natural geologic formations beneath site fills. The direct impacts of the Proposed Project on groundwater would be limited to the possible need to pump groundwater seepage out of excavations during construction of sub-grade foundations and facilities (i.e., groundwater dewatering). If this activity is required, its effects on shallow groundwater levels would be temporary and highly localized. (For locational reference, see Figure 6 of Appendix I.) Any impacts would be limited to the perched groundwater and would therefore not affect static water levels in the underlying regional aquifer. Furthermore, because the campus is reliant on municipal water supplies, there are no existing or proposed groundwater wells in or adjacent to the Proposed Project that could be adversely affected by construction-related dewatering activities.

Following construction, changes in land cover (e.g., impervious surfaces) could ultimately affect the amount of stormwater that percolates into the ground versus the amount that runs off into the regional storm drain system. To the extent the Proposed Project changes the ratio of pervious to impervious surfaces, it could also increase or decrease recharge of the underlying groundwater aquifer. As shown on Figure 4, the proposed landscaping would include a large lawn in an area currently occupied by the Engineering Lab Building (to be demolished) and paved driveways. Further, areas between buildings currently occupied by driveways, walkways, and parking areas would be landscaped. The exact area of pervious versus impervious surfaces is dependent on final design and engineering details. However, comparison of current aerial photographs of the site with the conceptual plans show that the Proposed Project would decrease impervious surface coverage compared to the existing site configuration, which, aside from a few planters and landscape strips, is nearly all impervious. Therefore, the Proposed Project will have a positive, albeit minor, effect on groundwater recharge. Direct impacts of the Proposed Project on aquifer volumes, the local groundwater table, and the production rate of pre-existing nearby wells would be less than significant.

Indirect Impacts

Water service for the Proposed Project is and will continue to be through purchase of municipal water from the City of San Diego — no on-site groundwater wells are proposed. The City currently derives its water supply almost exclusively from surface water sources (both local and imported), with only a small pilot program in place to use local groundwater. One of the City's top priorities, however, is to further develop local sources of groundwater and reduce the demand for imported water. This means that local groundwater may become a larger part of the City's water portfolio in the future. To the extent the Proposed Project generates additional demand for water, it could also indirectly result in a small, incremental increase in demand on the City's groundwater supply.

The water demand of the existing facilities is approximately 11,971 gallons per day. The water demand of the proposed facilities, once completed, would be approximately 8,950 gallons per

day—a net decrease of 3,021 gallons per day. This decrease is equivalent to nearly 3.4 acre-feet per year, or roughly the amount of water used by six or seven typical single-family dwellings in a year. It is also equivalent to an approximately 25% decrease, which exceeds the goal of the water conservation legislation SBx7-7 in a local context. SBx7-7 calls for a 20% statewide reduction in urban per capita water use by 2020. The Proposed Project would actually decrease water demands and therefore would likewise decrease groundwater demands. The effect on groundwater supplies would be beneficial, though only marginally so, because nearly all of the City's water supply is sourced from surface water. Therefore, impacts would be less than significant.

Threshold (c) and (d): Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on- or off-site?

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Because there are no natural water features (i.e., lakes, rivers, creeks, or springs) within the footprint of the Proposed Project, there would be no direct impact with respect to alteration of streams or rivers. The land cover on site would continue to consist of campus buildings and would not substantially alter the topography of the site. Stormwater flows would continue to be directed to the north and east, and would be directed to the same storm drains. (For locational reference, see Figure 5 of Appendix I.) Because impervious surface coverage on the site would decrease, the rate and amount of surface runoff would decrease, resulting in a slight decrease in the potential for downstream flooding or erosion. (For reference, see Figure 7 of Appendix I.)

Changes in impervious areas created and the newly configured land uses could alter the types and levels of pollutants that could be present in project site runoff. Runoff from streets, driveways, parking lots, and landscaped areas can contain nonpoint source pollutants such as oil, grease, heavy metals, pesticides, herbicides, fertilizers, and sediment. Concentrations of pollutants carried in urban runoff are extremely variable, depending on factors such as the following:

- Volume of runoff reaching the storm drains
- Time since the last rainfall
- Relative mix of land uses and densities
- Degree to which street cleaning occurs

Under existing conditions, stormwater that is not infiltrated into landscaped areas and bare ground moves as sheet flow toward street gutters, swales, and the inlets of underground storm drains. The storm drains direct runoff to the Alvarado Creek and eventually into the San Diego River and Pacific Ocean along with the runoff from much of the 7,100-acre urban watershed area (see Figure 5 of Appendix I). If rainfall is sufficiently intense and/or long-lasting, and if storm drain inlets have not been cleared of leaves and/or other debris, water may temporarily pond in low-lying areas. Under the Proposed Project, stormwater runoff would generally

behave in the same or an improved manner, and drainage infrastructure improvements planned as part of the Proposed Project would ensure that hydrologic and water quality standards are met.

The new Engineering and Interdisciplinary Sciences Building would be designed to meet Leadership in Energy and Environmental Design (LEED) Silver certification or equivalent, and on-site stormwater collection and conveyance facilities would include low-impact design systems such as those recommended in the *San Diego Low Impact Development Design Manual* (City of San Diego 2011) to provide stormwater treatment (e.g., bioretention planters and/or modular wetlands). As indicated earlier, the Proposed Project would not increase total impervious surface area compared to existing site conditions.

Even though the Proposed Project would reduce the coverage of impervious surfaces relative to existing conditions, it would be considered a regulated project under the Phase II Small MS4 General Permit (similar to a "priority development project" under the San Diego Regional Phase I Permit). Although the Proposed Project would not have an individually significant impact with respect to drainage patterns, cumulative increases in pollutant loads and the intensity of runoff within the watershed as a whole has created a cumulatively significant impact (see Appendix I, list of impaired water bodies, Table 5). Thus, the prevailing standard is for all development activities within the watershed to reduce their contribution to the cumulative impacts to the maximum extent practicable, even in cases where a project does not result in an increase in the existing level of impervious coverage. Therefore, mitigation measure HYD-2 is identified to ensure that the Proposed Project complies with the Phase II Small MS4 General Permit. With implementation of HYD-2, the impacts of the project on drainage patterns would be less than significant.

Threshold (e): Would the project 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?

Because the on-site drainage areas would maintain the same boundaries and because impervious surfaces would be reduced, the Proposed Project is not anticipated to contribute additional flows to the off-site stormwater drainage system as compared to existing conditions and impacts would be less than significant. Additionally, some on-site modifications to the drainage system may be undertaken, if required, as part of facility construction, and LID measures would be implemented to further reduce peak flow rates and volumes. As to polluted runoff, introduction of polluted sources of runoff is discussed above, and mitigation measure HYD-1 is included to reduce this potential impact.

Threshold (f): Would the project otherwise substantially degrade water quality?

The ways in which the Proposed Project could degrade water quality have been analyzed under the above criteria. The project would not involve any non-stormwater discharges other than sanitary sewer discharges, and would not degrade water quality for any reason other than those already discussed.

Threshold (g): Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The Proposed Project does not include housing, and is not within a 100-year flood hazard area as mapped by FEMA. Therefore, the Proposed Project would have no impact with respect to this criterion. (See Figure 7 of Appendix I.)

Threshold (h): Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The Proposed Project is not within a 100-year flood hazard area as mapped by FEMA. Therefore, the Proposed Project would have no impact with respect to this criterion. (See Figure 7 of Appendix I.)

Threshold (i): Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Flood inundation of the Proposed Project is not likely due to its site elevation (i.e., higher than approximately 425 feet above mean sea level) and distance from natural drainage channels susceptible to flooding during precipitation events. For the same reasons, it is also not in an area susceptible to inundation by a dam failure (such as Lake Murray). Therefore, the Proposed Project's impacts with respect to this criterion would be less than significant.

Threshold (j): Would the project result in inundation by seiche, tsunami, or mudflow?

Seiches are periodic oscillations of a body of water. Due to the project site's elevation and its distance from bodies of water, the possibility of its inundation from a seiche is considered very low. Similarly, as to inundation by tsunami, due to the distance from the coastline and the elevation of the project site, the possibility of inundation of the site by a tsunami is considered very low. Mudflow is a flowing mass of soil with a high fluidity during movement. The project site is located on a relatively level to gently sloping mesa area in an urbanized campus area with minimally exposed soil surfaces. The possibility of the inundation of the project site by mudflows is considered very low. Therefore, the Proposed Project would not result in inundation by seiche, tsunami, and/or mudflow hazards, and impacts would be less than significant.

Cumulative Analysis:

Due to the existing developed nature of the area proposed for redevelopment, in combination with the proposed mitigation measures, the Proposed Project would not contribute to a cumulative change in discharge rates. The analysis provided above addresses the cumulative effects of the project in addition to the individual effects. With respect to water quality, the Proposed Project's adherence to applicable Best Management Practices ("BMPs") for water quality management would be consistent with the overall regional objective of improving water quality. All SDSU campus projects would be planned, constructed, and managed in accordance with regional BMPs and discharge requirements. Adherence to regional standards would eliminate unlawful discharge quantities or poor water quality management practices from occurring on a cumulatively considerable scale. Further, it is reasonable to assume that off-

campus projects in process or proposed in the future by others would also adhere to regional and other applicable water quality protection measures to eliminate a cumulative water quality condition. Therefore, the Proposed Project would not result in significant cumulative impacts to hydrology and water quality.

MITIGATION:

The following mitigation measures are identified to reduce the potential impacts associated with hydrology and water quality to less than significant.

HYD-1 **Construction Stormwater Pollution Prevention Plan**. Prior to commencement of construction activities associated with the Proposed Project, CSU/SDSU, or its designee, shall develop a project-specific stormwater pollution prevention plan (SWPPP) consistent with the Construction General Permit (SWRCB Order No. 2009-0009-DWQ). The SWPPP shall be prepared by a qualified individual and must contain site maps that show the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list best management practices (BMPs) that will be used to protect stormwater quality throughout the construction phase. The SWPPP must identify the placement of each BMP in accordance with the *San Diego Low Impact Development Design Manual*. Additionally, the SWPPP must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to monitor the effectiveness of the selected BMPs.

The following are examples of effective BMPs to be included in the SWPPP as applicable:

- Silt fences installed along limits of work and/or the project construction site
- Stockpile containment (e.g., visqueen, fiber rolls, gravel bags)
- Exposed soil stabilization structures (e.g., fiber matrix on slopes and construction access stabilization mechanisms)
- Street sweeping
- Tire washes for equipment
- Runoff control devices (e.g., drainage swales, gravel bag barriers/ chevrons, velocity check dams) shall be used during construction phases conducted during the rainy season.
- Storm drain inlet protection
- Wind erosion (dust) controls
- Tracking controls

- Prevention of fluid leaks (inspections and drip pans) from vehicles
- Dewatering operations best practices (e.g., discharge to landscaped, vegetated, or soil area or into an infiltration basin, so long as the water only contains sediment (no other pollutants); use of vacuum truck to haul the water to an authorized discharge location; or implementation of various methods of treatment on site prior to discharging the water)
- Materials pollution management
- Proper waste management
- Regular inspections and maintenance of BMPs

The SWPPP must also incorporate the hazards avoidance/minimization mitigation measures outlined in mitigation measures HAZ-1 through HAZ-5, outlined in the Hazards Technical Report (Dudek 2015; Appendix H to this Initial Study). If a cleanup action were required in the vicinity of the Engineering Lab, any discharge of accumulated groundwater or stormwater shall be made in coordination with the San Diego Regional Water Quality Control Board (RWQCB) and in accordance with applicable waste discharge requirements. CSU/SDSU shall implement all guidelines contained in the SWPPP throughout construction of the Proposed Project.

HYD-2 **Implementation and Maintenance of Low-Impact Design**. During design of the Proposed Project, SDSU shall incorporate stormwater pollution control BMPs to reduce pollutants discharged from the project site to the maximum extent practicable. Post-construction pollution prevention shall be accomplished by implementing low-impact design, source control, and treatment control BMPs. The low-impact design features shall be identified and designed consistent with the requirements of the Phase II Small MS4 General Permit (SWRCB Order No. 2013-0001-DWQ). Examples of effective permanent project design BMPs to be incorporated into the project design as applicable include:

- A hydrodynamic separator shall be used.
- Loading dock facilities, if any, shall drain directly to the sanitary sewer.
- Interior parking garage floor drains shall be plumbed to the sanitary sewer.
- Drainage from rooftops, impervious parking lots, sidewalks, and walkways shall be directed into adjacent landscaping where possible.
- Exterior trash and/or recycling areas shall be covered, graded, and paved to preclude run-on and runoff from the area.
- Green roof or flow-through planters with sub-surface drains shall be used.

SDSU shall develop a maintenance plan to ensure that permanent design BMPs will be maintained throughout project operation. Examples of maintenance include removal of accumulated sediment and trash, thinning of vegetative brush in biotreatment swales, and maintaining the appearance and general status of the vegetation. The operation and maintenance plan shall include:

- Responsibilities for managing all stormwater BMPs
- Employee training programs and duties to ensure compliance
- Operation/routine service schedule (annual inspection of facilities, at minimum)
- Maintenance frequency
- Specific maintenance activities (including maintenance of stormwater conveyance stamps)
- Copies of resource agency permits, as applicable

LEVEL OF SIGNIFICANCE AFTER MITIGATION

After application of the identified mitigation measures and mitigation measures HAZ-1 through HAZ-5, the impacts related to hydrology and water quality would be mitigated to less than significant.

LAND USE AND PLANNING				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Physically divide an established community?				✔
(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✔
(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				✔

ANALYSIS:

Thresholds (a) - (c):

The Proposed Project consists of the construction of an Engineering and Interdisciplinary Sciences teaching and research laboratory building on the SDSU Main Campus. The project would not physically divide an established community as it would replace an existing educational building and would be consistent with the surrounding uses. As a state agency, SDSU (California State University) is not subject to local planning and zoning laws, such as general plans and zoning ordinances, and, therefore, the Proposed Project would not impact local land use regulations. As to habitat or natural community conservation plans, development of the Proposed Project would not conflict with any such plans (please see Biological Resources, Threshold (f) for additional information). Therefore, development of the Proposed Project would not result in impacts relative to Land Use and Planning.

MITIGATION:

No significant impacts would occur; therefore, no mitigation is required.

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MINERAL RESOURCES				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?				✔

ANALYSIS:

Thresholds (a) - (b):

The Proposed Project is the development of educational and research facilities on a previously developed site on the urban SDSU main campus. As such, availability of any mineral resources that may be on the site is infeasible. Therefore, the Proposed Project would not result in the loss of availability of a known valuable mineral resource or of a locally-important mineral resource recovery site.

MITIGATION:

No significant impacts would occur; therefore, no mitigation is required.

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NOISE				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project result in:				
(a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✔	
(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✔	
(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✔	
(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		✔		
(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 expose people residing or working in the project area to excessive noise levels?			✔	
(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			✔	

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Noise Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix J to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The project has a potential to generate noise levels in excess of standards during both construction and operation.

Construction

The noise levels generated by construction equipment would vary depending on factors such as the equipment type and model (e.g., graders, scrapers, backhoes, loaders, cranes, dozers, water trucks, jackhammers, portable generators and air compressors, and miscellaneous trucks), operation being performed (e.g., demolition, clearing and grubbing, grading, foundation construction, and finish construction), and condition of the equipment. Blasting or pile-driving activities would not be conducted as part of project construction. The average sound level of the construction-related activity also depends on the amount of time that the equipment operates and the intensity of the construction during that period. Further, the construction contractor may mobilize more than one crew, and each of these crews may be in a different location and affect different receptors.

The maximum noise level ranges for various pieces of construction equipment at a distance of 50 feet are shown in Figure 6, Typical Construction Equipment Noise Generation Levels. The maximum noise levels at 50 feet would range from approximately 65 to 90 dBA for the type of equipment normally used for this type of project. Construction noise in a well-defined area typically attenuates at approximately 6 dB per doubling of distance. Additionally, project construction-related activities would be limited to the City of San Diego's allowable hours of operation.

The closest off-site existing residences are located approximately 1,000 feet away, along West Falls View Drive, east of the Proposed Project site. Off-site residences are also located to the north, north of I-8, approximately 1,100 feet from the Proposed Project site. On-campus housing is located south of the project site, approximately 1,500 feet away, with intervening buildings. Classrooms are located immediately to the west and south of the Proposed Project site; the physical sciences, physics astronomy and physics buildings are located within approximately 25 feet of project construction.

The Federal Highway Administration's Roadway Construction Noise Model (FHWA 2008) and information regarding project-specific construction equipment provided by SDSU were used to estimate construction noise levels at the nearest noise-sensitive land use for each of the phases of project construction. Input variables for the Roadway Construction Noise Model consist of the receiver/land use types, the equipment type and number of each (i.e., two excavators, a loader, a dump-truck), the duty cycle for each piece of equipment (i.e., percentage of hours the equipment typically works per day), and the distance from the sensitive noise receptor. The Roadway Construction Noise Model has default duty cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty-cycle values were used for this analysis. The construction analysis

output is included as Appendix A to the Noise Technical Report, and the results are summarized in Table 14.

At the nearest off-site residences and on-campus housing, the noise levels during construction/demolition would not exceed the City's 75 dBA noise level criterion. The loudest estimated noise level at the residential receivers is 63 dBA L_{eq} (which would occur during the third phase of construction of the Engineering and Interdisciplinary Sciences Building). At the nearest classrooms, interior noise levels during construction are estimated to be as high as 75 dBA L_{eq} (assuming an average exterior-to-interior noise reduction from the building of 20 dB with windows closed). However, the noise levels would not exceed 75 dBA Leq for 12 hours within a 24-hour period, which is the City's temporary construction noise level criterion. Moreover, the City's 75 dBA noise level criterion is not applicable to the classrooms as it is applicable to residential uses. Therefore, construction activities at the project site are not anticipated to expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Thus, a less than significant impact would occur.

Table 14
Summary of Results - Roadway Construction Noise Model (RCNM), Version 1.1

Construction Phase	Receiver	L_{eq} (dBA)
Case 1 Demolition Work	Residents east of project site - 1,000'	60.1
	Residents north of project site - 1,100'	59.2
	Classrooms adjacent to project site - 25'	72.1
Case 2 Const Eng Building Ph	Residents east of project site - 1,000'	60.9
	Residents north of project site - 1,100'	58
	Classrooms adjacent to project site - 25'	72.9
Case 2 Const Eng Building Ph	Residents east of project site - 1,000'	58.3
	Residents north of project site - 1,100'	55.4
	Classrooms adjacent to project site - 25'	70.3
Case 2 Const Eng Building Ph	Residents east of project site - 1,000'	63
	Residents north of project site - 1,100'	60.1
	Classrooms adjacent to project site - 25'	75
Case 3 Renovate Existing Eng	Residents east of project site - 1,000'	58.7
	Residents north of project site - 1,100'	55.8
	Classrooms adjacent to project site - 25'	70.7
Case 4 Demo Quonset Hut	Residents east of project site - 1,000'	61.4
	Residents north of project site - 1,100'	58.5
	Classrooms adjacent to project site - 25'	73.5

Operation

Off-Site Traffic Noise. At buildout, the Proposed Project would generate a net traffic volume increase over existing volumes. According to the project traffic analysis conducted by Linscott,

Law and Greenspan (LLG 2015), the majority of the increased traffic volumes would be along College Avenue and Montezuma Road. As shown in Table 15, at project buildout the additional traffic would increase the noise along the adjacent roads by less than 1 dB CNEL. Therefore, the Proposed Project would not result in a substantial increase in ambient noise levels in the project vicinity above existing levels; therefore, near-term impacts would be less than significant.

With respect to long-term (2035) impacts, as shown in Table 15, year 2035 traffic noise levels would increase up to 2 dB CNEL over existing levels along portions of College Avenue and Montezuma Road without project traffic. With project traffic, the increase in long-term CNEL levels over existing levels would be the same as without project traffic. Therefore, the noise level increase associated with the Proposed Project in the long term would be minimal and the project's impacts on long-term noise levels would be less than significant.

On-Site Operational Noise. Outdoor mechanical equipment such as heating, ventilation, and air conditioning equipment could be mounted on roofs or at the ground level of the buildings. The noise levels generated by this equipment would vary, but typically range from approximately 45 to 55 dB at a distance of 50 feet.

Table 15
Off-Site Traffic Noise Level Increase per Street (Segment)

Street (Segment)	Existing ADT	Existing + Project ADT	CNEL Increase[1] (dB)	Long-Term (2035) Without Project ADT	CNEL Increase[2] (dB)	Long-Term (2035) With Project ADT	CNEL Increase[3] (dB)
College Avenue							
Canyon Crest Drive to Zura Way	35,310	37,005	<1	43,900	<1	44,168	<1
Lindo Paseo to Montezuma Road	26,118	27,436	<1	42,800	1	43,063	1
Montezuma Road to Cresita	26,610	27,790	<1	38,100	2	38,205	2
Montezuma Road							
College Avenue to Campanile Drive	24,586	25,658	<1	29,100	2	29,179	2
Rockford Drive to East Falls View Drive	21,490	22,437	<1	23,300	1	23,379	1

Notes: ADT = average daily traffic; CNEL = community noise equivalent level; dB = decibel(s).

1 Existing plus project noise levels relative to existing levels.

2 Long-term (2035) noise levels without project relative to existing levels.

3 Long-term (2035) noise levels with project relative to existing levels.

The proposed structures would replace existing, nearby structures used for similar purposes (e.g., teaching labs and research facilities, offices) and the surrounding land uses are of a similar type (i.e., fully enclosed academic or administrative facilities). The nearest off-site residences are approximately 1,000 feet away, and the nearest on-campus residences are approximately 1,500 feet away. At such relatively large distances, the noise from on-site equipment would dissipate to approximately 19 to 29 dBA or less, which would be substantially lower than applicable noise standards and well below existing ambient noise levels. Nearby classrooms would be substantially closer; however, the building structure would provide substantial noise reduction (typically 20 to 25 dB or more with windows closed, or 15 dB with windows open). Therefore, a less than significant impact would occur.

Threshold (b): Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

The heavier pieces of construction equipment used at the project site could include bulldozers, graders, loaded trucks, water trucks, pavers, and cranes. No blasting or pile driving would take place as part of project construction. Ground-borne vibration and noise information related to construction activities collected by the California Department of Transportation (Caltrans 2004) indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inches/second begin to annoy people. Ground-borne vibration from the heavy equipment that would be used in connection with construction of this project is typically attenuated over short distances (i.e., within 25 to 50 feet). Although vibration is very subjective and some people may be annoyed at continuous vibration levels near the level of perception (or approximately a peak particle velocity of .01 inches/second), construction-related activities are not anticipated to expose persons to or generate excessive ground-borne vibration or noise levels. Therefore, potential impacts under this criterion would be less than significant.

Threshold (c): Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As previously addressed (Table 14), the project would result in increases in traffic noise levels of less than 1 dB, which in the context of changes in community noise (i.e., outside of controlled listening room tests) is not an audible or substantial increase. As also addressed above, on-site mechanical equipment noise would be well below existing ambient noise levels and thus would not result in a substantial permanent increase. Therefore, potential impacts under this criterion would be less than significant.

Threshold (d): Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As previously addressed (Table 14), during project construction, construction activities would result in interior noise levels at nearby classrooms of up to 75 dBA L_{eq}. However, unless such noise persisted for 12 hours during a 24-hour period, any impacts associated with such noise levels would be less than significant under the City's temporary construction noise ordinance. Noise levels of this magnitude, however, would constitute a substantial temporary increase, and would be disruptive to normal classroom / study activities. Therefore, for purposes of this analysis, such temporary increases are considered a potentially significant impact.

Threshold (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 expose people residing or working in the project area to excessive noise levels?

The project site is not located close to an airport. The closest airport is Montgomery Field, which is approximately 4 miles northwest of the site. The project site is subject to occasional overflights by helicopters, as well as commercial and general aviation aircraft. However, the campus is not located within the 60 dBA CNEL noise contour of any airport and is not subject to aircraft noise in excess of regulatory limits. Therefore, the Proposed Project would not expose people residing or working in the project area to excessive noise levels associated with aircraft. There would be no impact related to this aspect of the project.

Threshold (f): For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The project site is not located in the vicinity of a private airstrip. The nearest private helipad (at Sharp Grossmont Hospital) is approximately 4.1 miles east of the Proposed Project site. There would be no impact related to this aspect of the project.

Cumulative Analysis:

Construction noise impacts primarily affect the areas immediately adjacent to the construction site. Thus, although several construction activities simultaneously may occur at several areas on campus and in the surrounding community, including construction of the approved Plaza Linda Verde / South Campus Plaza project, the increased noise would not result in significant cumulative impacts due to the distance from the Proposed Project construction activities.

As previously noted, the Proposed Project's traffic-related impacts would result in a 1 dB or less increase along the adjacent roadways at project buildout. Additionally, under 2035 cumulative conditions, the noise level increase associated with the Proposed Project would not affect measurable CNEL levels. Therefore, the increase in noise associated with Proposed Project traffic would not be cumulatively considerable and cumulative impacts would be less than significant.

MITIGATION:

The following mitigation measure would reduce the temporary on-site noise impacts from construction activities to a level below significant:

NOI-1 During construction of the Proposed Project, SDSU, or its designee, shall, to the extent feasible, comply with the City of San Diego's noise ordinance criteria relative to construction activities. Therefore, construction-related activities shall be conducted primarily between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. In order to minimize construction-related noise and ensure that the 12-hour average sound level does not exceed 75 dB at any academic building, SDSU, or its designee, shall:

- Locate noisy equipment as far as possible from the Project site boundaries and nearby occupants of academic buildings.
- Install stationary equipment in enclosures.
- Equip all construction equipment, fixed or mobile, with properly operating and maintained muffler exhaust systems.
- Locate stockpile and vehicle staging areas as far as practical from nearby occupants of academic buildings.
- Use quieter (i.e., typically smaller) pieces of equipment while working immediately adjacent to the nearby occupants of academic buildings.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the identified mitigation measures, any potentially significant noise-related impacts would be reduced to a level below significant.

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POPULATION AND HOUSING				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Induce substantial 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 housing, necessitating the construction of replacement housing elsewhere?				✔
(c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✔

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Population and Housing Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix K to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project induce substantial 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)?

The Proposed Project potentially would result in an increase of approximately 224 students and 80 staff members. Therefore, on its face, the Proposed Project would not induce substantial population growth in the area. Additionally, as discussed in detail in Appendix K, based on existing housing demands, these additional students and staff members would live in varied locations including on-campus housing, the surrounding community, and more distant locations. As further discussed in Appendix K, there is adequate available housing, both on-campus and in the surrounding community, to serve the limited increase in students, and in the larger San Diego community to house the additional staff members. Therefore, impacts would be less than significant.

With respect to those students who choose to live in the area immediately surrounding the campus, concerns regarding the compatibility of certain off-campus student housing

(referred to as "nuisance rentals") with the surrounding single-family residences has arisen in the past. Issues include noise from increased densities of students in residential communities, increased traffic and parking demands, and the general compatibility of students versus neighborhood land use demands. Because the Proposed Project does not include the development of any off-campus housing, any potential effects relating to nuisance rentals would be indirect and speculative.

Issues relating to nuisance rentals are addressed primarily through the City of San Diego's land use planning process via the development of community plans, the enactment of related zoning ordinances, and the enforcement of local and state laws. The City, through the planning and entitlement process, zoning code compliance department, and its police department, is charged with the primary responsibility to develop, implement, and enforce land use regulations to ensure land use compatibility. In this regard, SDSU police officers work collaboratively with the City of San Diego Police Department; SDSU and the City have jointly taken direct action to curb nuisance law violations through joint enforcement by the City and SDSU Police Departments. An extensive program of enforcement measures and programs has been developed that is available to the City and SDSU Police Departments to curb associated effects of nuisance rentals. For additional information, please see Appendix K, Section 5, Impact Analysis. As a result, any potential impacts would be less than significant.

Threshold (b): Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The Proposed Project would not result in displacement of any number of existing housing on or off campus. Therefore, no impact would occur.

Threshold (c): Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Proposed Project would not result in the displacement of any number of residents such that replacement housing would be necessary. Therefore, no impact would occur.

Cumulative Analysis:

A number of multifamily residential unit housing projects is planned for development within the City of San Diego over the near- and long-term. These future projects would aid in addressing the region's housing availability and affordability issues by providing additional housing opportunities for the city and region at large. In light of the proposed project's limited increase in population, in combination with the additional housing projects being processed by the City of San Diego Planning Department, the Proposed Project would not result in significant cumulative impacts associated with population/housing.

MITIGATION:

No significant population and housing impacts were identified; therefore, no mitigation measures are required.

PUBLIC SERVICES				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
(i) Fire protection?			✔	
(ii) Police protection?				✔
(iii) Schools?			✔	
(iv) Parks?			✔	
(v) Other public facilities?			✔	

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Public Services and Utilities Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix L to this Initial Study and is incorporated herein by this reference.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire Protection?

The Proposed Project would create additional demand for fire-rescue services by accommodating a 224-student headcount enrollment increase and up to 80 additional research staff members over current levels.

Table 18 provides the projected Priority 1 fire-related calls anticipated for the Proposed Project. Because the Fire-Rescue Department currently responds to calls for service originating from the Proposed Project site, only the net increase in student headcount enrollment (224) was used to calculate the projected Priority 1 calls attributable to the Proposed Project. As shown in Table 16, the Proposed Project would generate approximately one additional annual call attributable to the Proposed Project.

Table 16

Projected Fire-Rescue Department Priority 1 Calls

Call Origin	Average Annual Calls per Student[a]	Student Headcount Enrollment Net Increase[b]	Projected Additional Priority Calls (per Year)
All Campus Facilities	0.0022	224	0.49

Notes:

a See Appendix L Table 10. To calculate the average annual call rate, the arithmetic mean of the 2012 and 2013 Priority 1 calls received was calculated.

b Shinn, pers. comm. 2015b.

The Proposed Project would result in a marginal increase in Fire-Rescue Department Priority 1 calls from academic facilities. Table 17 lists the current average response times for the Fire-Rescue Department.

Table 17

Current San Diego Fire-Rescue Department Response Times for Entire Service Area

Measure	90% Minute Goal	Goal Source	Actual Performance
Fire receipt to arrival	Within 6 minutes	Current City of San Diego	49.7%
Fire receipt to arrival	Within 8 minutes 50 seconds	City of San Diego Actual Compliance	90.2%

Source: Citygate Associates 2011.

Notes: The current City goal is 6 minutes total response time. This includes a 1-minute dispatch, 1-minute crew turnout, and 4-minute travel time. The City response time goals presented in Section 3.2.1 do not include dispatch time.

The data in Table 17 represent current fractile response times specifically for Priority 1 calls within the City's entire service area and does not necessarily describe the performance of the specific stations located within the vicinity of the Proposed Project. The referenced Citygate Study identified 11 areas within the County's Southwest Quadrant, which encompasses central portions of the City, where additional fire stations are recommended based on a finding that travel times exceed 5 minutes in those areas. The areas identified for additional fire stations did not include the SDSU campus, including the site of the Proposed Project (Citygate Associates 2010, Volume 3, pp. 25 and 28). Additionally, neither the SDSU campus nor the project site are located within any of the service coverage "gaps" identified in the Citygate Study (Citygate Associates 2010).

In addition, fire access shall be provided for the new building as required by the state fire marshal. Fire access to existing buildings shall be maintained by retaining fire truck access between the Physics Building and new Engineering and Interdisciplinary Sciences Building. Breezeway access will be provided to accommodate hose pull and ladder work within the center courtyard (Cannon Design 2014). Because the Proposed Project would simply consist of new/expanded instructional and support space where such space currently exists on campus, new firefighting processes or expanded service demand, outside of those identified above, would not occur. Therefore, a less-than-significant impact to the City's building/facility fire fighting capacity would occur.

Considering the marginal increase (less than a single call over the course of the academic year) in projected Fire-Rescue Department Priority 1 calls, and that new Fire-Rescue Department facilities would not be required to maintain acceptable levels to accommodate the SDSU campus, the Proposed Project would not result in potentially significant impacts to fire-rescue services and no mitigation is necessary.

Police Protection?

The Proposed Project would create additional demand for campus police services by accommodating a 224-student headcount enrollment increase and up to 80 additional research staff members over current levels.

Table 18 provides a projection of future Priority 1 calls to the SDSU Police Department. Because the SDSU Police Department currently responds to calls for service originating from the Proposed Project site, the net increase in student headcount enrollment (224) was used to calculate the projected Priority 1 calls attributable to the Proposed Project. As shown in Table 18, the Proposed Project would generate approximately one additional annual call from students and employees using the Engineering and Interdisciplinary Sciences Building.

Table 18

Projected Priority 1 Police Service Calls

Call Origin	Average Annual Calls per Student[a]	Student Headcount Enrollment Net Increase[b]	Projected Additional Priority Calls (per Year)
All Campus Facilities	0.0027	224	0.60

Notes:

a See Appendix L Table 11. To calculate the average annual call rate, the arithmetic mean of the 2012 and 2013 Priority 1 calls received was calculated.

b Shinn, pers. comm. 2015b.

Preliminarily, because the Proposed Project site lies within the jurisdiction of the SDSU Police Department and is already part of the normal patrol and enforcement zone, the Proposed Project would not generate any new or altered demands on the City's police department. The SDSU Police Department, as discussed previously in Section 3.2.2, currently responds to Priority 1 calls within 3 minutes and 31 seconds, Priority 2 calls within 4 minutes and 18 seconds, and Priority 3 calls within 6 minutes and 45 seconds (SDSU Police Department 2015b). These current response times are well within the City's General Plan response time goals, which, as previously noted, are 12 minutes, 30 minutes, and 90 minutes, respectively. Therefore, while the increase in academic uses may result in increased calls and increased response times, based on existing service levels and the projected increase in Priority 1 calls (a single annual call), response times would continue to be within acceptable service levels.

New or expanded/altered governmental facilities would not be required to maintain acceptable levels of police protection. The SDSU Police Department currently occupies a 15,000-square-foot building at the intersection of Remington Road and Aztec Circle Drive. This building was renovated in 2008 and would accommodate the police protection needs of the Proposed Project. The SDSU Police Department facility is adequately sized to accommodate the additional annual call that would potentially be generated from the Proposed Project.

Due to the Proposed Project's forecasted effect on existing response times, combined with the fact that the project would not result in the need for new or physically altered governmental facilities, the Proposed Project would not result in potentially significant impacts to police services and no mitigation is necessary.

Schools?

The 224 students associated with the Engineering and Interdisciplinary Sciences Building would not result in an increase in secondary school children. However, the Engineering and Interdisciplinary Sciences Building would accommodate up to 80 additional research staff members and their children to the San Diego area. According to the SANDAG's 2010–2020 *Regional Housing Needs Assessment Plan*, the average household size in the year 2020 for the

County is projected to be approximately 2.84 persons per household (SANDAG 2011). Assuming this average household size represents 1 child per household, the new research staff members could introduce approximately 80 children to the area who would use K–12 school facilities. Table 5 of the *Population and Housing Technical Report* (Dudek 2015a), presents faculty and staff residence distribution patterns. According to Table 5, 7% of staff live within the area immediately surrounding SDSU (i.e., the College Area community). Assuming staff members continue to reside in these neighborhoods at current rates, approximately 6 children could be introduced to San Diego Unified schools specifically within the College Area community. The remaining staff members reside in other communities within the City and County.

The introduction of 80 K–12 students to various locations throughout the City and County would result in a marginal increase in students to San Diego Unified and other school districts. Therefore, impacts would be less than significant and no mitigation is necessary.

Parks and Recreational Facilities?

The Proposed Project could potentially create additional demand for park and recreational facilities by accommodating a 224-student increase and to 80 additional research staff members over current levels. While the students have the option to use City parks and recreational facilities in the community, SDSU students are more likely to use SDSU recreational facilities because of the proximity of classrooms and other academic uses to on-campus recreational facilities. As described in Section 3.2.4, SDSU provides 46.27 acres of community/neighborhood type facilities, 503.7 acres of scenic/natural areas, and 16.1 acres of future recreational facilities. These SDSU- owned and operated facilities are more than adequate to support the existing student body as well as the projected additional 224 students. Therefore, an impact to local city/county parks and recreation resources would not be generated from the projected student increase associated with the Proposed Project.

New research staff members could introduce new families to the area, which may contribute to an additional demand for park and recreational facilities. According to the SANDAG's 2010–2020 *Regional Housing Needs Assessment Plan*, the average household size in the year 2020 for the County is projected to be approximately 2.84 persons per household (SANDAG 2011). Applying this average household size, the new research staff members could introduce 227 persons to the area who could use park and recreational facilities. Table 5 of the *Population and Housing Technical Report* presents faculty and staff residence distribution patterns (Dudek 2015a). Assuming staff members continue to reside in these neighborhoods at current rates, new staff would reside throughout various locations within the City and County and, thereby, any potential use of park and recreational facilities would be dispersed throughout the area. Considering there would be a minor increase in staff members, the fast that staff would likely reside throughout various locations within the City and County, and SDSU's park and recreational facilities would be available to staff members, impacts would be less than significant. No mitigation is necessary.

Libraries?

The Engineering and Interdisciplinary Sciences Building would result in teaching labs that can accommodate a capacity increase of 224 students. Additionally, the Engineering and Interdisciplinary Sciences Building would accommodate up to 80 additional research staff members over current levels.

The 224 students associated with the Engineering and Interdisciplinary Sciences Building would be SDSU students, who would use the main on-campus Malcolm A. Love Library. While the students have the option to use surrounding City libraries, SDSU students are more likely to use the Malcom A. Love Library due to the proximity of classrooms and other academic facilities, and research capabilities that are typically present only in university library facilities.

The Engineering and Interdisciplinary Sciences Building would accommodate up to 80 additional research staff members over current levels and could introduce new households/families to the area. According to the SANDAG's 2010–2020 *Regional Housing Needs Assessment Plan*, the average household size in the year 2020 for the County is projected to be approximately 2.84 persons per household (SANDAG 2011). Applying this average household size, the new research staff members could introduce 227 persons to the area who could utilize local libraries. Table 5 of the *Population and Housing Technical Report* presents faculty and staff residence distribution patterns (Dudek 2015a). Assuming staff members continue to reside in these neighborhoods, new staff would reside throughout various neighborhoods within the City and County. The introduction of 227 persons to the area would result in a marginal increase in persons using local public libraries, since staff would likely reside throughout various locations within the City and County. Additionally, SDSU library facilities are available for faculty and staff members to use. Impacts would be less than significant and no mitigation is necessary.

Emergency Medical Services?

The Proposed Project could potentially result in an increase in calls for emergency medical services by accommodating a 224-student headcount enrollment increase and up to 80 additional research staff members over current levels.

Table 19 provides a projection of future Priority 1 medical aid service calls to the SDSU Police Department. Because the Fire-Rescue Department currently responds to calls for service originating from the Proposed Project site, only the net increase in student headcount enrollment (224) was used to calculate the projected Priority 1 calls attributable to the Proposed Project. As shown in Table 14 from the Public Services and Utilities Technical Report, the Proposed Project would generate less than one additional annual call from students and employees using the Engineering and Interdisciplinary Sciences Building.

Table 19

Projected Priority 1 Medical Aid Service Calls From Academic Facilities

Call Origin	Average Annual Calls per Student[a]	Student Headcount Enrollment Net Increase[b]	Projected Additional Priority Calls (per Year)
All Campus Facilities	0.0011	224	0.25

Notes:

a See Appendix L Table 17. To calculate the average annual call rate, the arithmetic mean of the 2012 and 2013 Priority 1 calls received was calculated.

b Shinn, pers. comm. 2015b.

The Proposed Project would result in less than one annual medical aid Priority 1 call. Considering the marginal increase in projected medical aid Priority 1 calls, and that new emergency medical service facilities would not be required to maintain acceptable levels to accommodate the SDSU campus, the Proposed Project would not result in potentially significant impacts to emergency medical services, and no mitigation is necessary.

Cumulative Analysis:

The Proposed Project would result in an incremental increase in demand for certain public services and facilities, while resulting in a decrease in demand for certain other services and facilities. However, the Proposed Project's consistency with planned growth and redevelopment anticipated in the College Area would reduce any potentially significant cumulative impacts to local water, sewer, stormwater, police, parks and recreation, fire, emergency medical services, solid waste, school services, and libraries to a level below significant.

MITIGATION:

No significant public utility and/or service impacts were identified; therefore, no mitigation measures are required.

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RECREATION				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✔	
(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✔

ANALYSIS:

Thresholds (a) - (b):

As discussed in Public Services, supra, the Proposed Project would not result in significant impacts to local city/county parks and recreation resources due to increased demand and use. Therefore, the Proposed Project would not cause substantial physical deterioration of such resources and impacts would be less than significant. Additionally, as the Proposed Project does not include the construction or expansion of recreational facilities, there would be no adverse physical effects on the environment.

MITIGATION:

No significant impacts would occur; therefore, no mitigation is required.

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TRANSPORTATION/TRAFFIC				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		✔		
(b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				✔
(c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✔
(d) Substantially increase hazards due to a design feature (*e.g.*, sharp curves or dangerous intersections) or incompatible uses (*e.g.*, farm equipment)?				✔
(e) Result in inadequate emergency access?				✔
(f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				✔

ANALYSIS:

The following analysis is based on the technical report prepared by Linscott Law & Greenspan, entitled *Traffic Impact Analysis SDSU Engineering & Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix M to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Analysis of the Proposed Project's potential impacts on transportation / traffic was conducted under several different scenarios. First, impacts associated with construction traffic, including worker and truck trips, were assessed. Second, impacts associated with operation of the Proposed Project following buildout were assessed, both under a near-term scenario (following Project completion) and under a long-term 2035 scenario.

Impacts were assessed taking into account existing traffic levels, combined with an annual growth rate, plus cumulative development, which included the previously approved SDSU Plaza Linda Verde (PLV) project (now referred to as South Campus Plaza). Impacts to both intersections and street segments were assessed utilizing the City of San Diego significance criteria. Under those criteria, if the project exceeds the thresholds set forth in the following table, then the project is considered to have a significant "direct" or "cumulative" project impact. A significant impact also can occur if a project causes the Level of Service to degrade from D to E, even if the allowable increases in the table are not exceeded. A feasible mitigation measure will need to be identified to return the impact within the City thresholds, or the impact will be considered significant and unmitigated.

Table 20

City Of San Diego
Traffic Impact Significant Thresholds

Level of Service with Project[b]	Allowable Increase Due to Project Impacts[a]					
	Freeways		Roadway Segments		Intersections	Ramp Metering[c]
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E	0.010	1.0	0.02	1.0	2.0	2.0
F	0.005	0.5	0.01	0.5	1.0	1.0

Footnotes:

a. If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note b), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.

b. All LOS measurements are based upon Highway Capacity Manual procedures for peak-hour conditions. However, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped locations). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

c. The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes. The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

General Notes:

1. Delay = Average control delay per vehicle measured in seconds for intersections or minutes for ramp meters
2. LOS = Level of Service
3. V/C = Volume to Capacity ratio
4. Speed = Arterial speed measured in miles per hour

See Appendix M to this Initial Study for additional information regarding analysis methodology, including significance criteria, trip generation and distribution.

Impacts are presented separately below under the Near-Term and Long-Term scenarios.

Near-Term Scenarios

Temporary Construction Impacts

This section presents the results of the analysis when project construction-related traffic is added to Existing traffic volumes + 3 years of growth (1% annual rate) + PLV project traffic. The results of these analyses are compared to the Existing + 3 Year Growth + PLV Project baseline

results to determine the significance of impacts. Note that the impacts presented in this section would be temporary short-term impacts that would not last beyond the corresponding phase of construction.

Peak Hour Intersection Analysis

Table 21 summarizes the peak hour intersection operations with and without the addition of the project construction-related traffic volumes (which are added to the Existing + 3 Year Growth + PLV Project baseline). The table shows that with the addition of project construction-related traffic, all of the study area intersections would operate at acceptable Level of Service (LOS) D or better with the exception of the following intersection:

- College Avenue / Canyon Crest Drive (LOS E during the AM & PM peak hours)

The College Avenue / Canyon Crest Drive intersection listed above would continue to operate at LOS E with the addition of construction-related traffic as it would without the project traffic. However, the increase in delay due to the project construction-related traffic is 6.0 seconds and 3.7 seconds in the AM and PM peak hours, respectively. At LOS E, the allowable increase in delay is 2.0 seconds. Therefore, based on the City's significance criteria, during construction of the Proposed Project, construction-related traffic at the College Avenue / Canyon Crest Drive intersection would result in a significant impact.

Daily Segment Operations

Table 23 summarizes the study area segment operations with and without the addition of Project construction-related traffic volumes (which are added to the Existing + 3 Year Growth + PLV Project baseline). The table shows that all of the study area segments would continue to operate at LOS C as they did without the Project with the following exception:

- College Avenue: between Canyon Crest Drive and Zura Way (LOS E)

The segment of College Avenue listed above would continue to operate at LOS E as it would without Project construction-related traffic, although the increase in vehicle capacity (v/c) due to the project is 0.003, which is less than the allowable 0.020. Therefore, based on the City's significance criteria, during Project construction, the impact on the identified College Avenue segment is deemed less than significant.

Operational Impacts

This section presents the results of the analysis under the scenario in which the Proposed Project is recently fully completed. Under this scenario, post-construction Project traffic is added to the Existing + 4 Year Growth + PLV Project traffic. The results of these analyses are compared to the Existing + 4 Year Growth + PLV Project baseline results to determine significance of impacts.

Peak Hour Intersection Analysis

Table 22 summarizes the peak hour intersection operations with and without the addition of the Project traffic volumes post-construction (which are added to the Existing + 4 Year Growth + PLV Project baseline). The table shows that with the addition of Project traffic, all of the study

area intersections would operate at LOS D or better with the exception of the following intersection:

- College Avenue / Canyon Crest Drive (LOS E during the AM & PM peak hours)

As shown, the intersection would operate at LOS E, as it would prior to the addition of Project traffic. The increase in delay due to the Project traffic (post-construction) would be 0 seconds and 0.9 seconds in the AM and PM peak hours, respectively. These increases in delay are less than the permissible 2.0 seconds at LOS E. Therefore, based on the City's significance criteria, Project impacts at the College Avenue / Canyon Crest Drive intersection would be less than significant.

Daily Segment Operations

Table 24 summarizes the study area segment operations in the study area with and without the addition of post-construction Project traffic volumes (which are added to the Existing + 4 Year Growth + PLV Project baseline). The table shows that all of the study area segments would continue to operate at LOS C on a daily basis with the following exception:

- College Avenue: between Canyon Crest Drive and Zura Way (LOS E)

As shown, this segment of College Avenue would continue to operate at LOS E as it would prior to the addition of Project traffic. The increase in v/c due to the Project would be 0.006, which is less than the permissible 0.020. Therefore, based on the City's significance criteria, the Project impacts on College Avenue between Canyon Crest Drive and Zura Way would be less than significant.

Table 21
Near-Term Intersection Operations (During Construction)

Intersection	Control Type	Peak Hour	Existing		Existing + 3 Year Growth + PLV Project		Existing + 3 Year Growth + PLV Project + Project Construction-Related Traffic		Δ[c]
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS	
College Avenue/I-8 WB Off-Ramp	Signal	AM	9.0	A	9.2	A	9.4	A	0.2
		PM	15.1	B	16.8	B	20.4	C	3.6
College Avenue/I-8 EB Off-Ramp	Signal	AM	39.1	D	42.3	D	48.8	D	6.5
		PM	40.8	D	47.8	D	53.4	D	5.6
College Avenue/Canyon Crest Drive	Signal	AM	58.0	E	73.0	E	79.0	E	6.0
		PM	57.7	E	66.6	E	70.3	E	3.7
College Avenue/Lindo Paseo	Signal	AM	9.9	A	12.1	B	12.3	B	0.2
		PM	10.2	B	12.2	B	14.8	B	2.6
College Avenue/Montezuma Road	Signal	AM	14.8	B	18.5	B	18.9	B	0.4
		PM	30.2	C	41.6	D	43.7	D	2.1

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes an increase in delay due to project.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

Table 22

Near-Term Intersection Operations (Post Construction)

Intersection	Control Type	Peak Hour	Existing		Existing + 4 Year Growth + PLV Project		Existing + 4 Year Growth + PLV Project + Project Post-Construction		Δ[c]
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS	
College Avenue/I-8 WB Off-Ramp	Signal	AM	9.0	A	9.3	A	9.3	A	0.0
		PM	15.1	B	17.5	B	17.8	B	0.3
College Avenue/I-8 EB Off-Ramp	Signal	AM	39.1	D	42.3	D	43.5	D	1.2
		PM	40.8	D	53.3	D	53.4	D	0.1
College Avenue/Canyon Crest Drive	Signal	AM	58.0	E	76.4	E	76.4	E	0.0
		PM	57.7	E	66.8	E	67.7	E	0.9
College Avenue/Lindo Paseo	Signal	AM	9.9	A	12.3	B	12.4	B	0.1
		PM	10.2	B	12.5	B	12.7	B	0.2
College Avenue/Montezuma Road	Signal	AM	14.8	B	19.5	B	19.9	B	0.4
		PM	30.2	C	43.5	D	45.0	D	1.5

Footnotes:

a. Average delay expressed in seconds per vehicle.

b. Level of Service.

c. Δ denotes an increase in delay due to project.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

Table 23
Near-Term Street Segment Operations (During Construction)

Street Segment	Existing Capacity (LOS E)[a]	Existing			Existing + 3 Year Growth + PLV Project			Existing + 3 Year Growth + PLV Project + Project Construction-Related Traffic			Δ[e]
		ADT[b]	V/C[c]	LOS[d]	ADT	V/C	LOS	ADT	V/C	LOS	
College Avenue											
Canyon Crest Drive to Zura Way	40,000	35,310	0.883	E	37,260	0.931	E	37,350	0.934	E	0.003
Zura Way to Montezuma Road	40,000	26,118	0.653	C	27,789	0.695	C	27,879	0.697	C	0.002
Montezuma Road to Cresita Drive	40,000	26,610	0.665	C	27,816	0.695	C	27,851	0.696	C	0.001
Montezuma Road											
College Avenue to Campanile Drive	40,000	24,586	0.615	C	26.016	0.650	C	26,036	0.651	C	0.001
College Avenue to East Campus Drive	40,000	21,490	0.537	C	22,466	0.562	C	22,501	0.563	C	0.000

Footnotes:

a. Capacities based on City of San Diego Roadway Classification & LOS table (See Appendix D of Traffic Technical Report).
b. Average Daily Traffic
c. Volume to Capacity ratio
d. Level of Service
e. Δ denotes a project-induced increase in the Volume to Capacity ratio

General Notes:

1. BOLD typeface indicates a potentially significant impact.

Table 24
Near-Term Street Segment Operations (Post Construction)

Street Segment	Existing Capacity (LOS E)[a]	Existing			Existing + 4 Year Growth + PLV Project			Existing + 4 Year Growth + PLV Project + Project Post- Construction			Δ[e]
		ADT[b]	V/C[c]	LOS[d]	ADT	V/C	LOS	ADT	V/C	LOS	
College Avenue											
Canyon Crest Drive to Zura Way	40,000	35,310	0.883	E	37,624	0.941	E	37,892	0.947	E	0.006
Zura Way to Montezuma Road	40,000	26,118	0.653	C	28,058	0.701	C	28,321	0.708	C	0.007
Montezuma Road to Cresita Drive	40,000	26,610	0.665	C	28,090	0.702	C	28,195	0.705	C	0.003
Montezuma Road											
College Avenue to Campanile Drive	40,000	24,586	0.615	C	26,269	0.657	C	26,348	0.659	C	0.002
College Avenue to East Campus Drive	40,000	21,490	0.537	C	22,688	0.567	C	22,767	0.569	C	0.002

Footnotes:

a. Capacities based on City of San Diego Roadway Classification & LOS table (See Appendix D of Traffic Technical Report).
b. Average Daily Traffic
c. Volume to Capacity ratio
d. Level of Service
e. Δ denotes a project-induced increase in the Volume to Capacity ratio

General Notes:

1. BOLD typeface indicates a potentially significant impact.

Long-Term (2035) Scenario

This scenario analyzes the impacts of the Proposed Project under a Long-Term (2035) scenario. Long-term traffic volumes were forecast using the SANDAG Series 12 traffic model volumes for the Year 2035. The analysis is based on the existing lane configurations. The Long-term (2035) Without Project (Baseline) traffic volumes were analyzed to determine the peak hour intersection and daily segment analysis results. These results form the baseline against which the Project impacts are measured. Appendix M, Figure 10–1 shows the long-term (2035) traffic volumes (without Project traffic). Figure 10–2 shows the year 2035 with Project traffic volumes (i.e., post construction).

Intersection Analysis

Table 25 summarizes the 2035 peak hour intersection operations with and without the Project traffic volumes. As shown in Table 25, with the addition of Project traffic, the majority of the study area intersections would continue to operate at LOS D or better conditions. The following two intersections would continue to operate at LOS E:

- College Avenue / Canyon Crest Drive (LOS E during the AM & PM peak hours)
- College Avenue / Montezuma Road (LOS E during the PM peak hour)

As shown on Table 25, the addition of Project traffic would not exceed the permissible increase in delay based on the established significance criteria. Therefore, based on the City's significance criteria, the Project impacts at these intersections would be less than significant.

Segment Operations

Table 26 summarizes the study area segment operations with and without the Proposed Project traffic volumes. As shown in Table 26, the following three study area segments would operate at LOS E or worse conditions:

- College Avenue: between Canyon Crest Drive and Zura Way (LOS F)
- College Avenue: between Zura Way and Montezuma Road (LOS F)
- College Avenue: between Montezuma Road and Cresita Drive (LOS E)

As shown on Table 26, the increase in v/c attributable to the Proposed Project would not exceed the permissible increase based on the City's significance criteria. Therefore, Project impacts at this study area segment would be less than significant.

Table 25
Long-Term Intersection Operations

Intersection	Peak Hour	Year 2035 Without Project		Year 2035 With Project		Delay Increase	Sig?[c]
		Delay[a]	LOS[b]	Delay	LOS		
College Avenue/I-8 WB Off-Ramp	AM	9.4	A	9.5	A	0.1	No
	PM	24.3	C	25.0	C	0.7	No
College Avenue/I-8 EB Off-Ramp	AM	38.4	D	39.6	D	1.2	No
	PM	38.5	D	39.6	D	1.1	No
College Avenue/Canyon Crest Drive	AM	58.7	E	59.6	E	0.9	No
	PM	61.4	E	61.8	E	0.4	No
College Avenue/Lindo Paseo	AM	14.4	B	16.3	B	1.9	No
	PM	14.1	B	14.2	B	0.1	No
College Avenue/Montezuma Road	AM	45.4	D	48.1	D	2.7	No
	PM	72.9	E	74.1	E	1.2	No

Footnotes:

a. Average delay expressed in seconds per vehicle.

b. Level of Service.

c. Sig = Significant impacts based on Significance Criteria.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

Table 26
Long-Term Street Segment Operations

Street Segment	Capacity (LOS E) [a]	Year 2035 Without Project			Year 2035 With Project			Δ[e]	Sig? [f]
		ADT[b]	LOS [c]	V/C [d]	ADT	LOS	V/C		
College Avenue									
Canyon Crest Drive to Zura Way	40,000	43,900	F	1.098	44,168	F	1.104	0.006	No
Zura Way to Montezuma Road	40,000	42,800	F	1.070	43,063	F	1.077	0.007	No
Montezuma Road to Cresita Drive	40,000	38,100	E	0.953	38,205	E	0.955	0.002	No
Montezuma Road									
College Avenue to Campanile Drive	40,000	29,100	C	0.728	29,179	C	0.729	0.001	No
College Avenue to East Campus Drive	40,000	23,300	C	0.583	23,379	C	0.584	0.001	No

Footnotes:

a. Capacity based on roadway classification operating at LOS E.

b. Average Daily Traffic.

c. Level of Service.

d. Volume to Capacity.

e. Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

f. Sig = Significant impact based on Significance Criteria.

Significance of Impacts and Mitigation Measures

Significance of Impacts

The analysis presented in this section determined that the Proposed Project would result in significant short-term, i.e., temporary, impacts attributable to Project construction activities. This impact would occur at the intersection of College Avenue and Canyon Crest Drive during peak hours (7:00 am -9:00 am and 4:00 pm – 6:00 pm).

Mitigation

To mitigate this impact, the traffic engineer recommends that CSU/SDSU establish an alternative transportation program to reduce the number of vehicle trips generated by construction trades commuting to the Project site. One approach would be to establish an off-site location for construction workers to park, such as at the Grantville park-n-ride. A shuttle could then be provided for the workers to travel to and from the Project construction site. With the addition of a shuttle, the trip generation during Project construction would decrease from 155 employee vehicles per day to approximately 23 vehicles per day (assuming 7 employees per shuttle).

As shown on Table 27, with operation of a shuttle, the change in delay in the AM peak hour would drop from 6.0 seconds to 1.1 seconds. The change in delay in the PM peak hour would drop from 3.7 seconds to 1.9 seconds. Based on the City's significance criteria, with operation of the shuttle, the Project's temporary, short-term impacts at the College Avenue /Canyon Crest Drive intersection would be fully mitigated. Appendix L contains the intersection analysis worksheets.

Table 27
Mitigated Near-Term Intersection Operations

Intersection	Control Type	Peak Hour	Existing		Existing + 3 Year Growth + PLV Project		Existing + 3 Year Growth + PLV Project + Project Construction-Related Traffic		Δ[c]
			Delay [a]	LOS[b]	Delay	LOS	Delay	LOS	
College Avenue/Canyon Crest Drive **without Mitigation**	Signal	AM	58.0	E	73.0	E	79.0	E	6.0
		PM	57.7	E	66.6	E	70.3	E	3.7
College Avenue/Canyon Crest Drive **with Mitigation**	Signal	AM	58.0	E	73.0	E	74.1	E	1.1
		PM	57.7	E	66.6	E	68.5	E	1.9

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes an increase in delay due to project.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

Threshold (b): Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Level of service standards are addressed under Threshold (a). There is no congestion management program presently in effect in San Diego County.

Threshold (c): Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Proposed Project consists of the development of classroom and laboratory facilities on the SDSU campus and, as such, the project would not result in a change in air traffic patterns,

including either an increase in traffic levels or a change in location that results in substantial safety risks.

Threshold (d): Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Proposed Project would not affect the campus circulation system and, therefore, would not substantially increase hazards due to a design feature or incompatible use and, therefore, there would be no impact.

Threshold (e): Would the project result in inadequate emergency access?

The Proposed Project would not affect emergency access and, therefore, there would be no impact.

Threshold (f): Would the project Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The Proposed Project consists of the development of classroom and laboratory facilities on the SDSU campus. Development of the project would not conflict with adopted plans or programs regarding public transit, bicycle, or pedestrian facilities. As to the performance or safety of such facilities, the traffic engineer assumed that of the additional students that would be accommodated by the Proposed Project, 10 of the students would walk or bike to campus, and 10 would take the trolley or bus to campus. In light of the limited number of additional riders, it is not expected that the Proposed Project would decrease the performance or safety of transit, bicycle or pedestrian facilities.

Cumulative Analysis:

The Long-Term 2035 analysis presented above includes Project traffic in combination with traffic from other reasonably foreseeable development and, thereby, serves to provide the cumulative impacts analysis.

MITIGATION:

TR-1 Upon the commencement of construction activities associated with development of the Proposed Project, CSU/SDSU shall establish an alternative transportation program to reduce the number of construction trade vehicles commuting to the Project site, e.g., a shuttle service operating between a Park n' Ride facility located along Interstate-8 and the SDSU project construction site to provide project construction workers with transportation between the off-campus parking facility and the worksite. CSU/SDSU shall direct that construction worker vehicles be parked at the designated parking facility. The shuttle shall operate during the A.M. and P.M. peak hours in such manner and frequency to accommodate up to a peak number of 155 construction workers.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of mitigation measure TR-1, the identified significant impact would be reduced to less than significant.

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UTILITIES AND SERVICE SYSTEMS				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
Would the project:				
(a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✔	
(b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✔	
(c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effect?			✔	
(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✔	
(e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demands in addition to the provider's existing commitments?			✔	
(f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✔	
(g) Comply with federal, state, and local statutes and regulations related to solid waste?			✔	

ANALYSIS:

The following analysis is based on the technical report prepared by Dudek entitled *Public Services and Utilities Technical Report for the SDSU Engineering and Interdisciplinary Sciences Building* (February 2015). The report is included in its entirety as Appendix L to this Initial Study and is incorporated herein by this reference.

Threshold (a): Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The City provides sewer collection for the SDSU campus. Wastewater collected by the City is treated at the Point Loma Wastewater Treatment Plant. The City is the National Pollutant Discharge Elimination System permit holder for Point Loma Wastewater Treatment Plant, and it is responsible for compliance with the wastewater treatment requirements in the National Pollutant Discharge Elimination System permit, Order No. R9-2009-001/CA0107409 (San Diego RWQCB 2010). Upon connection to City wastewater facilities, the Proposed Project would be in compliance with the wastewater treatment requirements of the RWQCB. Therefore, the Proposed Project would not exceed the wastewater treatment requirements of the applicable RWQCB. Impacts would be less than significant and no mitigation is necessary.

Threshold (b): Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Sewer

A 6-inch sewer line located east of the project site in the campus loop road currently serves the existing Engineering Building (Cannon Design 2014).

A complete sanitary sewer, waste, and vent system would be provided as part of the Proposed Project. The system will serve the restrooms, general classrooms, mechanical equipment, and floor drains. The system will be run by gravity whenever possible. Building drains or floor sinks that cannot be discharged by gravity flow (if any), will be collected into a duplex sewage ejector system from which the effluent will be lifted and discharged into a gravity drainage system. Vent terminations through the roof will be coordinated so as to avoid any light monitors, clearstory, and interference with heating, ventilation, and air conditioning equipment outside air intakes. Sump pumps will be provided as required for low-grade areas and be submersible, duplex with guide rail for easy removal (Cannon Design 2014).

Based on estimated capacity and accessory uses, wastewater generation projected for each of the buildings is summarized in Table 28.

Table 28

Estimated Wastewater Generation (gallons per day)

	Existing Wastewater Generation	Proposed Wastewater Generation	Net Change[a]
Existing Facilities			
Engineering Lab and Industrial Technology Buildings	5,356	0	(5,356)
Engineering Building	3,735	3,735	0
CAM Labs	307	0	(307)
Quonset Hut	1,375	0	(1,375)
Proposed Facilities			
Engineering and Interdisciplinary Sciences Building	0	4,320	4,320
Total	**10,773**	**8,055**	**(2,718)**

Sources: P2S Engineering 2015

a Proposed wastewater generation minus existing wastewater generation.

Approximately 10,773 gallons per day of wastewater is generated within the existing facilities located on the project site, which is conveyed by the existing sewer line. Approximately 8,055 gallons per day would be generated upon buildout of the Engineering and Interdisciplinary Sciences Building. Thus the Proposed Project would result in a net decrease of 2,718 gallons per day of wastewater. Because the Proposed Project would result in net a decrease of wastewater generation from the Proposed Project site, the Proposed Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. Impacts would be less than significant and no mitigation is necessary.

Potable Water

Domestic and fire water are currently supplied to the existing site via a combined 6-inch private looped main in the campus loop road, which runs along the south side of the existing building to a point of connection at the southwest corner. Domestic and fire water for the Proposed Project will come off this existing line. Existing water lines would need to be relocated in order to provide service to the Engineering and Interdisciplinary Sciences Building. The water service line and proposed backflow prevention system for the proposed building would provide for all project-related fire sprinkler service and domestic water demands (Cannon Design 2014).

Based on estimated capacity, accessory uses, and surrounding landscaping, water use projected for each of the buildings is summarized in Table 30.

Table 29

Estimated Water Use (gallons per day)

	Existing Water Use	Proposed Water Use	Net Change (Proposed Water Use – Existing Water Use)
Existing Facilities			
Engineering Lab and Industrial Technology Buildings	5,952	0	(5,952)
Engineering Building	4,150	4,150	0
CAM Labs	341	0	(341)
Quonset Hut	1,528	0	(1,528)
Proposed Facilities			
Engineering and Interdisciplinary Sciences Building	0	4,800	4,800
Total	**11,971**	**8,950**	**(3,021)**

Sources: P2S Engineering 2015

Approximately 11,971 gallons of water per day is consumed within the existing facilities located on the project site, which is conveyed by the existing main. Approximately 8,950 gallons of water per day would be consumed upon buildout of the Engineering and Interdisciplinary Sciences Building. Thus, the Proposed Project would result in a net decrease of 3,021 gallons of water consumed per day. Because the Proposed Project would result in a net decrease of water consumed within the project site, the Proposed Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities. Impacts would be less than significant and no mitigation is necessary.

Recycled Water

Recycled water is not available in the Proposed Project area. The Proposed Project does not include the construction of on-campus infrastructure to support the use of recycled water because those services are not currently available to the campus (Cannon Design 2014). Therefore, the Proposed Project would not result in potentially significant impacts related to the distribution of recycled water.

Threshold (c): Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?

The existing Engineering Building facility drains in a southwest to northeast direction, which is funneled to an underground pipe, and exits the site in an 8-inch storm drain. This storm drain flows east from the northeast corner of the site. The site is located at the end of the drainage

system, with no off-site flows entering the system at the site's location. Storm water runoff from this area of campus runs off into a gravity collection system, which ultimately drains to a City facility downstream (Cannon Design 2014).

On-site storm water collection and conveyance facilities associated with the Proposed Project would include low impact design systems to provide storm water treatment and would consist of bio-retention planters and/or modular wetlands (Cannon Design 2014).

Regarding total peak flow rate and run-off volumes, the Proposed Project would not increase the total impervious area within the project limits since the site is pre-developed.

Because any changes in impervious surfaces would be relatively minor, the Proposed Project is not anticipated to exceed the capacity of existing off-site storm water drainage system. In addition, a complete gravity storm drainage system connecting to each roof drain and overflow drain shall be provided (Cannon Design 2014). Therefore, impacts are less than significant and no mitigation is necessary.

Threshold (d): Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

As described above, and shown in Table 29, approximately 11,971 gallons of water per day are consumed within the existing facilities located on the project site. Approximately 8,950 gallons of water per day would be consumed upon buildout of the Proposed Project. Thus, the Proposed Project would result in a net decrease of 3,021 gallons of water consumed per day. Because the Proposed Project would result in a net decrease of water consumed within the project site, the Proposed Project would not require new or expanded entitlements. Impacts would be less than significant and no mitigation is necessary.

Threshold (e): Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As described above, and shown in Table 28, approximately 10,773 gallons per day of wastewater is generated within the existing facilities located on the project site. Approximately 8,055 gallons per day would be generated upon buildout of the Proposed Project. Thus, the Proposed Project would result in a net decrease of 2,718 gallons per day of wastewater. Because the Proposed Project would result in a net decrease of wastewater generation from the project site, impacts would be less than significant and no mitigation is necessary.

Threshold (f): Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction of the Proposed Project would generate construction and demolition waste (e.g., concrete rubble, asphalt rubble, wood, drywall) that would result in an increased demand for solid waste collection and disposal capacity. The demolition of the Quonset Hut, CAM Laboratories, and Engineering Lab and Industrial Technology buildings would

result in the generation of approximately 5,258 cubic yards of demolition waste[5]. Assuming 50% of this waste is recycled, as required per AB 75, this would result in the generation of 2,629 cubic yards of demolition waste to be disposed of in a local landfill. Demolition and construction waste is accepted at the Miramar Landfill and the Otay Landfill, which have remaining capacities of 15,527,878 and 24,514,904 cubic yards, respectively (CalRecycle 2015a and 2015c). The Miramar Landfill and the Otay Landfill would have sufficient capacity to accommodate the 2,629 cubic yards of solid waste associated with the demolition of the Quonset Hut, CAM Laboratories, and Engineering Lab and Industrial Technology buildings. Therefore, potential impacts associated with disposal of construction solid waste would be less than significant.

Republic Services Inc., or a comparable vendor, would service the Proposed Project's solid waste needs during operation. Solid waste would continue to be collected in dumpsters located throughout the campus and then transported to one of three locations: (1) food and green waste would be diverted to the Miramar Greenery located within the Miramar Landfill; (2) non-recyclable solid waste would be diverted to the Sycamore Landfill; and (3) the remaining recyclable waste would be diverted to the EDCO Recycling Facility in Lemon Grove (Del Rio, pers. comm. 2015a).

As noted above in Section 3.2.11, the Miramar Landfill is nearing capacity and is expected to close by 2025. The remaining capacities of the Sycamore and Otay Landfills are 42,246,551 cubic yards (as of February 2011) and 24,514,904 cubic yards (as of March 2012), respectively.

Data are not available regarding solid waste generated specifically by existing academic campus land uses. The California Emissions Estimator Model (CalEEMod), Version 2013.2.2, was used to calculate criteria air pollutant and greenhouse gas emissions associated with the construction and operation of the Proposed Project (described in the *Air Quality Technical Report* and *Greenhouse Gas Technical Report* (Dudek 2015b, 2015c)). CalEEMod assumes an annual solid waste generation rate of 1.3 tons per 1,000 square feet of university facility space. Based on the assumption that there would be an increase of 38,168 gross square feet on campus, the Proposed Project would generate approximately 50 tons of solid waste per year.

The *County of San Diego Countywide Five-Year Review Report* (County of San Diego 2012) analyzes projected countywide landfill capacity until 2030. Using the following assumptions, the report projects County landfill capacity versus County disposal rates: (1) permitted daily capacity provided by local enforcement agencies; (2) Otay Landfill has a closure date of 2028; (3) Miramar Landfill has a closure date of 2025; and (4) Sycamore Landfill will expand daily throughput capacity three times over the course of 18 years. Under these assumptions, the County would lack sufficient landfill capacity after 2028 (County of San Diego 2012). However,

[5] The Quonset Hut, CAM Laboratories, and Engineering Lab and Industrial Technology buildings have a total floor area of 8,100 gross square feet, 1,732 gross square feet, and 47,000 gross square feet, respectively. Assuming a building height of 10 feet, and that the total volume of demolition waste would be equal to 25% of the building volume, the demolition of these buildings would result in a total of 5,258 cubic yards of waste.

due to recent solid waste disposal regulations (AB 341), which set a goal of 75% solid waste diversion by 2020, disposal capacity is expected to be greater than calculated. The *County of San Diego Countywide Five-Year Review Report* concludes that the County would continue to have landfill disposal capacity over the next 15 years (County of San Diego 2012).

The SDSU energy manager and the Student Union's sustainability manager and director are currently establishing programs and practices that would help the campus meet the requirements of AB 341, which requires all large state facilities to divert at least 75% of solid waste from landfills by 2020. SDSU is also coordinating with the City to assist in the development of these solid waste diversion programs and practices (Del Rio, pers. comm. 2015b). Given these considerations, and with recycling that would occur during construction, potential impacts associated with solid waste capacity would be considered less than significant.

Threshold (g): Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Construction of the Proposed Project would generate construction and demolition waste (e.g., concrete rubble, asphalt rubble, wood, drywall) that would result in an increased demand for solid waste collection and disposal capacity.

Republic Services Inc., or a comparable vendor, would serve the Proposed Project's solid waste needs during operation. Solid waste would continue to be collected in dumpsters located throughout the campus and then transported to one of three locations: (1) food and green waste would be diverted to the Miramar Greenery located within the Miramar Landfill; (2) non-recyclable solid waste would be diverted to the Sycamore Landfill; and (3) the remaining recyclable waste would be diverted to the EDCO Recycling Facility in Lemon Grove (Del Rio, pers. comm. 2015a).

Solid waste generated from construction and operation of the Proposed Project would be consistent with SDSU's ongoing recycling programs, which historically have been successful at diverting at least 50% of on-campus-generated solid waste from a landfill to an appropriate recycling facility. Maintaining the existing diversion rate would ensure compliance with AB 75, which requires all large state facilities to divert at least 50% of solid waste from landfills.

Additionally, the SDSU energy manager and the Student Union's sustainability manager and director are currently establishing programs and practices that would help the campus meet the requirements of AB 341, which requires all large state facilities to divert at least 75% of solid waste from landfills by 2020. SDSU is also coordinating with the City to assist in the development of these solid waste diversion programs and practices (Del Rio, pers. comm. 2015b). Given these considerations, and with recycling efforts currently employed by SDSU and in the process of being expanded, impacts associated with solid waste policies and programs are less than significant.

Cumulative Analysis:

The Proposed Project would result in an incremental increase in demand for certain public services and facilities, while resulting in a decrease in demand for certain other services and

facilities. However, the Proposed project's consistency with planned growth and redevelopment anticipated in the College Area would reduce any potentially significant cumulative impacts to local water, sewer, stormwater, police, parks and recreation, fire, emergency medical services, solid waste, school services, and libraries to a level below significant.

MITIGATION:

The analysis did not identify any significant public utility and/or service impacts; therefore, no mitigation measures are required.

MANDATORY FINDINGS OF SIGNIFICANCE				
Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal, 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 which will cause substantial adverse effects on human beings, either directly or indirectly?		✔		

ANALYSIS:

Threshold (a): Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

To the extent the Proposed Project would result in potentially significant impacts that may be

viewed as degrading the quality of the environment, such impacts have been previously identified in this Initial Study, with appropriate mitigation included that would reduce the identified impacts to less than significant.

Development of the Proposed Project would not reduce the habitat of a fish or wildlife species, or cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. For additional related information, please also see the analysis of Biological Resources presented in this Initial Study.

With respect to eliminating important examples of the major periods of California history or prehistory, the Cultural Resources analysis presented in this Initial Study analyzes the potential impacts of the Proposed Project relative to historic, archaeologic and paleontologic resources. Mitigation is included that would reduce the identified potential significant impacts to less than significant.

Threshold (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)?

The impact analysis for each individual impact category presented in this Initial Study separately identifies cumulative impacts as applicable. Where significant impacts are identified, mitigation is proposed that would reduce the impacts to less than significant.

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

Analysis of the Proposed Project's impacts relative to all environmental impact categories, including those that may cause substantial adverse effects on human beings, is presented in this Initial Study. To the extent significant impacts are identified, mitigation is proposed that would reduce the impact to less than significant.

MITIGATION:

There are no additional significant impacts beyond those previously identified in this Initial Study. Therefore, no additional mitigation is required.