

PROPOSED MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY

NEW STUDENT UNION PROJECT



FEBRUARY 2019

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PROPOSED MITIGATED NEGATIVE DECLARATION

NEW STUDENT UNION PROJECT

LEAD AGENCY:

CALIFORNIA STATE UNIVERSITY BOARD OF TRUSTEES

401 Golden Shore
Long Beach, California 90802

CALIFORNIA STATE UNIVERSITY, FRESNO

2351 E. Barstow Avenue
Fresno, California 93740

PREPARED BY:

DUDEK

725 Front Street, Suite 400
Santa Cruz, California 95060

FEBRUARY 2019

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PROPOSED MITIGATED NEGATIVE DECLARATION

California State University, Fresno New Student Union Project

Lead Agency: California State University Board of Trustees
401 Golden Shore
Long Beach, CA 90802-4210

California State University, Fresno (Fresno State)
2351 E. Barstow Avenue
Fresno, California 93740

Project Location: Fresno State

Description of Project: The proposed New Student Union Project (Project) would involve the construction of a new, approximately 70-foot-tall, 80,000-gross-square-foot (GSF) Student Union building. The Project would also include demolition of the existing 7,400-GSF Keats building, as well as the amphitheater and stage on the Project site. The building would include lounge spaces, meeting rooms for student clubs and organizations, campus-serving retail services and program spaces, and offices for professional staff affiliated with Fresno State. The Project would also include a 12,000-square-foot multi-purpose meeting room accommodating 1,200 seats. A new student plaza would be created north of the new Student Union building.

A master plan revision is also proposed to accommodate the new Student Union building on the proposed Project site. This would involve changes to the current Master Plan that would add the Project to the proposed location and remove the existing Keats building and amphitheater/stage from the Project site.

Finding: A Mitigated Negative Declaration (MND) is proposed by the California State University Board of Trustees (Trustees) for the Project. The Trustees is the lead agency for the preparation of the MND in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (Title 14 of the California Code of Regulations [CCR] 15000 et seq.). Per California Education Code Section 66606, the Trustees is the governing body and has the authority to adopt the CEQA document, approve the Master Plan revision, and provide for other approvals for the Project. Fresno State is the point of contact for the CEQA process.

The attached Initial Study and supporting documents have been prepared to determine if the Project would result in potentially significant or significant impacts on the environment. On the basis of the Initial Study, the California State University has determined that, with incorporation of Project-specific mitigation measures identified in the Initial Study, the Project would not result in a significant adverse effect on the environment.

Supporting Documentation: The documentation supporting this determination is discussed in the attached Initial Study prepared for this Project.

INITIAL STUDY

NEW STUDENT UNION PROJECT

LEAD AGENCY:

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1 INTRODUCTION

1.1 PROJECT OVERVIEW

California State University, Fresno (Fresno State) proposes to construct a new, approximately 80,000-gross-square-foot (GSF) Student Union building (New Student Union Project or Project) south of the existing Keats building located in the central portion of the Fresno State campus (see Figure 1, Regional Map, and Figure 2, Vicinity Map). The Project would include demolition of the existing Keats building, amphitheater, and stage. Utility infrastructure improvements, as well as new lighting and landscaping, would also be provided. The Project would not include additional parking facilities.

1.2 CEQA AUTHORITY TO PREPARE A MITIGATED NEGATIVE DECLARATION

The California Environmental Quality Act (CEQA) serves as the main framework of environmental law and policy in California. CEQA emphasizes the need for public disclosure and identifying and preventing environmental damage associated with proposed projects. Unless a proposed project is deemed categorically exempt, CEQA is applicable to any project that must be approved by a public agency in order to be processed and established. This Project does not fall under any of the statutory or categorical exemptions listed in the 2013 CEQA Statute and Guidelines (California Public Resources Code, Section 21000 et seq.; 14 California Code of Regulations [CCR] 15000 et seq.), and, therefore, must meet CEQA requirements.

The Board of Trustees of the California State University (Board of Trustees) is the lead agency pursuant to CEQA and is responsible for preparing and adopting the CEQA document for the Project. The Board of Trustees has determined that a mitigated negative declaration (MND) is the appropriate environmental document to be prepared for the Project in compliance with CEQA. This finding is based on the Environmental Checklist/Discussion of Environmental Evaluation (Chapter 3 of this document). Per the CEQA Guidelines, a MND may be prepared for a project subject to CEQA if an initial study (IS) has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the project proponent before the proposed MND and IS are released for public review would avoid the effects or mitigate the effects to a point in which clearly no significant effect on the environment would occur; and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment (California Public Resources Code, Section 21064.5).

This IS/MND has been prepared by the Board of Trustees as the lead agency and in conformance with Section 15070(a) of the CEQA Guidelines. Fresno State is acting as point of contact for the CEQA process. The purpose of the IS/MND is to determine the potential significant impacts associated with the construction and operation of the Project, and to incorporate mitigation measures, as necessary, to reduce or eliminate the significant or potentially significant effects of the Project.

1.3 OTHER AGENCIES' USE OF THE MND

This IS/MND is intended to be used by responsible and trustee agencies that may have an interest in reviewing the Project. At the time of the IS/MND's publication, the Board of Trustees does not believe permits or authorizations required from other agencies or individuals would require such agencies' or individuals' need to comply with CEQA.

1.4 PUBLIC REVIEW PROCESS

In reviewing the IS/MND, affected public agencies and the interested public should focus on the sufficient identification and analysis of possible impacts on the environment in the document.

Fresno State issued a Notice of Availability and a Notice of Intent to Adopt a Mitigated Negative Declaration for the Project. Comments may be made on the IS/MND in writing before the end of the public review period. A 30-day review and comment period from February 5, 2019, to March 7, 2019, has been established in accordance with CEQA Guidelines Section 15072(a). Following the close of the public comment period, the Board of Trustees will consider this IS/MND and its comments in determining whether to adopt the MND, adopt the Mitigation Monitoring and Reporting Program (MMRP), and approve the Project.

Written comments on the IS/MND should be sent to the following address by 5:00 p.m., on March 7, 2019.

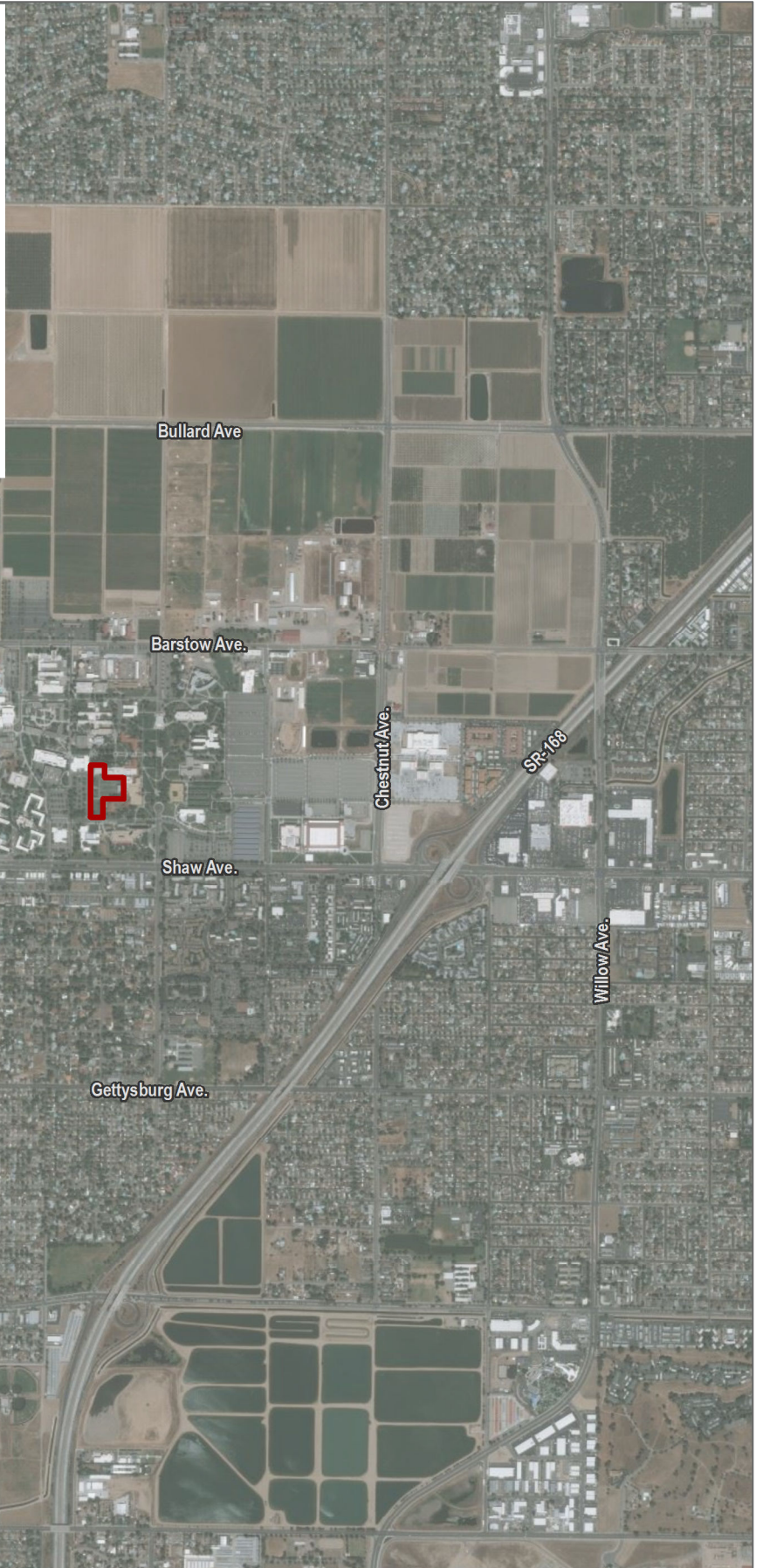
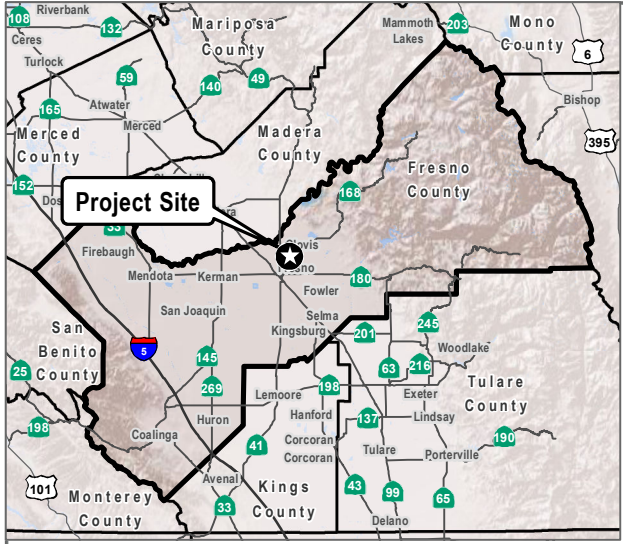
Ms. Tinnah Medina
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California State University, Fresno
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tinnahcm@mail.fresnostate.edu


1.5 PROJECT LOCATION AND SETTING

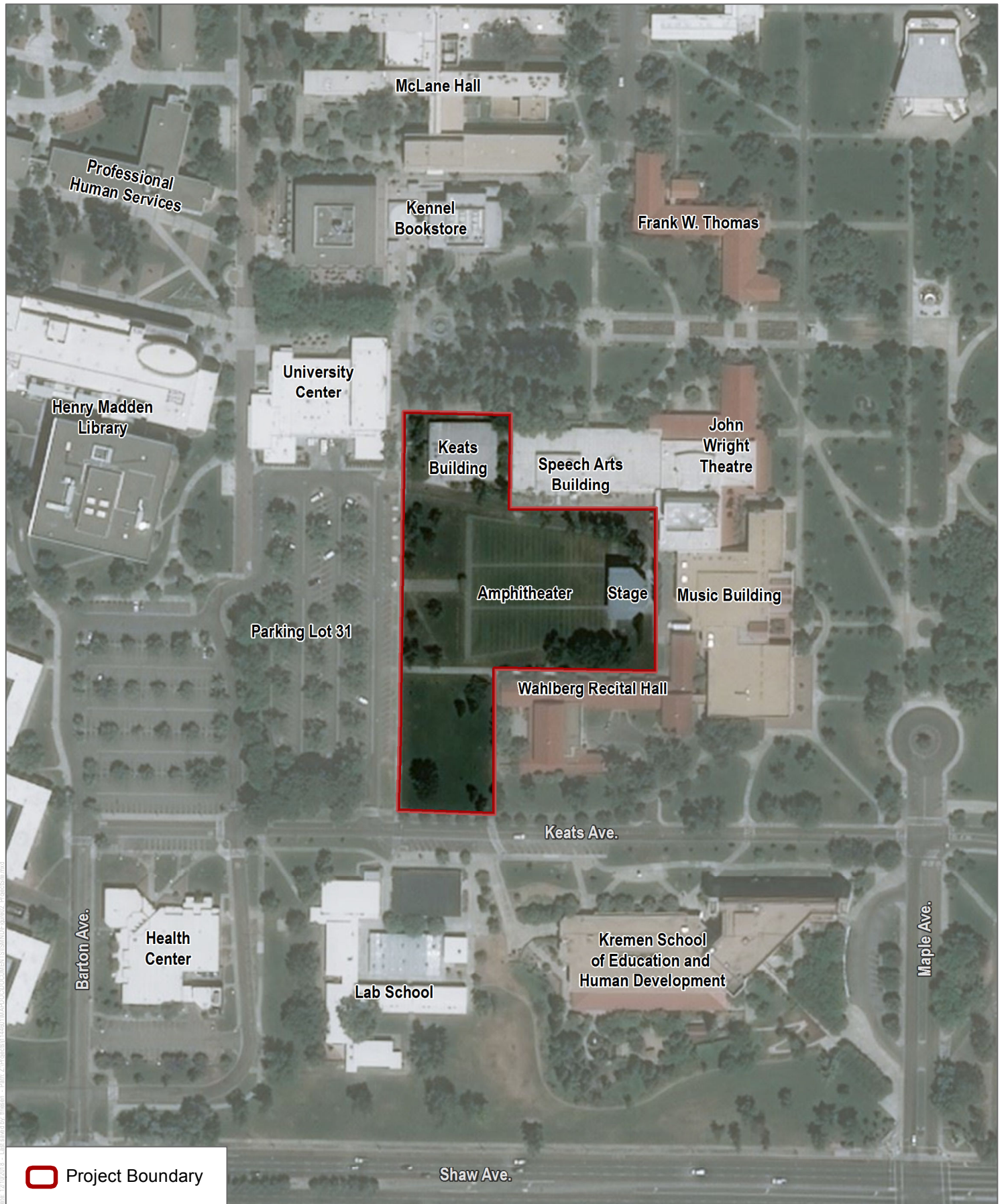
The Project site is located on the existing Fresno State campus in the City of Fresno, California. The Fresno State campus is located near the intersection of State Route (SR) 168 and Shaw Avenue. Major streets surrounding the campus include Shaw Avenue, North Cedar Avenue, East Barstow Avenue, and North Chestnut Avenue (see Figure 1).

The Project site is located north of East Keats Avenue and east of the existing Parking Lot 31 in the core of the main campus, and encompasses the existing Keats building, as well as the existing amphitheater and stage (see Figure 2). This Project vicinity also contains other academic and administrative facilities, including the Speech Arts building, Music Building, Henry Madden Library, and existing University Student Union. There is a surface parking lot (Parking Lot 31) adjacent to the Project site to the west.

The existing Keats building is a one-story, modest Contemporary style, educational building, originally constructed in 1956. The Keats building sits on the northern portion of the Project site, with its main elevation facing northward. A 1,500-square-foot extension was added to the south elevation of the building in 1959. The stage, originally constructed in 1963, is a one-story, open concrete platform covered by a metal canopy roof which was added in 1980. The amphitheater seating area consists of a graded grass field delineated by concrete dividers forming equally spaced rectangular sections, creating a series of 24 grass sections for seating up to 5,000 people. A total of 69 landscape trees, some of which are part of Fresno State's formal arboretum, are located throughout the Project site.



 Project Boundary



SOURCE: Bing Maps 2018

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2 PROJECT DESCRIPTION

2.1 PROJECT OBJECTIVES

CEQA indicates that the statement of project objectives should be clearly written to define the underlying purpose of a project to aid the lead agency in making findings when considering the project for approval. Fresno State lacks the necessary modernized student life and support spaces to meet the needs and expectations of students, faculty, and staff. Facilities dedicated to student life on the campus are dispersed in the existing University Student Union, Satellite Student Union, and Bookstore. The Project would result in the construction of a new, centrally located Student Union building envisioned to be a hub of student life and activity. The objectives of the Project are as follows:

- 1) Provide additional, centrally located student life and support spaces on campus to serve the needs of over 24,000 students, 270 clubs, student government, and other social organizations.
- 2) Improve connectivity of student life functions and accessibility of amenities.
- 3) Create a focal point on the campus that integrates faculty and students of all levels, promotes socialization and community, and functions as a hub of student life and activity.
- 4) Use sustainable design principles and ensure that new construction achieves at least Leadership in Energy and Environmental Design (LEED) Gold or equivalent performance and energy efficiency at or beyond Title 24 requirements.

2.2 PROJECT COMPONENTS

2.2.1 Master Plan Revision

The Campus Master Plan, adopted by the Trustees of the California State University in 2011, addresses all aspects of future physical development and land use on the campus to accommodate the approved enrollment capacity of 25,000 full-time equivalent students (FTES).

The campus proposes revisions to the physical master plan to accommodate one new facility, the New Student Union (#79). The new Student Union would support student life and dining, complementing the existing University Student Union (#80) and the Satellite Student Union (#78). The Project would demolish the 1956 Keats building (#95) and the 1963 open Amphitheater. The Project would be sited on this open area immediately south of the Keats building. Figure 3 shows the existing Master Plan and Figure 4 shows the proposed revisions to the Master Plan.

California State University, Fresno

Master Plan Enrollment: 25,000 FTE

Master Plan approved by the Board of Trustees: February 1964

Master Plan Revision approved by the Board of Trustees: November 1966, January 1967, June 1968, May 1970, September 1970, January 1973, January 1975, January 1982, November 1982, May 1984, July 1988, September 1989, March 1990, September 1994, November 1999, July 2007, November 2011

- | | |
|---|---|
| 1. Joyal Administration | 56. Social Science Addition |
| 2. Music | 77. Satellite Student Union Addition |
| 3. Speech Arts | 78. Satellite Student Union |
| 4. Conley Art | 80. University Student Union |
| 4T. Conley Art (Temporary Print Making Lab) | 81. Sequoia/Cedar Hall |
| 5. Agriculture | 82. Birch Hall |
| 6. McLane Hall | 83. Residence Atrium |
| 7. Professional and Human Services | 84. Sycamore Hall |
| 8. Family and Food Science | 85. Aspen/Ponderosa Hall |
| 9. McKee Fisk | 86. Baker Hall |
| 10. Social Science | 87. Graves Hall |
| 11. Engineering West | 88. Homan Hall |
| 11A. Engineering West Annex | 90. Shipping/Receiving/Print Shop |
| 12. Grosse Industrial Technology | 91. Football Stadium |
| 12A. MDF 'A' | 91A. MDF 'C' |
| 13. North Gymnasium | 91C. Soccer/Lacrosse Restroom |
| 13B. Spalding Wathen Tennis Center | 92. Bob Bennett Stadium |
| 13C. North Gymnasium Addition | 92A. Baseball Batting Cage |
| 13D. North Gymnasium Annex | 93. Duncan Athletic Facility |
| 13E. Track and Field House | 93A. Meyers Family Sports Medicine Center |
| 13F. Aquatics Center | 94. Strength and Conditioning Center |
| 14. South Gymnasium | 95. Keats Campus |
| 14A. Physical Education Addition | 96. Margie Wright Diamond |
| 15. Engineering East | 96A. Softball Batting Cage |
| 16. Science | 99. Corporation Yard |
| 17A. Downing Planetarium | 99K. Public Safety and Addition |
| 17B. Crime Lab | 110. Jordan Agricultural Research Center |
| 17C. Science II | 133T. Education Annex Trailer |
| 17D. Downing Planetarium Museum | 134. University High School |
| 17E. MDF 'B' | 135T. Lab School Annex |
| 19. Physical Therapy and Intercollegiate Athletic | 150. Save Mart Center |
| 23. Agricultural Mechanics | 150A. Student Recreation Center |
| 27. Henry Madden Library | 170. Greenhouses |
| 30. Temporary Lab School | 180. Meteorology Building |
| 31. Kennel Bookstore | 226A. Post Harvest Cold Storage |
| 32. University Center | 235J. Foaling Barn |
| 33. Student Health Center | |
| 34. Home Management | |
| 35. Residence Dining | |
| 38. Bookstore/Food Service | |
| 40. Frank W. Thomas Building | |
| 41. Administration | |
| 42. Smittcamp Alumni House | |
| 43. Parking Structure | |
| 44. Classroom/Academic Services Building | |
| 46. Kremen School of Education and Human | |
| Development | |
| 47. Humanities/Auditorium | |
| 49. Graphic Arts | |
| 50. Peters Business | |
| 50A. Peters Business Annex | |
| 54. McLane Hall Addition | |

Campus Pointe

- 400. Campus Pointe Multi-Family Housing
- 401. Campus Pointe Senior Housing
- 402. Campus Pointe Hotel
- 403. Campus Pointe Retail
- 404. Campus Pointe - Office

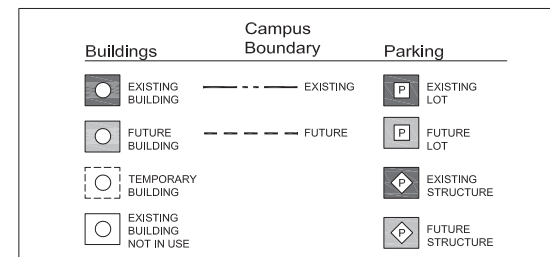
LEGEND:

Existing Facility / Proposed Facility

NOTE: Existing building numbers correspond with building numbers in the Space and Facilities Data Base (SFDB)

California State University, Fresno

Campus Master Plan
 Master Plan Enrollment: 25,000 FTE
 Approval Date: February 1965
 Revised Date: November 2011
Pending Revision: 2019
 Main Campus Acreage: 327 Acres



SOURCE: Fresno State 2018

California State University, Fresno

Master Plan Enrollment: 25,000 FTE

Master Plan approved by the Board of Trustees: February 1964

Master Plan Revision approved by the Board of Trustees: November 1966, January 1967, June 1968, May 1970, September 1970, January 1973, January 1975, January 1982, November 1982, May 1984, July 1988, September 1989, March 1990, September 1994, November 1999, July 2007, November 2011,
Pending 2019

- | | |
|--|---|
| 1. Joyal Administration | 56. <i>Social Science Addition</i> |
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| 50A. Peters Business Annex | |
| 54. McLane Hall Addition | |

Campus Pointe

- 400. Campus Pointe Multi-Family Housing
- 401. *Campus Pointe Senior Housing*
- 402. *Campus Pointe Hotel*
- 403. Campus Pointe Retail
- 404. *Campus Pointe - Office*

LEGEND:

Existing Facility / *Proposed Facility*

NOTE: Existing building numbers correspond with building numbers in the Space and Facilities Data Base (SFDB)

2.2.2 New Student Union Building

The Project would result in the construction of a new, approximately 70-foot-tall, 80,000-GSF Student Union building. The Project would also include demolition of the existing 7,400-GSF Keats building, as well as the approximately 47,000-square-foot amphitheater and 3,000-square-foot stage on the Project site.

The building would include lounge spaces, meeting rooms for student clubs and organizations, campus-serving retail services and program spaces, and offices for professional staff affiliated with Fresno State. The building would also include a 12,000-square-foot multi-purpose meeting room accommodating 1,200 seats. A new student plaza would be created north of the new Student Union building.

The building would include state-of-the-art technology, including indoor sound systems, lighting, and equipment for large presentations, and would require ancillary support spaces within the building, such as a technician office and storage areas.

The total site area disturbed for the Project would be approximately 3.5 acres. Figure 5 shows the site plan for the Project.

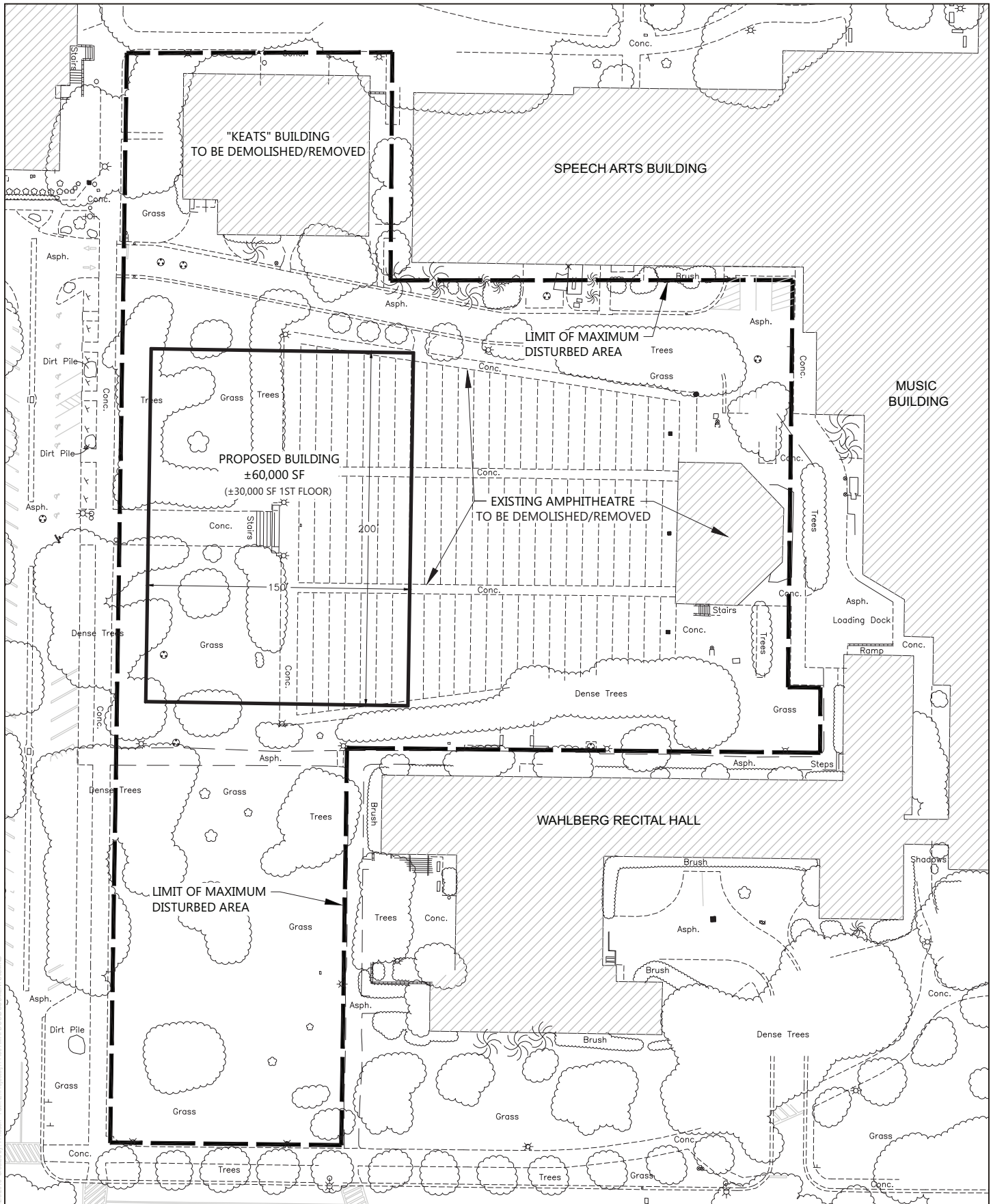
Infrastructure and Service Systems

Water. The Project would be served by the existing potable water infrastructure near the Project site with new service connections provided for the new building. The new domestic water service would be extended from an existing 6-inch water main line traversing east-west, south of the Keats building and the access road. The existing water pressure for campus is generally adequate at 50 pounds per square inch. If required, a booster pump would be provided as part of the Project. A new meter would be installed to monitor consumption for remote meter reading.

Water would be supplied by Fresno State's groundwater well system. The Project's proposed water use would be approximately 2 million gallons per year, which would result in a net increase of 1.8 million gallons per year taking into consideration the demolition of the Keats building.¹

Wastewater. The Project would be served by the existing wastewater infrastructure near the Project site with new service connections provided for the new building. Service would be extended from an existing 8-inch main sewer line immediately south of Keats Building. An existing 6-inch sewer line traversing east-west servicing the Music building would need to be relocated to accommodate the new building footprint. Backflow preventers would be provided to separate potable and unsafe water systems.

¹ Estimated using an approximate water usage rate of 25 gallons per year per square foot adopted from a 2010 study of water usage at the University of California, Berkeley.



SOURCE: Adapted from Yamabe & Horn Engineering, Inc. 2018

FIGURE 5

Site Plan

New Student Union Project

The Project's proposed wastewater generation would be approximately 1.8 million gallons per year, which would result in a net increase of 1.6 million gallons per year taking into consideration the demolition of the Keats building.²

Stormwater and Irrigation. The Project would increase the impervious surface area on the site from approximately 0.8 acres (23 percent of the site) to approximately 1 acre (29 percent of the site), which would represent an increase in the impervious surface area of 6 percent. This would be expected to result in an increase in stormwater runoff of approximately 0.1 cubic feet per second.

The campus is required to comply with the Phase I Municipal Separate Storm Sewer Systems (MS4) permit issued by the Central Valley Regional Water Quality Control Board (RWQCB) in 2016, and the Storm Water Quality Management Program (SWQMP), adopted in 2013. The Project site is larger than 1 acre, and would need to apply for a Construction General Permit and incorporate Low Impact Development (LID) measures into the Project design.

A reduced pressure backflow preventer (RPBP) would be provided for irrigation. Project would use a sub-surface drip irrigation system.

Heating and Cooling. There currently is insufficient capacity in the existing campus Central Plant infrastructure to accommodate the Project. The Project would be served by independent and dedicated heating, ventilation, and air conditioning (HVAC) systems. New site utility stub outs for future connections would be provided for connection to the Heating Hot Water (HHW) loop and the Chilled Water Loop (CHW).

Lighting. Exterior lighting would be limited to security lighting near doorways and pathways. Exterior lighting would adhere to LEED–New Construction (NC) guidelines for light pollution reduction and energy efficiency.

Energy. The Project would be designed to meet at least LEED Gold equivalent and would, at a minimum, comply with Title 24 Building, Energy and Green Buildings Standards (California Building Code, Title 24, Parts 4, 6, and 11). Project lighting, in particular, would be a minimum of 20 percent more efficient than California Energy Code requirements. Sustainable design strategies for the new building would include the use of high-performance glazing and a light-colored, single-ply, thermoplastic roof membrane over a well-insulated roof assembly to reduce heat gain during the summer. Other sustainable features would include energy-efficient light fixtures, lighting controls, and water-conserving plumbing fixtures. A new Direct Digital Control system would be installed to monitor and operate utilities. The Direct Digital Control system would be integrated with a total building Energy Management System to monitor electrical, natural gas, and water usage. Lighting controls would also be integrated. The building roof would be solar ready and able to support future installation of a photovoltaic system; however, this is not a part of the Project being analyzed.

² Assumed to be roughly 90 percent of the water consumption rate.

Electricity is currently provided by Pacific Gas & Electric Company. The facility would be served from a new 12-kilovolt (kV) to 277/480-volt (V) pad-mounted transformer and would be less than 1,000 kilovolt-amperes (kVA). A number of on-site improvements to the electrical services would be required to serve the new building. These improvements include a new pad-mounted transformer, and transformer conductors and conduit. Additionally, underground feeder circuits would be installed to provide services to the new building. The Project would to be served by the existing 12-kV distribution lines that run parallel to the adjacent surface parking lot west of the Project site. A 400-kV diesel emergency generator would also be installed to serve the new building.

The Project would be served by the existing gas lines on or near the Project site with new service connections provided for the new building. Gas utilities on site are owned by the University and would be modified and relocated as needed based on the requirements of the Project. A new meter would be installed to monitor consumption. Gas would be utilized for domestic hot water and space heating. To reduce gas consumption, point-of-use electric water heaters in place of gas water heaters would be utilized. Service would be extended from a 1-inch gas line tapped on to an existing 8-inch gas line located to the west in the adjacent parking lot. It is assumed that a gas booster system is not required.

Solid Waste. The Project would be provided with similar trash and recycling services as other existing buildings on the campus.

Access and Parking

A new loading dock would be constructed as part of the new Student Union building, to allow for delivery vehicle access to the building. Vehicles would access the new loading dock via a new or existing vehicle access point from the existing parking lot to the west (Parking Lot 31) of the Project site.

The existing parking would remain unchanged with the Project. The Project would be located east of the existing Parking Lot 31, which would serve the Project. Parking Lot 31 is currently underutilized and would have adequate capacity to serve the Project; no new parking stalls would be added.

Design and Landscaping

Figure 6 depicts a conceptual rendering of the new Student Union building. The Project aims to encourage the use of architectural techniques that create open spaces which are highly visible, inviting, and identifiable, with a goal of achieving visual transparency between the interior and exterior of the building.



FIGURE 6
SOURCE: Stantec 2016

SOURCE: Stantec 2016

DUDEK

FIGURE 6

Conceptual Rendering of the Project

New Student Union Project

Project construction would result in the removal of some of the existing landscape trees located on the Project site, some of which are part of the campus's formal arboretum. There are 69 ornamental trees located within the Project site. These include:

- 28 Italian cypress (*Cupressus sempervirens*)
- 18 American sweetgums (*Liquidambar styraciflua*)
- 12 ginkgos (*Ginkgo biloba*)
- 6 Mexican fan palms (*Washingtonia robusta*)
- 2 Japanese black pines (*Pinus thunbergii*)
- 2 redwoods (*Sequoia sempervirens*)
- 1 crape myrtle (*Lagerstroemia indica*)
- 1 Japanese red pine (*Pinus densiflora*)
- 1 bunya pine (*Araucaria bidwillii*)

All of these trees, except the bunya pine on the southern edge of the site, would be removed to allow for Project construction. The Project would include tree replacement at a 2:1 ratio and other landscaping.

2.3 PROJECT OPERATIONS

2.3.1 Events

As described above in Section 2.2.2, the Project would include a 12,000-square-foot multi-purpose room with 1,200 seats. The multi-purpose room would be used for existing activities and events currently held on the campus and geared toward the campus population, including annual Dog Days orientations (i.e., new student orientations), student convocation, speakers, and other large events designed to promote and enhance student success. The multi-purpose room would not be open for public use. The Project would not result in a change in the frequency or size of these existing events. Indoor amplified sound base decibel rates of 75 dBA and spikes of 90 dBA are permitted, and all events would end at the time determined by University administration based on the Fresno State Police Department's security assessment, or as prescribed by University policies and City of Fresno ordinances (Medina pers. comm. 2019). Any outdoor events at the Student Union plaza would not use amplified sound.

2.3.2 Employment Growth

The Project would not result in new employment growth as all programs are already existing on the campus.

2.4 PROJECT DEMOLITION AND CONSTRUCTION

Demolition activities and construction of the Project would be anticipated to commence in 2020/2021 and last for approximately 15 to 18 months. Demolition of the Keats building and the amphitheater and preparation of the site would take place at the onset of construction, anticipated in March 2020.

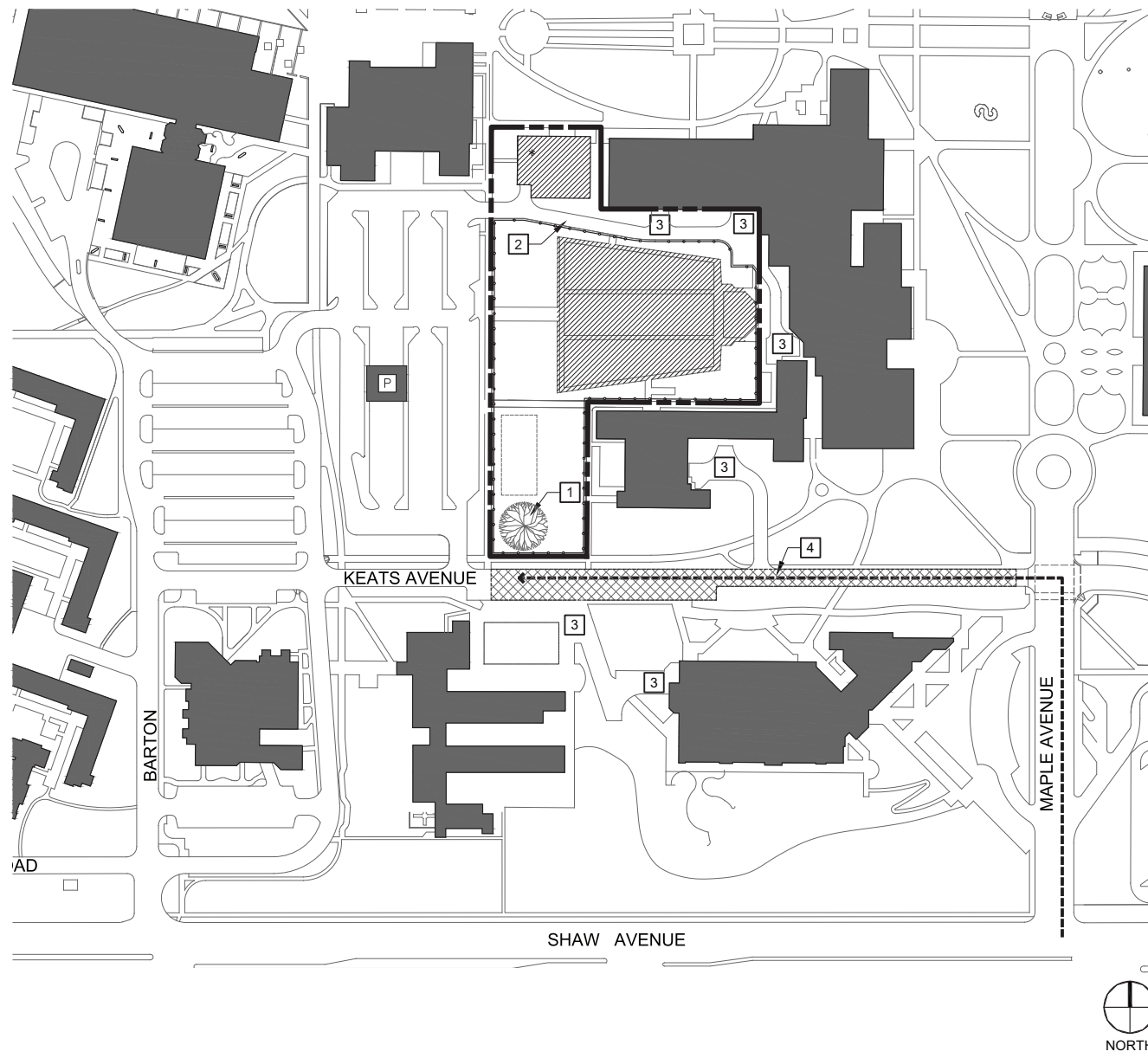
The limits of construction disturbance, including disturbance from construction staging and laydown areas, are shown by the Project site boundary line in Figure 7. Keats Avenue would be closed during construction to accommodate material delivery and some construction parking. Temporary construction parking would be located remote to the Project site, located north along East Barstow Avenue adjacent to the Sheep building (between North Woodrow Avenue and North Chestnut Avenue). Construction worker vehicles and equipment would access the construction site primarily via Maple Avenue and Keats Avenue. Construction hours would be from 8:00 a.m. to 8:00 p.m., Monday through Friday.

Construction would be performed by qualified contractors. Plans, specifications, and construction contracts would incorporate stipulations regarding standard California State University (CSU) requirements and acceptable construction practices, including abatement of hazardous building materials per regulatory requirements,³ grading and demolition, safety measures, vehicle operation and maintenance, excavation stability, erosion control, drainage alteration, groundwater disposal, traffic circulation, public safety, dust control, and noise generation.

2.5 DISCRETIONARY ACTIONS

This section describes discretionary actions required for Project approval by state and regional agencies. Discretionary approvals include, but are not limited to, adoption of the IS/MND under CEQA, approval of the Master Plan revision, and approval of the schematic designs for the Project, by the CSU Board of Trustees, as summarized in Table I. Other approvals could also be necessary as noted below.

³ Hazardous building materials include, but are not limited to, asbestos building materials, lead-based paint, and other regulated materials such as fluorescent lights and electrical ballasts.



Legend

- Work Limits
- Construction Fenceline
- Construction Vehicular Access
- Demolition

Vehicular Access

Maple Ave. entrance to Keats Ave.

Construction Trailer / Staging

Trailer / Staging to occur within work limits

*Potential Option
Trailer / Staging to occur in Keats Building

Notes

- 1 Existing tree to be protected
- 2 Access road to remain open / accessible
- 3 Back of house & loading dock operations for surrounding buildings to remain accessible
- 4 Hatched area indicates portion of Keats Ave. to be closed with barriers at E/W ends

SOURCE: Fresno State 2018

DUDEK

FIGURE 7
Construction Site Access Plan
New Student Union Project

TABLE I
PROJECT APPROVALS

Authorizing Jurisdiction or Agency	Action
<i>CSU Board of Trustees</i>	
Final IS/MND	Adoption
Master Plan Revision	Approval
Schematic Plans for the Project and other related actions and approvals, as necessary	Approval
<i>Division of the State Architect</i>	
Accessibility Compliance	Approval
<i>State Fire Marshal</i>	
Facility Fire and Life Safety Compliance	Approval
<i>Regional Water Quality Control Board</i>	
National Pollutant Discharge Elimination System Permit (NPDES) – Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent to Comply with NPDES Construction Permit	Approval/Enforcement
<i>Air Pollution Control District</i>	
Authority to Construct and/or Permits to Operate	Approval
Hazardous Materials Removal and Asbestos Demolition	Rule Compliance

3 INITIAL STUDY CHECKLIST

Topics with a check mark below would result in a potentially significant impact, but would be reduced to a level that is clearly less than significant with implementation of Project mitigation measures identified in this Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology and Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards and Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

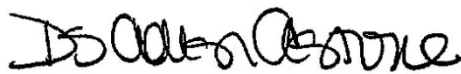
DETERMINATION

On the basis of this initial 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 could have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed Project could 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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.



1/31/19

Deborah Adishian-Astone, Vice President for Administration

Date

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 Environmental Impact Report 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), may be cross-referenced).

- 5) Earlier analyses may be used where, pursuant to the tiering, program environmental impact report, or other CEQA process, an effect has been adequately analyzed in an earlier environmental impact report or negative declaration (see Item 1 above). 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 (e.g., 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 less than significance.

3.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

The City of Fresno does not contain any designated scenic vistas (City of Fresno 2014b), though views of distant natural landscape features such as the San Joaquin River and the foothills of the Sierra Nevada mountain range are available from some areas of the City. View corridors around the Fresno State campus provide a variety of views into the campus, mostly from Shaw Avenue south of the Project site. The Project site is not visible from off-campus locations. The Project site is visible from on-campus locations immediately adjacent to the site, such as Parking Lot 31, but is not widely visible from other on-campus locations due to intervening buildings and landscaping. Similarly, views from the Project site are limited to immediately surrounding development and landscaping.

The nearest officially designated State Scenic Highway to the Project site is SR 180 from the Alta Main Canal near Minkler to the Kings Canyon National Park Boundary near Cedar Grove, approximately 7 miles southeast of the Project site. A portion of SR 168 is eligible for the State Scenic Highway Program, from SR 65 east of Clovis to near Huntington Lake, approximately 9.5 miles northeast of the Project site (Caltrans 2018). The City of Fresno General Plan designates several roads as scenic corridors or boulevards. The closest designated scenic corridors include Audubon Drive near Herndon Avenue, approximately 2.2 miles from the Project site, Ashlan Avenue near Maroa Avenue, approximately 3 miles from the Project site, and North Wishon Avenue near West Shaw Avenue, approximately 3.2 miles from the Project site.

The Project site is located in a relatively level, central part of the Fresno State campus. The core of the campus is dominated by the academic and administrative functions, with elements such as housing, athletics, and events on the periphery. Figure 8 shows existing views of the Project site looking north, east, south, and west.

The site is characterized predominantly by grassy open space, landscape trees, and concrete sidewalks, with the one-story Keats building located on the northern portion of the site. The existing amphitheater and stage occupy the eastern portion of the site. An access road for the outdoor amphitheater and music building also runs through the northern portion of the site. Surrounding buildings are relatively low in height (one to two stories). The Henry Madden Library is an exception, which is four stories and 70 feet tall. The site is primarily surrounded by academic uses to the north, east, and south. Two surface parking lots are located to the west of the site. Student housing is located beyond these parking lots in the southwest corner of the campus, though views from this student housing are obstructed by landscape trees in the parking lots.

Existing sources of light in the vicinity of the Project site are primarily from surrounding buildings and lampposts in the parking lot to the west and along concrete sidewalks, as well as car headlights from vehicular traffic entering and exiting the parking lot. Existing sources of glare in the Project vicinity include light reflected from building and car windows.

DISCUSSION

a) *Would the project have a substantial adverse effect on a scenic vista? (No Impact)*

As described above, there are no designated scenic vistas in the City and the Project site does not offer high-quality scenic views due to its relatively flat terrain and developed nature of the surrounding environment. Due to the lack of scenic vistas or views in the vicinity of the Project site, the Project would not obstruct such views. Therefore, the Project would have no impact on scenic vistas.

b) *Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (No Impact)*

The nearest state scenic highway to the Project site is SR 180, approximately 7 miles east of the site, and the nearest City-designated scenic corridors are approximately 2 to 3 miles from the site. Due to the distance as well as the presence of buildings, trees, and other structures that intervene with the line of sight, the Project would not be visible from any state scenic highways or local scenic corridors. Therefore, the Project would have no impact on scenic resources within a state scenic highway.



Photo 1: Looking North toward Keats Building



Photo 2: Looking East toward Amphitheater



Photo 3: Looking South towards Keats Avenue



Photo 4: Looking West from Stage

- c) ***In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (Less than Significant)***

Upon completion of construction, the long-term visual character of the project would be established, which would consist of the new building with its architectural design, and associated landscaping. The Project would result in the construction of a new building on a site that is currently open space, which would change the visual character of the Project site. However, the new building and plaza created by the Project would be consistent with the other academic and administrative buildings, which surround the Project site. Surrounding buildings are the Henry Madden Library, University Student Union, Speech Arts, Music, Old Music, and the Student Health Center. The maximum height of the new Student Union building would be the same as the existing Henry Madden Library building located approximately 300 feet west of the site. While the new building would be larger than the Keats building previously occupying the site, the new building would display a comparable bulk and scale as other nearby existing buildings.

In addition, 68 of the 69 existing ornamental trees on the Project site would be removed as part of the Project, some of which are large and mature. The Project would include tree replacement at a 2:1 ratio, as well as other landscaping. Thus, the Project would result in an increase in ornamental plantings on the Project site, which would not degrade visual character or quality of the site and surroundings.

While the Project would change the existing character of the site from predominantly landscaped open space to a new building, the building would be designed to complement existing surrounding architecture and would be visually compatible in scale and massing to the surrounding buildings to create a more unified character. Design elements, materials, glazing, and color selection for the facility's exterior would be selected to create cohesive qualities between the new building and adjacent campus buildings. The Project would include a new plaza in place of the existing Keats building which would connect to open space/plaza areas to the north of the Project site, further unifying the space.

As Project components would be visually compatible in scale and massing with existing surrounding buildings and facilities and congruous with the academic and administrative uses immediately surrounding the Project site in the campus core, the visual character of the Project area as experienced by viewers in the immediate vicinity of the site would not substantially change. As the Project would not substantially degrade the existing visual character and quality of the site and surrounding area, impacts would be less than significant.

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

As described above, existing lighting on the Project site consists of exterior building lighting and lighting along walkways. The Project would generate new sources of light and glare on the Project site in the form of external building lighting and additional reflective surfaces, such as windows. The introduction of light and glare from the new Student Union building would be negligible relative to existing conditions, given that the Project vicinity is the developed campus core, which contains existing external nighttime lighting and reflective surfaces, including building exterior lighting, parking lot and sidewalk lighting, vehicle headlights, and windows. Moreover, exterior lighting would adhere to LEED-NC guidelines for light pollution reduction, which would minimize light trespass and glare from the building and site. Therefore, Project impacts associated with light and glare would be less than significant.

3.2 AGRICULTURAL AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The Project site is located in the core of the existing Fresno State campus. There are no lands designated or zoned for agricultural use or subject to Williamson Act contracts on or adjacent to the Project site (California Department of Conservation 2016). The Project site is designated as Urban and Built-Up Land by the California Farmland Mapping and Monitoring Program (California Department of Conservation 2018). Additionally, there are no active agricultural operations on the Project site or adjacent areas. The closest agricultural land is located approximately 0.4 miles northeast of the site, near the intersection of Barstow Avenue and Woodrow Avenue, including Fresno State agricultural facilities as well as off-campus farmland. Additionally, no forest or timberlands are present on or adjacent to the Project site.

DISCUSSION

- a) ***Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (No Impact)***

The Project site is not located in an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Farmland Mapping and Monitoring Program. The Project would not affect agricultural operations in off-site and off-campus locations approximately 0.4 miles northeast of the site. Therefore, no impacts to agricultural lands or agricultural operations would result with construction and operation of the Project.

- b) ***Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? (No Impact)***

No land zoned for agricultural use or enrolled in a Williamson Act contract is located on or near the Project site; therefore, the Project would have no impact on agricultural zoning or Williamson Act contracts.

- c) **Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?** (No Impact)

and

- d) **Would the project result in the loss of forest land or conversion of forest land to non-forest use?** (No Impact)

As there is no forest land or timberland located on or near the Project site, the Project would have no impact on forest or timberland. The Project also would not conflict with land zoned as forest land or timberland.

- e) **Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?** (No Impact)

As previously discussed, the Project site is designated as Urban and Built-Up Land by the Farmland Mapping and Monitoring Program. There is no farmland or forest land located in the vicinity of the Project site; therefore, the Project would have no impact on agricultural or forest land.

3.3 AIR QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

The Project site is located within the San Joaquin Valley Air Basin (SJVAB), which includes Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties, and is within the jurisdictional boundaries of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD adopted the *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI), which advises lead agencies on how to evaluate potential air quality impacts, including establishing quantitative and qualitative thresholds of significance (SJVAPCD 2015). These thresholds are described below.

Criteria Air Pollutants

The GAMAQI has established emissions-based thresholds of significance for criteria pollutants (SJVAPCD 2015), which are depicted in Table 2. Criteria air pollutants include ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}), and lead. As shown in Table 2, the SJVAPCD has established significance thresholds for construction emissions and operational permitted and non-permitted equipment and activities, and it recommends evaluating impact significance for these categories separately.

TABLE 2
SJVAPCD CEQA SIGNIFICANCE THRESHOLDS FOR CRITERIA POLLUTANTS

Pollutant	Construction Emissions (tons per year)	Operational Emissions (tons per year)	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
ROG	10	10	10
NO _x	10	10	10
CO	100	100	100
SO _x	27	27	27
PM ₁₀	15	15	15
PM _{2.5}	15	15	15

Source: SJVAPCD 2015.

In addition to the annual emissions mass thresholds described in Table 2, the SJVAPCD has also established screening criteria to determine whether a project would result in a CO hotspot at affected roadway intersections (SJVAPCD 2015). If neither of the following criteria are met at any of the intersections affected by the project, the project would result in no potential to create a violation of the CO standard:

- A traffic study for the project indicates that the level of service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F.

- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or intersections in the project vicinity.

Toxic Air Contaminants

The SJVAPCD has established thresholds of significance for combined toxic air contaminant (TAC) emissions from the operations of both permitted and non-permitted sources (SJVAPCD 2015). Projects that have the potential to expose the public to TACs in excess of the following thresholds would be considered to have a significant air quality impact:

- Probability of contracting cancer for the maximally exposed individual equals or exceeds 20 in 1 million people.
- Hazard index⁴ for acute and chronic non-carcinogenic TACs equals or exceeds 1 for the maximally exposed individual.

Odors

As described in the GAMAQI, due to the subjective nature of odor impacts, there are no quantitative thresholds to determine if potential odors would have a significant impact (SJVAPCD 2015). Projects must be assessed for odor impacts on a case-by-case basis for the following two situations:

- Generators: Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate.
- Receivers: Residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The SJVAPCD has identified some common types of facilities that have been known to produce substantial odors, as well as screening distances between these odor sources and receptors. These are depicted in Table 3.

⁴Non-cancer adverse health impact, both for acute (short-term) and chronic (long-term) health effects, is measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentration from the project to a published reference exposure level that could cause adverse health effects as established by the Office of Environmental Health Hazard Assessment (OEHHA). The ratio (referred to as the hazard quotient) of each noncarcinogenic substance that affects a certain organ system is added together to produce an overall hazard index for that organ system.

TABLE 3
SCREENING LEVELS FOR POTENTIAL ODOR SOURCES

Type of Facility	Screening Distance (miles)
Wastewater Treatment Facility	2
Sanitary Landfill	1
Transfer Station	1
Composting Facility	1
Petroleum Facility	2
Asphalt Batch Plant	1
Chemical Manufacturing	1
Fiberglass Manufacturing	1
Painting/Coating (i.e., auto body shop)	1
Food Processing Facility	1
Feed Lot/Dairy	1
Rendering Plant	1

Source: SJVAPCD 2015.

If a project would result in an odor source and sensitive receptors being located within these screening distances, additional analysis would be required. For projects involving new receptors locating near an existing odor source where there is currently no nearby development and for new odor sources locating near existing receptors, the SJVAPCD recommends the analysis be based on a review of odor complaints for similar facilities, with consideration also given to local meteorological conditions, particularly the intensity and direction of prevailing winds. Regarding the complaint record of the odor source facility (or similar facility), the facility would be considered to result in significant odors if there has been:

- More than one confirmed complaint per year averaged over a 3-year period.
- Three unconfirmed complaints⁵ per year averaged over a 3-year period.

DISCUSSION

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan? (Less than Significant)*

A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable SJVAPCD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts or directly included in the applicable plan(s).

⁵ An unconfirmed complaint means that either the odor/air contaminant release could not be detected or the source/facility could not be determined (SJVAPCD 2015).

Zoning changes, specific plans, general plan amendments, and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to comply with the applicable air quality plan (SJVAPCD 2015).

The Project would comply with applicable SJVAPCD rules and regulations, such as Regulation VIII (Fugitive PM₁₀ Prohibitions). The Project would not involve a change in zoning and would be consistent with other land uses on campus. In addition, as indicated in the following discussion in Section 3.3(b), the Project would result in less-than-significant construction emissions and would not result in long-term adverse air quality impacts. For long-term operations, the Project would not generate new on-road vehicle trips. The Project would not conflict with or delay the implementation of the SJVAPCD Ozone or Particulate Matter Attainment Plans. Based on these considerations, the Project would result in a less-than-significant impact related to conflicts with applicable air quality plans.

b) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (Less than Significant)*

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SJVAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

A quantitative analysis was conducted to determine whether proposed construction and operational activities may result in emissions of criteria air pollutants that may cause exceedances of the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS), or contribute to existing nonattainment of ambient air quality standards. Pollutants that are evaluated herein include reactive organic gases (ROG) and oxides of nitrogen (NO_x), which are important because they are precursors to O₃, as well as CO, sulfur oxides (SO_x), PM₁₀, and PM_{2.5}.

Construction. Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and ROG off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). 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. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Criteria air pollutant emissions associated with temporary construction activities were quantified using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with construction activities from a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the Project land use type and size, construction schedule, and anticipated construction equipment utilization, were based on information provided by Fresno State, or default model assumptions if Project specifics were unavailable.

Implementation of the Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, and architectural coatings. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ and PM_{2.5} emissions. The Project would be required to comply with applicable Rules under SJVAPCD Regulation VIII to control dust emissions generated during grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites twice per day, depending on weather conditions. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5}. The application of architectural coatings, such as exterior application/interior paint and other finishes would also produce ROG emissions; however, the contractor would be required to procure architectural coatings from a supplier in compliance with the requirements of SJVAPCD's Rule 460I (Architectural Coatings).

Table 4 presents the estimated maximum annual emissions generated during development of the Project, including demolition of the existing uses on-site. Details of the emission calculations are provided in Appendix A.

TABLE 4
ESTIMATED MAXIMUM ANNUAL CONSTRUCTION
CRITERIA AIR POLLUTANT EMISSIONS

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>tons per year</i>					
2020	0.27	2.53	2.03	0.00	0.21	0.16
2021	0.64	0.80	0.77	0.00	0.06	0.04
Maximum Annual Emissions	0.64	2.53	2.03	0.00	0.21	0.16
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO_x = oxides of nitrogen; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; SO_x = sulfur oxides; ROG = reactive organic gases

See Appendix A for complete results.

Construction emissions were estimated using CalEEMod and include demolition of the existing uses.

As shown in Table 4, the Project would not exceed the annual significance threshold established by the SJVAPCD. Therefore, construction impacts of the Project would be less than significant.

Operations. Operation of the Project would generate criteria pollutant emissions from area sources (consumer products, architectural coatings, landscaping equipment) and energy sources (natural gas appliances, space and water heating). The existing Keats building to be demolished also generates criteria air pollutants from these sources. In addition, the Project would also include installation of a 400-kV diesel emergency generator to serve the new building. CalEEMod was used to estimate daily emissions from these operational sources for the Project and existing Keats building for operational year 2022 and existing conditions 2018, respectively. Notably, the Project would not result in new on-road vehicle trips, so mobile sources were not included in the emissions inventory. Table 5 summarizes the area and energy source emissions of criteria pollutants that would be generated by the Project and existing building to be demolished, and compares the net increase in emissions to SJVAPCD operational thresholds. Table 6 depicts the criteria air pollutant emissions associated with the routine testing and maintenance of the proposed emergency generator.

TABLE 5
ESTIMATED MAXIMUM ANNUAL OPERATIONAL CRITERIA AIR POLLUTANT EMISSIONS – NON-PERMITTED SOURCES

Emissions Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	tons per year					
Proposed Project						
Area	0.37	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.09	0.07	0.00	0.01	0.01
Total Project Emissions	0.38	0.09	0.07	0.00	0.01	0.01
Existing Keats Building						
Area	0.03	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.01	0.01	0.00	0.00	0.00
Total Existing Emissions	0.04	0.01	0.01	0.00	0.00	0.00
Net Increase (Project minus Existing)	0.34	0.08	0.06	0.00	0.01	0.01
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded?	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO_x = oxides of nitrogen; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; SO_x = sulfur oxides; ROG = reactive organic gases

See Appendix A for complete results.

Totals may not sum due to rounding. Annual emissions results are based on CalEEMod. Project emissions are based on the "Mitigated" CalEEMod outputs in order to incorporate LEED Gold and a 20% lighting energy reduction based on installation of high-efficiency lighting in all outdoor areas, even though implementation of these measures would not be considered actual mitigation.

TABLE 6
ESTIMATED MAXIMUM ANNUAL OPERATIONAL CRITERIA AIR POLLUTANT
EMISSIONS – PERMITTED SOURCES

Emissions Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>tons per year</i>					
Emergency Diesel Generator	0.02	0.05	0.05	0.00	0.00	0.00
Total Permitted Source Emissions	0.02	0.05	0.05	0.00	0.00	0.00
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO_x = oxides of nitrogen; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; SO_x = sulfur oxides; ROG = reactive organic gases

See Appendix A for complete results.

Emergency diesel generator emissions were estimated using CalEEMod for a 400-kV engine (about 430 horsepower) assuming routine testing and maintenance of up to 50 hours per year per the California Air Resources Board air toxic control measure for stationary compression-ignition engines.

As shown in Table 5 and Table 6, Project operations would not exceed the annual significance thresholds established by the SJVAPCD. Therefore, operational impacts of the Project would be less than significant.

The SJVAB is a nonattainment area for O₃, PM₁₀, and PM_{2.5} under the NAAQS and/or CAAQS. The exceedance of these air quality standards in the SJVAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emissions sources. Projects that emit these pollutants or their precursors (i.e., ROG and NO_x for O₃) potentially contribute to air quality violations. As indicated in Table 4 through Table 6, annual construction and operational emissions associated with the Project would not exceed the SJVAPCD significance thresholds. Additionally, the Project would not conflict with the SJVAPCD Ozone Attainment Plans, or the PM₁₀ or PM_{2.5} Attainment Plan, which address the cumulative emissions in the SJVAB. Accordingly, the Project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants and impacts would be less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations? (Less than Significant)

The SJVAPCD has adopted thresholds for TAC emissions to sensitive receptors: cancer risks and non-cancer health effects (acute and chronic). These impacts are addressed on a localized rather than regional basis and are specific to the sensitive receptors identified for the Project. SJVAPCD's GAMAQI defines sensitive receptors as those that are more susceptible to the effects of air pollution than the population at large (SJVAPCD 2015). Sensitive receptor locations may include schools, parks and playgrounds, childcare centers, nursing homes, hospitals, and residential dwelling units. The Project site is located within the core of the Fresno State campus and is surrounded by various academic buildings to the north, east, and south, and a paved parking lot to the west.

The closest sensitive receptors to the Project site are the on-campus health care center (about 350 feet to the southwest), on-campus residential housing units (about 560 feet to the west), off-campus residences located across Shaw Avenue (about 650 feet to the south), and the University High School (about 700 feet to the southeast).

“Incremental cancer risk” is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be diesel particulate matter, emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to California Air Resources Board (CARB) air toxic control measures (ATCMs) to reduce diesel particulate matter emissions. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, the duration of proposed construction activities (approximately 15 to 18 months) would only constitute a small percentage of the total 30-year exposure period. Regarding long-term operations, the Project would include installation of a 400-kV diesel emergency generator that would emit diesel particulates during routine testing and maintenance. The emergency generator would be required to comply with the CARB ATCM that applies to stationary compression-ignition engines and would be subject to permitting by the SJVAPCD. Fresno State would be required to work with the SJVAPCD and provide the necessary emission information to ensure exhaust TAC exposure from the emergency generator would be less than significant in order to obtain permits to operate.

Although the Project site is currently developed, as previously discussed, the Project would be required to comply with SJVAPCD Rule 8021, which requires applicants to develop, prepare, submit, obtain approval of, and implement a Dust Control Plan that would reduce fugitive dust impacts to a less-than-significant level for all construction phases of the project. Dust control measures would also control the potential release of Valley Fever (*Coccidioides immitis*) fungal spores from construction activities.

Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, demolition, and disposal of asbestos-containing material (ACM). ACMs could be encountered during demolition of existing structures, particularly older structures constructed prior to 1970. Asbestos can also be found in various building products, including (but not limited to) utility pipes/pipelines. Because the Project includes demolition of existing structures, the removal of ACMs would be subject to the asbestos program administered by the SJVAPCD.

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO “hotspots.” CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors. Since the Project would not result in additional long-term traffic, the Project would not contribute to potential adverse traffic impacts that may result in the formation of CO hotspots.

In summary, the Project would not expose sensitive receptors to substantial pollutant concentrations or health risks during construction or operations, and this impact would be less than significant.

d) *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Less than Significant)*

Odors are a form of air pollution that is most obvious to the general public and can present problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern. Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the Project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from the tailpipes of construction equipment. Such odors would be temporary and generally occur at magnitudes that would not affect substantial numbers of people. With regard to long-term operations, SJVAPCD has identified typical sources of odor in the GAMAQI, which are depicted in Table 3 above. The Project would not include uses that have been identified by SJVAPCD as potential sources of objectionable odors. Therefore, Project impacts associated with odors would be considered less than significant.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state- or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The Project site is located in the core of the Fresno State campus and does not connect to areas of natural open space. According to the Vegetation Communities Map prepared for the Master Environmental Impact Report (EIR) for the City of Fresno General Plan and Development Code Update, the Project site is mapped as “Urban” (City of Fresno 2014a). The site is developed with the existing amphitheater, stage, and Keats building, as well as a paved access road and concrete sidewalks. Vegetation on the site is limited to a turf lawn area and ornamental trees and shrubs. No native vegetation or habitats exist on the Project site. The site does not contain wetlands or other sensitive habitats under federal or state regulations.

Due to the lack of native, sensitive, and wetland habitats on the Project site, special-status plant and animal species are not likely to occur on site. Dudek conducted a search of the California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) rare plant inventory, and federal Information, Planning, and Consultation (IPaC) System to determine whether special-status plants or wildlife species have been documented near the Project site (see Appendix B). As shown in Appendix B, none of the special-status plant and wildlife species with known or potential occurrence in the vicinity of the Project site are expected to occur on site.

DISCUSSION

- 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? (Less than Significant with Mitigation Incorporated)***

As stated above, the CNDDDB, CNPS, and IPaC databases were reviewed to identify the known or potential occurrences of candidate, sensitive, and special-status species documented near the Project site. Based on the search results, no special-status plant or wildlife species are expected to occur on the Project site. Moreover, the site does not contain habitat expected to support special-status species.

However, the trees on and near the Project site provide potential nesting habitat for bird species protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGF). As such, nesting may be occurring on the site, or may occur in the future. Project construction could result in the loss or abandonment of active nests of birds protected under the MBTA and/or the CFGF, as a result of tree removal or construction-related noise and disturbance. The loss of an active bird nest protected by the MBTA and/or CFGF would be considered a potentially significant impact. Implementation of Mitigation Measure BIO-1 would protect active bird nests that could occur in the disturbance area and reduce the potentially significant impact to a less-than-significant level.

Mitigation Measure BIO-1: To avoid impacts to native migratory birds protected by the federal MBTA and/or the CFGF, a nesting bird survey shall be completed by a qualified biologist no earlier than 2 weeks prior to construction and/or tree removal during the nesting season (February 1–September 30) to determine if any native migratory birds are nesting on or near the site. If any active nests are observed during surveys, a suitable avoidance buffer will be determined by the qualified biologist and consultation with CDFW will be sought, if necessary. The nests will be flagged by the qualified biologist based on species, location and planned construction activity in the vicinity of the nest. These nests will be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. Any nesting habitat (i.e., trees) will be removed outside of the breeding bird season to avoid impacts to nesting birds. If it is infeasible to remove trees outside of the breeding season, a survey will be performed no earlier than 1 week prior to removal to determine if active nests are present.

- 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? (No Impact)***

and

- c) ***Would the project have a substantial adverse effect on state- or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (No Impact)***

The Project site does not contain riparian habitats, other sensitive natural communities, or wetlands, and none of these habitats are located near the site. Therefore, the Project would have no impact on riparian habitats, other sensitive natural communities, or federally or state-protected wetlands.

- 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? (No Impact)***

Wildlife corridors are pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, other natural obstacles, or manmade obstacles such as urbanization. As stated above, the Project site is developed, is surrounded by other development, and does not connect areas of natural open space. The Project site is not part of a wildlife movement corridor and would not impede the use of native wildlife nursery sites. Therefore, the Project would have no impact on wildlife movement or native wildlife nursery sites.

- e) ***Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)***

There are no local ordinances or policies of the City of Fresno that would apply to projects on the Fresno State campus, as the City does not have jurisdiction over CSU lands. The Project would be constructed entirely on CSU property. Therefore, the Project would not conflict with local policies. Construction of the Project would include the removal of 68 ornamental trees, but the Project would replace these trees at a 2:1 ratio and provide other landscape plantings on the site. Therefore, no impacts related to conflicts with policies for the protection of biological resources would result with implementation of the Project.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, National Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (No Impact)

The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, National Community Conservation Plan, or other applicable Habitat Conservation Plan, as the Project site does not fall within the boundaries of such an adopted plan. Therefore, no impact related to conflicts with an adopted plan would result with implementation of the Project.

3.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SETTING

The information in this section is based on a Cultural Resources Technical Report prepared for the Project, which is provided in Appendix C. The report included a records search of the California Historical Resources Information System (CHRIS) from the Southern San Joaquin Valley Information Center (SSJVIC) conducted for the Project site and a 0.5-mile radius, a search of the Native American Heritage Commission (NAHC) Sacred Lands File, Native American group coordination, and a pedestrian survey of the Project site. Due to the ages of the Keats building (constructed in 1956) and amphitheater/stage (constructed in 1963), these structures were also evaluated for potential historical significance and integrity. The results of the Cultural Resources Technical Report are discussed below.

DISCUSSION

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? (No Impact)

The results of the CHRIS records search indicated that no historic built environment resources have been previously recorded within the Project site. As a result of the background research, field survey, and property significance evaluation, the Keats

building and amphitheater/stage appear not eligible for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks (CHL), and City of Fresno Local Register of Historic Resources due to a lack of significant historical associations, architectural merit, and compromised integrity. Thus, no historical resources are located on or adjacent to the Project site. Therefore, the Project would have no impact on historical resources.

b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Less than Significant with Mitigation Incorporated)*

According to the CHRIS records search, the Project area contains no previously recorded archaeological resources. Similarly, the search of the NAHC Sacred Lands File did not identify any known Native American resources in the Project area. Intensive pedestrian survey of the Project site by a qualified archaeologist did not encounter any archaeological resources. In consideration of the severity of past disturbance to native soils, the topographic setting, and the negative inventory results, the likelihood of encountering unanticipated significant subsurface archaeological deposits or features is considered low. Nevertheless, in the event that construction activities were to unearth previously unidentified archaeological resources, implementation of Mitigation Measure CUL-I would reduce potentially significant impacts to a less-than-significant level.

Mitigation Measure CUL-I: CSU shall include a standard inadvertent discovery clause in every construction contract for this Project, which requires that in the event that an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease until a qualified archaeologist can evaluate the find and make a recommendation for how to proceed. For an archaeological resource that is encountered during construction, the campus shall:

- Retain a qualified archaeologist to determine whether the resource has potential to qualify as a historical resource or a unique archaeological resource as outlined in CEQA (PRC 21083.2).
- If the resource has potential to be a historical resource or a unique archaeological resource, the qualified archaeologist, in consultation with CSU/Fresno State, shall prepare a research design and archaeological evaluation plan to assess whether the resource should be considered significant under CEQA criteria.
- If the resource is determined significant, in consultation with CSU/Fresno State, a qualified archaeologist will prepare a data recovery plan for retrieving data relevant to the site's significance. The data recovery plan shall be implemented prior to, or during site development (with a 100 foot buffer around the resource). The archaeologist shall also perform appropriate technical analyses, prepare a full written report and file it

with the Southern San Joaquin Valley Information Center, and provide for the permanent curation of recovered materials.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries? (Less than Significant with Mitigation Incorporated)

As the Project site has been substantially disturbed, it is unlikely that unmarked human burials exist on the site. Nevertheless, in the event that construction activities were to unearth previously unidentified human remains, implementation of Mitigation Measure CUL-2 would reduce potentially significant impacts to a less-than-significant level.

Mitigation Measure CUL-2: Should human remains be discovered at any time, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to CSU/Fresno State and the County Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.

3.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

This section addresses effects of the Project on energy consumption during construction and operation. Existing energy consumption on the Project site includes consumption of fossil fuels in operation of the Keats building. Fresno State has implemented numerous energy-saving programs on campus, including conversion of indoor lighting to T-8 fluorescent lamps and electronic ballasts; installation of occupancy sensors in classrooms, offices, and athletic facilities; installation of window film to reduce HVAC requirements; and replacement of boilers with high-efficiency boilers to reduce fuel consumption, among others (Fresno State 2018b).

DISCUSSION

- a) ***Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation? (Less than Significant)***

Construction of the Project would require consumption of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil, natural gas, and gasoline) for automobiles and construction equipment, and other resources including, but not limited to, lumber, sand, gravel, asphalt, metals, and water. Construction would include energy used by construction equipment and other activities at the Project site (e.g., building demolition, excavation, paving), in addition to the energy used to manufacture the equipment, materials, and supplies and transport them to the Project site. Energy for maintenance activities would include that for day-to-day upkeep of equipment and systems, as well as energy embedded in any replacement equipment, materials, and supplies. It is expected that nonrenewable energy resources would be used efficiently during construction and maintenance activities given the financial implications of inefficient use of such resources. Therefore, the amount and rate of consumption of such resources during construction and maintenance activities would not result in the unnecessary, inefficient, or wasteful use of energy resources.

The Project would not result in an increase in enrollment or employment at Fresno State; thus, no increase in vehicle miles traveled and, hence, petroleum use, would occur with Project operation. Operation of the Project would involve consumption of electricity and natural gas; however, these resources are already consumed on the Project site, and an incremental increase in the consumption of these resources associated with Project operation would not represent unnecessary, inefficient, or wasteful use of resources. As described in Section 2.2.2 above, the Project would include numerous energy-efficiency measures. The Project would be designed to meet at least LEED Gold equivalent and would, at a minimum, comply with Title 24 Building, Energy and Green Buildings Standards (California Building Code, Title 24, Parts 4, 6, and 11). Project lighting, in particular, would be a minimum of 20 percent more efficient than California Energy Code requirements.

Sustainable design strategies for the new building would include the use of high-performance glazing and a light-colored, single-ply, thermoplastic roof membrane over a well-insulated roof assembly to reduce heat gain during the summer. Other sustainable features would include energy-efficient light fixtures, lighting controls, and water-conserving plumbing fixtures. A new Direct Digital Control system would be installed to monitor and operate utilities. The Direct Digital Control system would be integrated with a total building Energy Management System to monitor electrical, natural gas, and water usage. Lighting controls would also be integrated. The building roof would be solar ready and able to support future installation of a photovoltaic system; however, this is not a part of the Project being analyzed.

Given the foregoing, the Project's consumption of energy resources would be less than significant, as it would not represent unnecessary, inefficient, or wasteful use of energy resources.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (No Impact)

As described above, the new Student Union building's energy efficiency would, at a minimum, comply with the California Energy Code and the California Building Code. While not specifically applicable to the Project, Senate Bill 350 sets ambitious 2030 targets for energy efficiency and renewable electricity, increasing California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. As described in Section 2.2.2, the new Student Union building would include a solar-ready roof which could support future installation of a photovoltaic system. As such, the Project would not conflict with or obstruct state or local plans for renewable energy or energy efficiency, and no related impact would occur.

3.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SETTING

This section is based on a geotechnical investigation report prepared for the Project (RMA Geoscience 2018). The scope for this study included review of literature and aerial maps, subsurface exploration consisting of five exploratory borings to a maximum depth of 51 feet below the existing grade, laboratory testing of selected samples, and geotechnical evaluation of the data.

The Project site is located in the central part of the San Joaquin Valley, which comprises the southern half of the Great Valley geomorphic province. The valley is a westward-tilting trough, which forms a broad alluvial fan, approximately 200 miles long and 50 to 70 miles wide, where the eastern flank is broad and gently inclined, as opposed to the western flank, which is relatively narrow. The Central Valley consists of the Great Valley Sequence comprised of marine deposits from the Late Jurassic through the Cretaceous, overlain by Cenozoic alluvium deposited by streams and rivers draining from the mountains, lakes that intermittently covered parts of the valley floor, and marsh environments. Underlying the Great Valley Sequence are the Franciscan Assemblage to the west and the Sierra Nevada Batholith to the east. The Project site is situated on Quaternary fan deposits and older marine sediments that are over 1,000 feet deep. The ground surface is relatively flat and the surface elevation is approximately 336 feet above mean sea level.

The nearest active earthquake fault zones (evidence of displacement within the past 11,700 years) are the Nunez Fault and Ortigalita Fault located approximately 57 miles southwest and 63 miles west-southwest, respectively, of the Project site. The Project site is not located within a fault zone, landslide zone, or liquefaction zone mapped by the California Geological Survey (CGS 2018).

Based on information obtained from the United States Department of Agriculture, Natural Resources Conservation Service Web Soil Survey online database (USDA 2018), the Project site is mapped as Ramona loam (Rc; approximately 65 percent of the site) and Ramona loam, hard substratum (Re; approximately 35 percent of the site). The Ramona series consists of well-drained soils that formed in moderately coarse textured old granitic alluvium (USDA 1971). The soil profile at the Project site generally consists of a silty clay fill layer extending

from the surface to a depth of approximately 3 to 5 feet, underlain by laterally discontinuous native layers of relatively clean sand, sandy silt, silty sand, clayey silt, and silty clay to the maximum depth explored of 51 feet below the existing ground surface. The granular soils generally had a relative consistency of medium dense to very dense, while the fine grained soils had a relative consistency of stiff to hard.

Groundwater was not encountered in exploratory borings. According to recent groundwater data from the California Department of Water Resources (DWR), as described in the geotechnical investigation, the depth to groundwater is estimated to be approximately 130 feet in the vicinity of the Project site.

DISCUSSION

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

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (No Impact)

The Project site is not located within the boundaries of an Earthquake Fault Zone for fault rupture hazard as defined by the Alquist-Priolo Earthquake Fault Zoning Act and no faults are known to pass through the site. As described above, the nearest active earthquake fault zones are located approximately 57 miles southwest and 63 miles west-southwest of the Project site. Therefore, no impact related to fault rupture would occur as a result of the Project.

ii) Strong seismic ground shaking? (Less than Significant)

and

iii) Seismic-related ground failure, including liquefaction? (Less than Significant)

As with most areas within the State of California, the Project site and surrounding region would be exposed to ground shaking from seismic events on local and regional faults. Although the Project site is located roughly 60 miles from the nearest active earthquake fault, moderate to strong ground shaking may occur at the Project site. The peak earthquake ground acceleration adjusted for site class effects (PGA_M) has been determined to be 0.300 percent of gravity (g).

Potential secondary seismic hazards that could affect the Project include liquefaction, lateral spreading, seismically induced settlement, and differential compaction. Liquefaction is a phenomenon where earthquake-induced ground vibrations increase the pore pressure in saturated, granular soils until it is equal to the confining, overburden pressure. When this occurs, the soil can completely lose its shear strength and enter a liquefied state. The possibility of liquefaction is dependent upon grain size, relative density, confining pressure, saturation of the soils, and intensity and duration of ground shaking. In order for liquefaction to occur, three conditions should exist: low-density, sand/sandy soils, a shallow groundwater depth typically shallower than 50 feet, and seismic shaking from a nearby large-magnitude earthquake. Since the depth to groundwater at the Project site is approximately 130 feet and loose, low-density sand layers are not expected within the exploration depth of approximately 51 feet, there is a negligible risk of liquefaction occurring at the Project site during a design-level seismic event.

Seismically induced settlement occurs most frequently in areas underlain by loose, granular sediments. Damage as a result of seismically induced settlement is most dramatic when differential settlement occurs in areas with large variations in the thickness of underlying sediments. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. Taking into account the consistency of the soils in the upper 51 feet, the PGA_M of 0.300g, and the distance to the nearest active fault (approximately 57 miles from the Project site), there is a low risk of any significant seismic settlement occurring at the Project site during a design-level seismic event. For design purposes, it is estimated that the seismically induced settlement would be less than 0.25 inches during a design-level seismic event.

These results and other recommendations of the geotechnical report would be incorporated into the Project structural design. Moreover, final design of the Project would comply with the CBC, which includes specific provisions for structural seismic safety. The Project would also be subject to review and recommendations by the CSU Seismic Review Board. Therefore, with the above provisions, the impact of the Project related to seismic ground shaking and other secondary seismic hazards would be less than significant.

iv) Landslides? (No Impact)

The majority of the campus and the City of Fresno consists of flat topography within the Central Valley with no risk of large landslides. The only areas within the City that have the potential for landslides are along the steep banks of rivers, creeks, or drainage basins such as the San Joaquin River bluff and along unlined basins and canals throughout the City (City of Fresno 2014a). The topography of the Project site is relatively flat and no steep slopes are located on or near the site. Thus, the Project site is not susceptible to landslides and no impact would occur.

b) *Would the project result in substantial soil erosion or the loss of topsoil? (Less than Significant)*

Project construction would include cut and fill grading, trenching, and removing trees and other vegetation. These activities would include ground disturbance, which would potentially result in short-term soil erosion. However, because the Project footprint is greater than 1 acre, it would be subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements for construction site stormwater discharges, and would comply with those requirements. A Storm Water Pollution Prevention Plan (SWPPP) is required to be prepared and implemented under these requirements, which includes appropriate erosion-control and water-quality-control measures during site preparation, grading, construction, and post-construction. Implementation of the SWPPP for the Project would minimize short-term erosion impacts. Long-term impacts of the Project would not result in substantial erosion, as the soils would be covered by buildings, pavement, vegetation, and landscaping. Therefore, Project impacts related to erosion would be less than significant.

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? (Less than Significant)*

As described above, the liquefaction potential at the Project site is considered negligible, and seismically induced settlement is estimated to be minimal (i.e., less than 0.25 inches). The site is not located near steep slopes that would be susceptible to landslides. Lateral spreading, which is commonly associated with liquefaction and occurs when a continuous layer of soil liquefies at depth and the soil layers above move toward an unsupported face, would also not be expected to occur due to the site's relatively flat topography and negligible liquefaction potential. Thus, the Project site is not located on a geologic unit or soil that is unstable or would be expected to become unstable. Moreover, compliance with the CBC would further reduce potential risks related to soil stability; therefore, associated impacts would be less than significant.

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

Expansive soils can undergo significant volume change with changes in moisture content; they shrink and harden when dried and expand and soften when wetted. The geotechnical field exploration and expansion index test results indicate that the near surface soils at the Project site have a low expansion potential. Therefore, impacts related to expansive soils would be less than significant.

- e) ***Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? (No Impact)***

The Project would connect to sewer facilities and would not include septic tanks or alternative wastewater disposal systems. Therefore, no impact related to septic tanks or alternative wastewater disposal systems would occur.

- f) ***Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less than Significant with Mitigation Incorporated)***

The Project site is located in the southern portion of the Great Valley Geomorphic Province (CGS 2002). This geomorphic province is characterized by a depositional basin that has received sediments since the Jurassic Period (approximately 160 million years ago) and is split into the Sacramento Valley in the north and the San Joaquin Valley in the south, where the Project site is located (CGS 2002). The Project site is underlain by Pleistocene (approximately 2.58 million years ago to 11,800 years ago) non-marine deposits (Matthews and Burnett 1965).

A geotechnical report that included borings up to a depth of 51 feet within the Project area reported artificial fill (reworked native) ranging from 3 to 5 feet below the ground surface (BGS; RMA Geoscience 2018). Below the fill, fine-grained sand, silt, and clay lenses, indicative of alluvial deposition, were noted. Depending on the depth, sediments were orange-yellowish brown to grayish brown and were moderately indurated to indurated (RMA Geoscience 2018).

An expedited paleontological records search was requested from the Natural History Museum of Los Angeles County (LACM) on November 30, 2018, and the results were received on December 06, 2018. Not citing specific geological mapping, the LACM stated that the entire Project area is underlain by the Pleistocene Riverbank Formation, but also mentioned that the area could be underlain by a veneer of soil over Holocene (less than 12,000 years ago) younger Quaternary alluvium (McLeod 2018). While no paleontological localities were reported from within the Project area, the LACM reported a fossil proboscidean (i.e., trunked mammal) from Pleistocene-age deposits northwest of the Project area on the south side of Ash Slough, northeast of Chowchilla (McLeod 2018), approximately 40 miles northwest of the Project site. The LACM recommended paleontological monitoring of substantial excavations within the Project area and sediment sampling to determine the microfossil potential.

Several Pleistocene fossil localities are known from the City of Fresno and Fresno County. Dundas et al. (2009) reported that mammoth (*Mammuthus* sp.) specimens were recovered during a Caltrans project in the City of Fresno. Specimens consisted of tusk, pelvis, femur, molar, and rib fragments from approximately 6.5 feet BGS. In his compilation of Pleistocene fossil vertebrate localities from California, Jefferson (1991) reported several localities from Fresno County from the same or similar sediments that

directly underlie the Project area or at depth. Fossils reported include fish (Osteichthyes), turtle (*Clemmys marmorata*), snakes (*Charina* sp. cf. *C. bottae* and *Crotalus* sp.), bird (*Gavia* sp.), mole (*Scapanus latimanus*), rabbit (*Lepus* sp.), gopher (*Thomomys* sp.), rodents (Heteromyidae, *Neotoma* sp., and *Microtus* sp.), horse (*Equus* sp.), camel (*Camelops* sp.), elk (*Cervus* sp.), deer (*Odocoileus* sp.), bison (*Bison* sp.), mastodon (*Mammut* sp.), coyote (*Canis latrans*), fox (*Vulpes* sp.), bear (*Urocyon* sp.), and badger (*Taxidea* sp.) (Jefferson 1991).

No paleontological resources were identified within the Project area as a result of the institutional records search and desktop geological review; however, several Pleistocene fossil localities have been documented from Fresno County. The Project is not anticipated to be underlain by unique geological features. While the Project area contains disturbed sediments up to 5 feet BGS, intact paleontological resources may be present below the original layer of fill. Given the proximity of past fossil discoveries in the surrounding area and the potential for impacts to underlying paleontological resources, the Project site is moderately to highly sensitive for supporting paleontological resources. In the event that intact paleontological resources are located on the Project site, ground-disturbing activities associated with construction of the Project, such as grading during site preparation and large-diameter (i.e., greater than 2 feet) drilling would have the potential to destroy a unique paleontological resource or site, which would be a potentially significant impact. However, implementation of Mitigation Measure GEO-1 would reduce potentially significant impacts to paleontological resources to a less-than-significant level.

Mitigation Measure GEO-1: Prior to commencement of any grading activity on site, CSU/Fresno State shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (2010) and shall outline where excavations below a depth of 5 feet would occur. The qualified paleontologist shall attend the preconstruction meeting and be on site during all rough grading and other significant ground-disturbing activities in previously undisturbed Pleistocene alluvial deposits below a depth of 5 feet. These deposits may be encountered at any depth below any fill materials (i.e., road base). In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. A final monitoring report, including the results of the monitoring and description of any paleontological resources recovered shall be submitted to CSU/Fresno State and any appropriate City or County agencies.

3.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). The greenhouse effect traps heat in the troposphere through a threefold process: (1) short-wave radiation emitted by the Sun is absorbed by the Earth; (2) the Earth emits a portion of this energy in the form of long-wave radiation; and (3) GHGs in the upper atmosphere absorb this long-wave radiation and emit this long-wave radiation into space and back toward the Earth. This trapping of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide, O₃, and water vapor. Some GHGs, such as CO₂, CH₄, and nitrous oxide, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely byproducts of fossil-fuel combustion, whereas CH₄ results mostly from off-gassing associated with agricultural practices and landfills. Manufactured GHGs, which have a much greater heat-absorption potential than CO₂, include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride, which are associated with certain industrial products and processes (California Climate Action Team 2006).

The Intergovernmental Panel on Climate Change (IPCC) developed the Global Warming Potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO₂; therefore, GWP-weighted emissions are measured in metric tons of CO₂ equivalent (MT CO₂e).

Regarding impacts from GHGs, the California Air Pollution Control Officers Association (CAPCOA) considers GHG impacts to be exclusively cumulative impacts (CAPCOA 2008); therefore, assessment of significance is based on a determination of whether the GHG

emissions from a project would represent a cumulatively considerable contribution to the global atmosphere. The SJVAPCD has adopted the Climate Change Action Plan (CCAP), which directed the Air Pollution Control Officer to develop guidance documents to assist land use and other permitting agencies in addressing GHG emissions as part of the CEQA process. The SJVAPCD has adopted the *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* (SJVAPCD 2009a) and the policy *Addressing GHG Emission Impacts for Stationary Source Projects under CEQA When Serving as the Lead Agency* (SJVAPCD 2009b). The guidance and policy rely on the use of performance-based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project-specific GHG emissions on global climate change during the environmental review process. However, SJVAPCD's adopted BPS are specifically directed at reducing GHG emissions from stationary sources; therefore, the adopted BPS would not generally be applicable to the Project. The SJVAPCD guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change. SJVAPCD supports the use of interim thresholds as established by the CAPCOA when adopted thresholds are not applicable (SJVAPCD 2009c). As such, for the purposes of establishing a quantitative threshold for GHG emissions, the interim threshold of 900 MT CO₂e per year established by CAPCOA is used herein. This threshold is consistent with California's climate-stabilization target (identified in Assembly Bill 32).

DISCUSSION

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

Construction. Construction of the Project would result in GHG emissions, which would primarily be associated with use of off-road construction equipment, on-road vendor trucks, and worker vehicles. The SJVAPCD recommends that construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. Thus, the total construction GHG emissions were calculated, amortized over 30 years, summed with the operational emissions, and compared with the CAPCOA GHG significance threshold of 900 MT CO₂e per year. Amortized GHG emissions associated with project construction would result in annualized generation of 15 MT CO₂e.

A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Appendix A.

Operations. Long-term operational emissions would occur over the life of the Project. CalEEMod was used to estimate GHG emissions from grid electricity usage, solid waste, and other sources (including area sources, natural gas combustion, and water/wastewater conveyance) for the Project, as well as for the existing Keats building to be demolished. GHG emissions associated with the routine testing of the proposed

emergency generator were also quantified with CalEEMod. Notably, the Project would not result in new on-road vehicle trips, so mobile sources were not included in the emissions inventory.

Table 7 summarizes the annual GHG emissions that would be generated by development of the Project, as well as emissions of existing building to be demolished. Detailed calculations are presented in Appendix A.

TABLE 7
ESTIMATED ANNUAL OPERATIONAL GHG EMISSIONS

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	metric tons per year			
Proposed Project				
Area	0.00	0.00	0.00	0.00
Energy	280.26	0.01	0.00	281.76
Stationary	8.19	0.00	0.00	8.22
Waste	21.11	1.25	0.00	52.30
Water	7.96	0.07	0.00	10.08
Total Project Emissions	317.51	1.33	0.00	352.35
Existing Keats Building				
Area	0.00	0.00	0.00	0.00
Energy	33.16	0.00	0.00	33.34
Waste	1.95	0.12	0.00	4.84
Water	0.76	0.01	0.00	0.97
Total Existing Emissions	35.87	0.12	0.00	39.15
Net Increase (Project minus Existing)	281.64	1.21	0.00	313.20
Amortized Construction Emissions				15.17
Net Increase Operational Emissions + Amortized Construction Total				328.37

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent

See Appendix A for complete results.

The values shown for the Project and existing use scenarios are from CalEEMod and may not sum due to rounding. Project annual emissions are based on the "Mitigated" CalEEMod outputs in order to incorporate LEED Gold and a 20% lighting energy reduction based on installation of high-efficiency lighting in all outdoor areas, even though implementation of these measures would not be considered actual mitigation. Existing emissions were based on the "historical" energy intensity factors in CalEEMod based on the age of the Keats building. For both the Project and existing scenario, the CO₂ intensity factor was adjusted to match PG&E's 2016 Power Content Label of 33% renewables. The "Stationary" source represents the emergency diesel generator to be installed under the Project, with emissions estimated using CalEEMod for a 400-kV engine (about 430 horsepower) assuming routine testing and maintenance of up to 50 hours per year per the CARB ATCM for stationary compression-ignition engines.

Table 7 indicates that the Project would result in a net GHG-emission increase of approximately 328 MT CO₂e per year from all sources, which would be below the screening GHG threshold of 900 MT CO₂e per year. This would represent a less-than-significant cumulative GHG impact.

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

Under the SJVAPCD's CEQA thresholds for GHGs, a project would not have a significant GHG impact if it is consistent with an applicable plan to reduce GHG emissions, and a CEQA-compliant analysis was completed for the GHG reduction plan. At this time, Fresno State has not adopted a Climate Action Plan or similar GHG reduction strategy that would be applicable to the Project. Fresno State is, however, committed to taking the necessary steps in reducing GHG emissions through implementation of a variety of sustainable practices. Initiatives that would help Fresno State reduce its GHG emissions include: energy efficiency and renewable energy projects, energy saving programs, integrating design construction practices, "greening" interiors development, working towards a waste diversion goal of 100 percent, integrating low water vegetation in outdoor spaces, and retooling campus water infrastructure to increase water efficiency. The Project would be constructed to meet at least LEED Gold and would, at a minimum, comply with Title 24 Building, Energy and Green Buildings Standards. Project lighting, in particular, would be a minimum of 20 percent more efficient than California Energy Code requirements.

While not directly applicable to the Project because it does not account for Fresno State's future growth projections, the Fresno Council of Governments (FCOG) *Regional Transportation Plan and Sustainable Communities Strategy* (RTP/SCS) was adopted for the purpose of reducing GHGs from the land use and transportation sectors and was adopted after completion of a Program EIR. CARB approved the RTP/SCS in 2015. Senate Bill 375 requires FCOG to demonstrate in its SCS that it will reduce car and light truck GHG emissions by 5 percent per capita by 2020, and 10 percent by 2035. The FCOG SCS has projected to exceed the goal by committing to a 9-percent reduction by 2020 and 11-percent reduction by 2035 (FCOG 2015). Notably, FCOG has drafted the *Regional Transportation Plan and Sustainable Communities Strategy 2018-2042* (2018 RTP/SCS), which has not yet been adopted (FCOG 2017a). The GHG emission goals in the FCOG RTP/SCS are based on demographic data trends and projections that include household, employment, and total population statistics. The Project would not generate an increase in population, employment or traffic. Therefore, the Project would not conflict with the FCOG RTP/SCS.

The Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, 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. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations. Relatedly, in the *Final Statement of Reasons for the Amendments to the CEQA Guidelines*, the California Natural Resources Agency (CNRA) 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 (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., low-carbon fuel standard), among others. To the extent that these regulations are applicable to the Project, the Project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Regarding consistency with post-2020 statewide targets, specifically Senate Bill 32 (goal of reducing GHG emissions to 40 percent below 1990 levels by 2030) and Executive Order S-3-05 (goal of reducing GHG emissions to 80 percent below 1990 levels by 2050), there are no established protocols or thresholds of significance for that future-year analysis. However, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014). The 2017 Scoping Plan Update reaffirms that the state is on the path toward achieving the 2050 objective of reducing GHG emissions to 80 percent below 1990 after the adoption of Senate Bill 32 and Assembly Bill 197 in 2016 (CARB 2017). As discussed previously, the Project would result in less-than-significant GHG emissions and would not conflict with the state's trajectory toward future GHG reductions. With respect to future GHG targets under Senate Bill 32 and Executive Order S-3-05, CARB has also made clear its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the Assembly Bill 32 horizon year of 2020, to meet the reduction targets in 2030 and in 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the state on its trajectory toward meeting these future GHG targets.

Based on the preceding considerations, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and related impacts would be less than significant.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ miles of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

Searches of the Department of Toxic Substance Control (DTSC) EnviroStor database and California State Water Resources Control Board GeoTracker database indicated no contamination on the Project site. The Project site was the subject of a School Investigation evaluated by DTSC in 2006. The evaluation did not identify any contamination on the Project site and DTSC issued a letter concluding that “No Action” was required (DTSC 2006).

The federal government banned consumer use of lead-based paint (LBP) in 1978 and many, but not all, ACMs were banned in construction products in 1989. As the structures on the Project site were constructed between 1956 and 1963, prior to the ban of these materials, it is possible that they contain LBP or ACMs. In addition, other regulated materials such as fluorescent lights may be present.

DISCUSSION

- a) ***Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less than Significant)***

The Project would result in a slight increase in the routine use of hazardous materials. The Project would include use of heavy equipment for demolition, grading, excavation, and construction. Fueling and maintenance of such equipment could result in incidental spills of petroleum products and hazardous materials in construction staging areas. However, such incidental spills would likely be minor and would be minimized through implementation of standard best management practices (BMPs) included in a NPDES-mandated SWPPP during construction. Relevant BMPs would typically include creation of designated fueling and maintenance areas located not in proximity to drainages and equipped with temporary spill containment booms, absorbent pads, and petroleum waste disposal containers. Some hazardous materials use would continue to occur in association with Project operations, including natural gas for the emergency generator, fertilizers, cleaning supplies, etc. Use of hazardous materials would be required to meet all applicable regulations related to the transport, use, and storage of such materials. Therefore, Project impacts associated with routine transport, use, and disposal of hazardous materials would be less than significant.

- 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? (Less than Significant)***

The Project would include demolition activities on Fresno State campus grounds prior to new construction. Given the age of the structures on site, LBP and ACMs may be encountered during demolition activities. Project construction would be required to comply with applicable state regulations regarding LBP work practices, including testing and abatement. The removal of ACMs would be subject to the Asbestos Program administered by the San Joaquin Valley Air Pollution Control District (SJVAPCD), which protects the public from uncontrolled emissions of asbestos through enforcement of the Federal Asbestos Standard. The Program includes survey and notification requirements prior to beginning a project, as well as work practice standards and disposal requirements (San Joaquin Valley APCD 2012).

Additionally, under California law, fluorescent lamps cannot be disposed as municipal waste. Fluorescent tubes and bulbs may be managed as universal wastes under Title 22, Chapter 23 of the California Code of Regulations and are typically recycled. With adherence to applicable regulations, Project impacts related to removal of hazardous materials during demolition would be less than significant.

- 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? (Less than Significant)***

University High School is located on the Fresno State campus approximately 650 feet southeast of the Project site. Demolition of the existing building would potentially involve the handling and disposal of hazardous waste products, including LBP, ACMs, petroleum products, etc. Handling of such substances would be regulated by federal and state hazardous materials laws that would minimize the risk of exposure to nearby land uses, including schools. Therefore, impacts associated with handling hazardous materials within 0.25 miles of a school would be less than significant.

- d) ***Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (No Impact)***

The State of California Hazardous Waste and Substances Site List (also known as the “Cortese List”) is a planning document used by state and local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials sites. The Project site is not included on the list of hazardous material sites compiled pursuant to Government Code Section 65962.5. As such, the Project would have no impact related to the Cortese List.

- e) ***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? (No Impact)***

The closest public airport to the Project site is the Fresno Yosemite International Airport, located approximately 2 miles to the southeast. The Project site is not located within any designated airport safety zones or airport noise contours (City of Fresno 2012). Therefore, no aircraft-related safety hazards or excessive noise impacts would occur in association with construction and operation of the Project.

- f) ***Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Impact)***

In the event of an emergency evacuation, the Fresno State campus has six designated assembly points on campus. The closest on-campus assembly point to the Project site is the grass area south of the Education building, located south of the Project site between Keats and Shaw avenues (Fresno State 2018a). Access to this assembly area would not be impaired as a result of construction or operation of the Project. Therefore, no impacts related to interference with emergency response or evacuation plans would occur.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? (No Impact)

The Fresno State campus, including the Project site, is not located on or adjacent to wildlands. Therefore, the Project would have no impact related to exposure to wildland fire hazards.

3.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on or off site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

The principal surface water drainages in the City of Fresno are the San Joaquin River, north of the Project site, and the Kings River, south of the Project site, which drain the western slopes of the Sierra Nevada. Floodwater from the Kings River is diverted to the San Joaquin River via the James Bypass, a human-made canal. Three dams control flows on the two rivers. The Friant and Mendota Dams are located on the San Joaquin River. These two dams provide some flood control; however, these two dams were not designed for the purpose of flood control. The Pine Flat Dam was built on the Kings River for the purpose of flood control. In addition to the dams on the two rivers, there are reservoirs and detention basins that have been constructed to prevent flooding. These facilities include the Redbank Dam and the Redbank-Fancher Creeks Flood Control Project. This project consists of two dams (Big Dry Creek Dam and Fancher Creek Dam), three detention basins (Redbank Creek, Pup Creek, and Alluvial Drain detention basins), and canals to convey discharges in and around the City of Fresno. These facilities were designed to protect developed areas from a 200-year storm event (City of Fresno 2014b).

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the Project site is located in an area of moderate flood hazard, but is not within a Special Flood Hazard Area (SFHA). The site is located within Zone X (shaded), in an area with a 0.2-percent annual chance of flooding, or 1-percent annual chance of shallow flooding (i.e., average depth less than 1 foot).

The Project site is relatively level with approximately 0.8 acres of impervious surface area (approximately 23 percent of the site). Stormwater runoff at the Project site occurs as sheet flow, which is transmitted into existing storm drains. These storm drains convey stormwater to surface water detention basins, which ultimately discharge to groundwater, irrigation canals, creeks, and the San Joaquin River. The system is designed to detain and infiltrate as much runoff as possible into the underlying groundwater aquifer (FMFCD et al. 2013).

As described in the geotechnical investigation prepared for the Project (RMA GeoScience 2018), according to groundwater data from DWR, recent groundwater data indicates the depth to groundwater is approximately 130 feet in the vicinity of the Project site. Historical data derived from wells (State Well IDs 13S20E12H001M and 13S21E07G001M) less than 1.5 miles to the northeast of the Project site indicate the depth to groundwater on average was approximately 41 feet deep throughout the 1950s and then declined to a depth of approximately 110 feet during the 1990s. Over the subsequent years, the data indicate that the groundwater elevation has declined another 20 feet, with rates as high as 3 feet per year in the northeastern area, adjacent to the City of Clovis (City of Fresno 2016).

The City is underlain by the Kings Subbasin, which, along with six other subbasins, comprises the San Joaquin Valley Groundwater Basin. The Kings Subbasin encompasses approximately 1,530 square miles and is in the greater Tulare Lake hydrologic region. The subbasin is generally bounded on the north by the San Joaquin River, on the west by the Fresno Slough, on the south by the Kings River and Cottonwood Creek, and on the east by the Sierra foothills. Based on California DWR Bulletin 118-80, the Kings Subbasin is in a state of critical overdraft and the

future of the groundwater basin has been projected to see continued overdraft conditions (City of Fresno 2016).

However, the rate of groundwater decline has slowed since 2004 when the City's first surface water treatment facility came on line in northeast Fresno, the Northeast Surface Water Treatment Facility (NESWTF), and when renewed focus on intentional groundwater recharge operations regained momentum. Since around 2004, groundwater levels stabilized and since then have generally held level over the last 10 years (City of Fresno 2016). To facilitate the further reduction of its reliance on groundwater, the City is nearing completion of a new 80-million-gallon-per-day (mgd) surface water treatment facility in southeast Fresno (i.e., the Southeast Surface Water Treatment Facility [SESWTF]) (Recharge Fresno 2018). The combination the NESWTF and SESWTF will maximize the use of available surface water and afford the City with greater water supply reliability, increase operational flexibility, and decrease the City's dependency on groundwater supplies (City of Fresno 2016).

The 2015 UWMP indicates that the City of Fresno would have a reliable water supply through 2040 during normal year supply and demand scenarios; single dry year supply and demand scenarios, and multiple dry year supply and demand scenarios (City of Fresno 2016).

DISCUSSION

a) *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? (Less than Significant)*

The Fresno Metropolitan Flood Control District (FMFCD) is responsible for flood control and stormwater planning and management. As the owner and operator of the stormwater drainage system, the FMFCD has primary responsibility for implementing the U.S. Clean Water Act requirements, through a National Pollutant Discharge Elimination System (NPDES) discharge permit, issued by the Central Valley Regional Water Quality Control Board (RWQCB). The municipal NPDES stormwater permit (or MS4 permit) was issued to the FMFCD, the cities of Fresno and Clovis, the County of Fresno, and Fresno State (i.e., the Permittees), by the Central Valley RWQCB in 2013. The NPDES Permit Program is comprised of pollutant removal in the stormwater basins and education to avoid storm water pollution; BMPs for commercial, industrial, and new development stormwater quality control; monitoring to assess stormwater impacts upon the quality of receiving water; and the preparation of ordinances for adoption by local governments to enforce storm water quality measures. The FMFCD's programs include water conservation efforts through its design and operation of storm water drainage facilities to detain and retain water from storm events, as well as receive dry season surface water supplies for groundwater recharge (City of Fresno 2014b).

In addition, a SWQMP was developed pursuant to Order No. R5-2013-0080, as a five-year management strategy for controlling the discharge of pollutants in stormwater and urban runoff from Fresno-Clovis metropolitan area Permittees. The SWQMP includes

specific pollution prevention and control practices for Fresno-Clovis urban drainage system planning, design, construction, and maintenance. The Program also includes public education to prevent stormwater pollution; specifies Permittee construction, industrial/commercial, municipal, and new development control practices; procedures to prevent and respond to illicit discharges and connections; monitoring to assess stormwater impacts on receiving waters; and program effectiveness assessments, to evaluate the effectiveness of BMPs. These Permittee requirements are designed to continue to achieve water quality standards and protect beneficial uses of the San Joaquin River, creeks, and canals. Because the SWQMP documents and describes actions that the Permittees will undertake to implement the requirements of the MS4 permit, the SWQMP itself is then an enforceable document (FMFCD et al. 2013).

Most recently, the Central Valley RWQCB issued a region-wide MS4 permit in 2016 (Order No. R5-2016-0040, NPDES No. CAS0085324) for Permittees in the Central Valley Region. This permit expires September 30, 2021. The Project would be required to comply with the Phase I MS4 permit issued by the Central Valley RWQCB in 2016 and the Fresno-Clovis SWQMP adopted in 2013. The Phase I MS4 permit requires runoff to be treated using LID treatment controls, such as biotreatment facilities and other hydromodification features, to improve stormwater quality. Given the above, operation of the Project would not violate any water quality standards.

Construction of the Project would result in short-term soil-disturbing activities that could lead to increased erosion and sedimentation. However, the Project would comply with NPDES General Permit for Storm Water Discharges Associated with Construction Activity, Order No. 99-08-DWQ. The Construction General Permit (CGP) requires the development and implementation of a SWPPP, which describes BMPs the discharger would use to protect stormwater runoff. The SWPPP would include appropriate erosion-control and water-quality-control measures during site preparation, grading, construction, and post-construction. Implementation of the SWPPP for the Project would minimize erosion and related impacts on water quality, such that construction-related impacts would be less than significant.

b) *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (Less than Significant)*

Water would be supplied to the Project by Fresno State's groundwater well system. The campus groundwater system, as well as other local agencies and districts, extract groundwater from the Kings Subbasin. As the Project site is within the developed Fresno State campus, it is not located in a groundwater recharge area. The new Student Union building would continue to be served by the existing potable water infrastructure on the Project site and by Fresno State's groundwater well system. Water use on the Project site would increase by a net of 1.8 million gallons per year with Project implementation.

While the campus's groundwater use would increase somewhat with the Project, groundwater level declines in the Kings Subbasin have decreased substantially since 2004, as water conservation, groundwater recharge, and use of reclaimed water from surface water treatment facilities has increased substantially. The 2015 UWMP indicates that the City of Fresno would have a reliable water supply through 2040 during normal year supply and demand scenarios; single dry year supply and demand scenarios; and multiple dry year supply and demand scenarios. In addition, in accordance with the Sustainable Groundwater Management Act (SGMA), the City and other regional stakeholders have formed a Groundwater Sustainability Agency (GSA) to ensure the continued beneficial use of groundwater supplies. As such, the Project water demand would not substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project would impede sustainable groundwater management of the basin. The Project's impacts on groundwater would be less than significant.

c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

i) *Result in substantial erosion or siltation on or off site? (Less than Significant with Mitigation Incorporated)*

and

ii) *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site? (Less than Significant with Mitigation Incorporated)*

There are no natural drainage features on or near the Project site. Construction activities would entail grading, excavation, and other ground-disturbing activities, which could temporarily alter surface drainage patterns and increase the potential for flooding, erosion, or siltation. However, the Project would be required to comply with the NPDES Construction General Permit, which would require implementation of BMPs and erosion control measures, thereby reducing the effects of construction activities on erosion and drainage patterns.

New drainage infrastructure would be included in the Project to accommodate stormwater flows and connect the Project to existing storm drain infrastructure. Once operational, the Project would increase the impervious surface area on the site from approximately 0.8 acres (23 percent of the site) to approximately 1 acre (29 percent of the site), which would represent an increase in the impervious surface area of 6 percent. This would be expected to result in an increase in stormwater runoff of approximately 0.1 cubic feet per second. Such an increase in runoff volume and rate could result in off-site erosion, siltation of waterways, and flooding. However, implementation of Mitigation Measure

HYD-I would reduce potentially significant impacts related to increased runoff to less-than-significant levels.

Mitigation Measure HYD-I: CSU/Fresno State shall provide stormwater detention such that post-construction runoff volume and rate is equal or less than existing conditions. Fresno State shall include the requirement for stormwater detention in development or construction contracts for the Project.

iii) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Less than Significant with Mitigation Incorporated)*

As discussed above, post-construction stormwater runoff would increase, potentially exceeding the capacity of existing or planned stormwater drainage systems, which would be a potentially significant impact. However, implementation of Mitigation Measure HYD-I described above would reduce impacts related to increased runoff to less-than-significant levels.

With respect to water quality, as described above in Section 3.10(a), with implementation of BMPs mandated by the MS4 permit, SWQMP, and construction-related NPDES permit, water quality impacts associated with Project construction and operation would be less than significant.

iv) *Impede or redirect flood flows? (Less than Significant)*

The Project site is not located within a low-lying area that would be inundated during the failure of an up-gradient water reservoir or dam (RMA GeoScience 2018). The Project site is not located within a 100-year flood zone. As described above, the Project site is located with flood Zone X with a 0.2-percent annual chance of flooding or a 1-percent annual chance of flooding with an average depth of less than 1 foot. Therefore, less-than-significant flood-related impacts would occur in association with construction and operation of the Project.

d) *In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation? (No Impact)*

Tsunamis are sea waves that are generated in response to large-magnitude earthquakes. When these waves reach shorelines, they sometimes produce coastal flooding. Seiches are the oscillation of large bodies of standing water, such as lakes, that can occur in response to ground shaking. Tsunamis and seiches do not pose hazards due to the inland location of the Project site and lack of nearby bodies of standing water. In addition, mudflows are large, rapid masses of mud formed by loose earth and water, primarily affecting hillsides and slopes of unconsolidated material. No steep slopes that

would be subject to mudflows are located on or near the Project site. Therefore, no impact related to tsunamis, seiches, or mudflows would occur.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Less than Significant)

The SGMA of 2014 is intended to provide for sustainable management of groundwater basins and to locally manage groundwater basins while minimizing state intervention to only when necessary. The SGMA requires the creation of GSAs to implement the SGMA. The deadline to adopt and begin implementation of Groundwater Sustainability Plans (GSPs) is January 31, 2020.

The North Kings GSA is one of six agencies formed in the Kings Subbasin and includes the Project site. Through its various surface water resources and several decades of proactive groundwater recharge activities, this portion of the Kings Subbasin has not experienced significant overdraft conditions experienced elsewhere in the basin. While the GSP for the North Kings Subbasin is currently being developed, as described above in Section 3.10(b), the Project water demand would not substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project would impede sustainable groundwater management of the basin. Furthermore, the Project would be required to comply with the Phase I MS4 permit requiring runoff to be treated using LID treatment controls, such as biotreatment facilities and other hydromodification features, to improve stormwater quality, and NPDES CGP requiring the development and implementation of a SWPPP, which describes BMPs to control erosion and water quality. Therefore, the Project would have a less-than-significant impact as it would not conflict with a water quality control plan or a sustainable groundwater management plan.

3.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

The Project site is located within the core of the Fresno State campus and is surrounded by various academic buildings to the north, east, and south, and a paved parking lot to the west.

DISCUSSION

a) *Would the project physically divide an established community? (No Impact)*

The Project site lies entirely within the boundaries of the Fresno State campus. The Project would not include the construction of barriers such as roadways or other dividing features that would physically divide an established community. Therefore, no related impact would occur.

b) *Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (Less than Significant)*

The Project site is located on the Fresno State campus, which is designated Public Facilities in the City of Fresno General Plan and zoned Public and Institutional (PI) in the Citywide Development Code (Fresno Municipal Code Chapter 15). The purposes of the City's public and semi-public zoning districts are to provide areas for a wide range of public facilities, ensure that development and operation of public facilities protects and enhances the character and quality of life of surrounding residential areas, ensure the provision of services and facilities to serve the community, and implement and provide appropriate regulations. The PI district is for public or quasi-public facilities, including schools, with accessory retail uses and services, including food facilities and childcare, permitted.

The Project would be constructed entirely on Fresno State property and therefore would be under the land use jurisdiction of the CSU Board of Trustees. There are no local ordinances or policies of the City of Fresno that would apply to projects on the Fresno State campus, as the City does not have jurisdiction over CSU lands. Nevertheless, the Project does not propose a change in land use on the site, and is consistent with the site's zoning district and land use designation, identified in the City Zoning Citywide Development Code and General Plan. Additionally, the proposed new Student Union building is a permitted land use within the PI district. Therefore, as the Project would not likely result in a significant environmental impact due to a conflict with any land use plan, policies or regulation, City General Plan and Citywide Development Code, the impact would be less than significant.

The only land use plan applicable to the Project is the CSU Master Plan. The Project would require a master plan revision to accommodate the new Student Union building. With approval of the master plan map revision by the Board of Trustees, the Project would be consistent with the Master Plan for the campus. Therefore, as the

Project would not result in a significant environmental impact due to a conflict with the Fresno State Master Plan, the impact would be less than significant.

Therefore, the Project's impacts related to consistency with land use plans would be less than significant.

3.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The California Geological Survey is responsible for classifying land into Mineral Resource Zones (MRZs) under the Surface Mining Control and Reclamation Act (SMARA) based on the known or inferred mineral resource potential of that land. The following MRZ categories are used to classify land:

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.

The mineral lands classification of the project site is MRZ-3 (California Department of Conservation 1988). No mining operations or mineral resources are known to be present on or adjacent to the Project site (California Department of Conservation 1999). The only known mineral resources in the City of Fresno are located along the San Joaquin River corridor (California Department of Conservation 1988, City of Fresno 2014a).

DISCUSSION

- a) ***Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (No Impact)***

and

- b) ***Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? (No Impact)***

As described above, the Project site does not contain mineral deposits that are known to qualify as mineral resources. Therefore, the Project would have no impact on known or locally important mineral resources.

3.13 NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

Fundamentals of Noise

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 20,000 Hz. The human ear is more sensitive to middle and

high frequencies, especially when the noise levels are quieter. As noise levels get louder, the human ear starts to hear the frequency spectrum more evenly. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed. The frequency weighting called “A” weighting is typically used for quieter noise levels which de-emphasizes the low frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the “noise level” and is referenced in units of dBA.

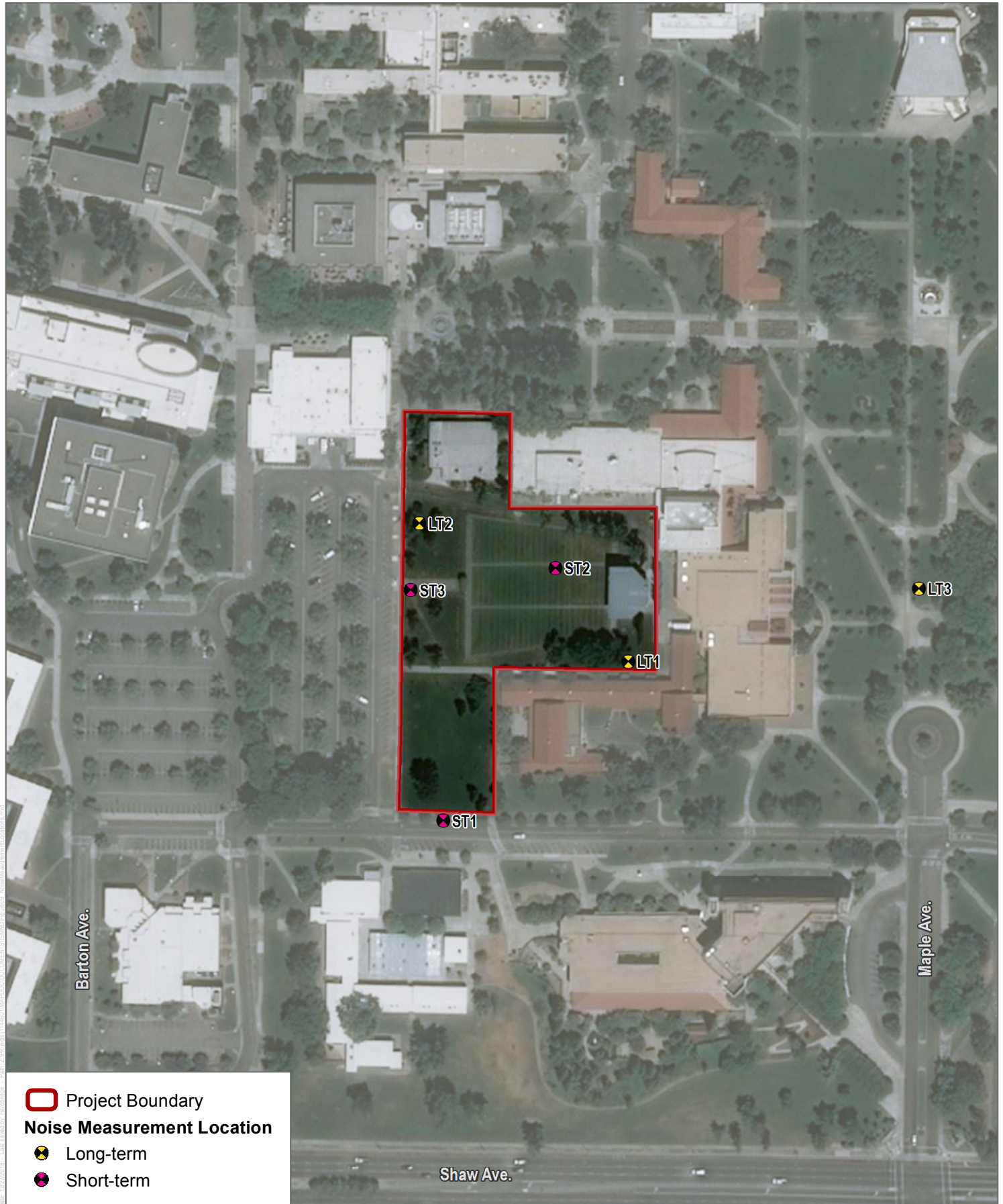
Hourly average noise levels are usually expressed as dBA L_{eq} or the equivalent noise level over that period of time. It is generally accepted that the average healthy ear can barely perceive a noise level change of 3 dB (Caltrans 2013) in an outdoor environment. A change of 5 dB is usually readily perceptible, and a change of 10 dB is perceived as twice or half as loud. A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the average daily number of traffic trips on a road) would result in a barely perceptible change in sound level.

Ambient environmental noise levels can be characterized by several different descriptors. Energy Equivalent Level (L_{eq}) describes the average or mean noise level over a specified period of time. L_{eq} provides a useful measure of the impact of fluctuating noise levels on sensitive receptors and is the most common noise metric. Other descriptors of longer-term noise incorporate a weighting system that accounts for human’s susceptibility to noise irritations at night. Community Noise Equivalent Level (CNEL) is a measure of cumulative noise exposure over a 24-hour period, with a 5-dB penalty added to the hourly L_{eq} of evening hours (7:00 p.m. to 10:00 p.m.) and a 10-dB penalty added to the hourly L_{eq} of night hours (10:00 p.m. to 7:00 a.m.). Since CNEL is a 24-hour average noise level, an area that has 65 dBA CNEL could have sporadic loud noise levels above 65 dBA which average lower over the 24-hour period. The L_{dn} or Day-Night Level is a similar metric addressing long-term noise over a 24-hour period with the same 10 dB penalty during nighttime, but without the penalty during the evening hours. Additionally, statistical noise levels (L_{xx}) are used to describe a sound level that has been exceeded for a certain percentage of the measurement time. For example, L_{10} is the sound level exceeded for 10% of the measurement time.

The sound produced by mechanical equipment is sometimes reported as sound power (L_w). The sound power level of a noise source is the rate at which sound energy is emitted from the source per unit time. Sound power levels are independent of the environment or distance from a source unlike the sound pressure level, which is reduced as distance from the source increases. Similar to the light-intensity produced by a light bulb, sound power is the rate at which sound energy is emitted.

Ambient Noise

Long-term and short-term noise measurements were taken near the Project site in December 2018 to document existing sound levels. Due to cold weather, the monitors stopped measuring hourly data before 24 hours of data had been collected. Figure 9 shows the noise measurement locations. Table 8 presents the results of the long-term noise measurements.



SOURCE: Bing Maps 2018

TABLE 8
LONG-TERM NOISE MEASUREMENT RESULTS

Noise Level Descriptor	Daytime 7 a.m.–7 p.m.			Evening 7 p.m.–10 p.m.			Night 10 p.m.–7 a.m.		
	LT1	LT2	LT3	LT1	LT2	LT3	LT1	LT2	LT3
Hourly L_{eq} , dB	58-50	53-56	52-68	51	50-52	N/A	N/A	47-51	N/A

Notes: L_{eq} = equivalent continuous sound level

As shown in Table 8, hourly L_{eq} results range from 47 to 68 dBA. Measurement location LT2 collected approximately 12 hours of consecutive data. These data were used to estimate the CNEL in the vicinity of the Project site. The resulting CNEL at LT2 is estimated to be approximately 56 dBA CNEL. At most of the locations, the dominant noise source was traffic on nearby roads. Other common noise sources for urban areas were also observed, including aircraft, birds, people walking and talking, leaves rustling in the wind, and lawn work.

Table 9 presents the results of the short-term noise measurements. Each short-term sound measurement was 10 minutes long. The short-term L_{eq} results range from 49 to 57 dBA. At measurement location ST1, traffic counts were conducted during the sound measurements due to its location adjacent to a road. During the measurement, 27 cars and 1 bus passed the measurement location on East Keats Avenue. Measurement locations ST2 and ST3 were not located adjacent to roads, so no traffic counts were collected with those measurements.

TABLE 9
SHORT-TERM MEASURED NOISE LEVELS (DBA)

Measurement Number	Location Description	Time	L_{eq}	L_{eq}					Noise Sources
				L_{max}	L_{min}	L_{10}	L_{50}	L_{90}	
ST1	Approximately 9 feet from E Keats Avenue on the sidewalk	1:31 p.m.	57	69	46	61	52	47	Traffic, birds, aircraft, distant conversation, distant gardening/landscaping, distant kids playing, distant traffic, rustling leaves
ST2	Near center of site in open field	1:47 p.m.	49	58	45	51	48	46	Birds, aircraft, distant conversation, distant gardening/landscaping, distant kids playing, distant traffic, rustling leaves
ST3	Near western edge of Project site, along sidewalk and parking lot	1:59 p.m.	54	70	44	57	49	46	Birds, aircraft, distant conversation, distant gardening/landscaping, distant kids playing, distant traffic, rustling leaves

Notes: L_{eq} = Equivalent continuous sound level; L_{max} = Maximum sound level; L_{min} = Minimum sound level; L_{10} = Sound level that was exceeded for 10% of the measurement time; L_{50} = Sound level that was exceeded for 50% of the measurement time; L_{90} = Sound level that was exceeded for 90% of the measurement time

DISCUSSION

- a) ***Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less than Significant)***

As the Project site is located on CSU property, the City of Fresno does not have jurisdictional or approval authority over the Project. Therefore, the City's General Plan and Noise Ordinance and associated standards do not directly apply to the Project. However, as described in Section 2.3.1, indoor amplified sound would be permitted to have a base decibel rate of 75 dBA and spikes of 90 dBA, and all events would end at the time determined by University administration based on the Fresno State Police Department's security assessment, or as prescribed by University policies and City of Fresno ordinances (Medina pers. comm. 2019). Additionally, outdoor events at the Student Union plaza would not use amplified sound. Fresno State and the CSU System do not have other applicable standards to use in the evaluation of construction and operational Project noise level increases. Regardless, permanent and temporary construction noise are further evaluated below.

Long-Term Operational Noise

As described below, Project-related operational noise would be similar to and consistent with existing uses within the Project vicinity, and would not be distinct from the ambient noise environment created by surrounding uses.

While indoor amplified sound may be used during some events in the new building, such noise would not exceed the noise standards above for amplified sound and would be attenuated by building walls and windows. As outdoor events at the Student Union plaza would not use amplified sounds, such sound would not be expected to be a substantial source of noise.

Exact mechanical system details are not available at this point in the Project design process. Performance criteria would guide the future design of the mechanical system. The currently known system details would include rooftop units and exhaust fans concealed behind a mechanical screen. The chiller would be located on the ground and also concealed.

Rooftop mechanical equipment noise was modeled as a set of point sources located on the rooftop. The input sound power data was based on assumed mechanical equipment with a sound power level of 93 dBA L_w , based on similar projects. Two pieces of mechanical equipment were assumed to be operating at the same time with this sound power level at a rooftop location at least 50 feet within the Project site boundary. At a distance of 50 feet from these units, the expected sound pressure level would be 64 dBA L_{eq} . The closest noise sensitive land uses are located over 400 feet away from where the units would be placed on the roof. At a distance of 400 feet, the sound

pressure level of the heating, ventilation, and air conditioning (HVAC) units would attenuate to 46 dBA L_{eq} .

Typical chiller noise levels vary depending on the exact equipment specification, the load during operation, and the location (relative to walls or other hard surfaces). Noise levels emitted from a variety of chillers (Trane model RTAC) were reviewed. The range of levels at a distance of 30 feet varies from 68 to 78 dBA L_{eq} for the chillers (Trane 2002). Based on these sound level ranges, an example chiller that could be used for this Project was assumed to operate with a sound pressure level of approximately 73 dBA L_{eq} at 30 feet. The closest noise sensitive land uses are located 360 feet away from where the chillers would be placed on the ground. At a distance of 360 feet (assuming the chiller is located 10 feet within the Project boundary), the sound pressure level would produce noise levels of approximately 52 dBA L_{eq} when operating.

As demonstrated by the existing long-term noise measurements displayed in Table 8 above, daytime (i.e., 7:00 a.m. to 7:00 p.m.) hourly measured sound levels are between 50 and 68 dBA L_{eq} , while evening and nighttime (i.e., 7:00 p.m. to 7:00 a.m.) hourly sound levels range from about 47 to 52 dBA L_{eq} . Existing estimated CNEL in the site vicinity is approximately 56 dBA. Assuming the mechanical equipment operates continuously, the resulting expected increase in the estimated CNEL would be approximately 3 dBA at the closest noise-sensitive land use. As described above, changes in a community noise level of 3 dBA is considered a barely perceivable change. Therefore, Project mechanical noise would not result in a substantial permanent increase in ambient noise levels in the Project vicinity.

While mitigation measures are not required to reduce a significant impact, design best management practice (BMP) NOI-I would reduce the potential for noise annoyance from Project mechanical equipment.

BMP NOI-I: For mechanical equipment, screw or scroll chillers should be avoided or treated with proper noise mitigation treatments due to the tonal nature of the noise they produce.

Short-Term Construction Noise

Construction of the Project would generate noise that could expose nearby receptors to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction, distance between the noise source and receiver, and intervening structures.

Equipment that would be in operation during construction would include rubber-tired dozers, backhoes, excavators, and compressors. None of the equipment would produce high levels of impact-type noise (as would be generated by pile driving, for example). Typically, construction equipment operates in alternating cycles of full power and low power, producing average noise levels less than the maximum noise level. The average

sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of the construction activities during that time.

The typical noise levels for various pieces of construction equipment at a distance of 50 feet are presented in Table 10.

TABLE 10
CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment Type	Acoustical Use Factor (%)	Measured L _{max} at 50 feet (dBA)
Backhoe	40	78
Compactor (ground)	20	83
Compressor (air)	40	78
Crane	16	81
Dozer	40	82
Dump Truck	40	76
Excavator	40	81
Flat Bed Truck	40	74
Front End Loader	40	79
Generator	50	81
Grader (spec)	40	85
Man Lift	20	75
Pavement Scarifier	20	90
Paver	50	77
Pickup Truck	40	75
Pneumatic Tools	50	85
Roller	20	80
Tractor (spec)	40	84
Warning Horn	5	83
Welder / Torch	40	74

Source: FTA 2006.

Notes: Acoustical Use Factor is the percentage of time the equipment is assumed to be operating versus idle over the work day.

The Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at the nearest noise-sensitive land uses 350 feet from the Project site. The RCNM includes representative sound levels for the most common types of construction equipment. Input variables for the RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of time the equipment is in operation versus idle, over the workday), and the distances between the construction activity and the noise-sensitive receivers. No topographical or structural shielding was assumed in the construction noise modeling. This is a worst-case scenario, as intervening vegetation and buildings would likely be located between the construction activity and closest

receptors, thereby reducing the noise level at the receivers. The RCNM has default duty-cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns, and were used for this noise analysis. Table II provides a summary of the assumed construction equipment used for the different phases of construction.

TABLE II
CONSTRUCTION PHASE, DURATION, AND EQUIPMENT ESTIMATES

Construction Phase	Equipment Type	Quantity
Demolition	Concrete/Industrial Saws	1
Demolition	Excavators	3
Demolition	Rubber Tired Dozers	2
Site Preparation	Rubber Tired Dozers	3
Site Preparation	Tractors/Loaders/Backhoes	4
Grading	Excavators	1
Grading	Graders	1
Grading	Rubber Tired Dozers	1
Grading	Tractors/Loaders/Backhoes	3
Building Construction	Cranes	1
Building Construction	Forklifts	3
Building Construction	Generator Sets	1
Building Construction	Tractors/Loaders/Backhoes	3
Building Construction	Welders	1
Paving	Cement and Mortar Mixers	2
Paving	Pavers	1
Paving	Paving Equipment	2
Paving	Rollers	2
Paving	Tractors/Loaders/Backhoes	1
Architectural Coating	Air Compressors	1

Using the FHWA RCNM construction noise model and construction information (types and number of construction equipment by phase), the estimated noise levels from construction were calculated for a representative range of distances, as presented in Table 12. The nearest receivers to the Project site are the on-campus health center (350 feet southwest), on-campus student housing (560 feet west), off-campus residences (650 feet south), and the University High School (700 feet southeast). This analysis of construction noise at these receivers is intended to represent a worst case when construction operations are occurring near the site boundary.

As presented in Table 12, the highest noise levels (71 dBA) are predicted to occur during the paving construction phase at the on-campus health center. The nearest residential receivers are located at the on-campus student housing, where the highest construction noise levels would be up to 66 dBA L_{eq} during demolition and paving.

TABLE 12
CONSTRUCTION NOISE MODELING SUMMARY RESULTS

Construction Phase	Calculated Noise Level L_{eq} (dBA)			
	<i>On-Campus Health Center 350'</i>	<i>On-Campus Housing 560'</i>	<i>Off-Campus Housing 650'</i>	<i>University High School 700'</i>
Site Preparation	70	65	64	63
Grading	69	65	64	63
Demolition	70	66	64	64
Building Construction	67	63	62	61
Paving	71	66	65	64
Architectural Coating	57	53	51	51

Notes: L_{eq} = equivalent continuous sound level

As Project construction noise would be temporary over the 15- to 18-month construction schedule, would be intermittent depending on construction activities, and would avoid nighttime construction activities, as described in Section 2.4, the Project would not result a substantial temporary or periodic increase in ambient noise levels in the Project vicinity. The construction noise impact would be less than significant.

While mitigation measures are not required to reduce a significant impact, construction BMP NOI-2 through BMP NOI-7 would reduce off-site noise levels resulting from Project construction.

BMP NOI-2: Construction hours, allowable workdays, and the phone number of the job superintendent should be clearly posted at all construction entrances to allow surrounding individuals to contact the job superintendent if necessary. In the event the University receives a complaint, appropriate corrective actions should be implemented and a report of the action provided to the reporting party.

BMP NOI-3: The Project contractor should, to the extent feasible, schedule construction activities to avoid final exams and/or other particularly sensitive learning times.

BMP NOI-4: All construction equipment, fixed or mobile, should be equipped with properly operating and maintained mufflers.

BMP NOI-5: Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and residences, use of electric air compressors and similar power tools, rather than diesel equipment, should be used where feasible.

BMP NOI-6: During construction, stationary construction equipment should be placed such that emitted noise is directed away from or shielded from sensitive receptors, including student residences.

BMP NOI-7: During construction, stockpiling and vehicle staging areas should be located as far as practical from noise sensitive receptors, including student residences.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels? (Less than Significant)

Once operational, the Project would not have the potential to generate excessive groundborne vibration. Construction activities, including demolition of existing structures, grading, excavation, site preparation, utility trenching, and new building framing and finishing, may generate perceptible vibration during the use of heavy equipment or impact tools. Vibration during construction would be a temporary phenomenon. Groundborne vibration information related to construction activities has been collected by Caltrans (2013). Information from Caltrans indicates that transient vibrations (such as construction activity) with a peak particle velocity (PPV) of approximately 0.035 inches per second may be characterized as barely perceptible, and vibration levels of 0.24 inches per second may be characterized as distinctly perceptible. The threshold of 0.24 inches per second (distinctly perceptible) is used for this Project as the significance threshold. The heavier pieces of construction equipment, such as bulldozers, would have PPVs of approximately 0.089 inches per second or less at a distance of 25 feet (FTA 2006). Pile driving or blasting, which can cause excessive vibration, would not be used for construction of the Project. Groundborne vibration is typically attenuated over short distances. Sensitive land uses are located approximately 350 feet from the nearest construction area. Vibration levels at the sensitive receptors would be below the threshold of perceptibility of 0.035 inches per second PPV. As the threshold would not be exceeded, short-term construction related vibration impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)

The closest public airport to the Project site is the Fresno Yosemite International Airport, located approximately 2 miles to the southeast. The Project site is not located within any airport noise contours (City of Fresno 2012). Therefore, no impact would occur related to excessive exposure to airport noise.

3.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

Fresno State has an approved enrollment capacity of 25,000 FTES. During the 2017-18 academic year, the campus had a headcount enrollment of 25,168 students and 21,533 FTES. As of Fall 2018, the campus had a headcount enrollment of 24,995 students (FTES data were not yet available) and 2,596 employees (Fresno State 2018d).

DISCUSSION

- a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (No Impact)**

The Project would serve the existing student population and would not require new employees, as all programs are already existing on the campus. Therefore, the Project would have no impact on population growth, either directly or indirectly.

- b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (No Impact)**

The Project site does not contain housing. Therefore, the Project would not displace housing or people, and no related impact would occur.

3.15 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The Fresno Fire Department (FFD) provides fire protection services to the campus. The FFD has 24 fire stations and responds to fire, emergency medical services, urban search and rescue, and hazardous materials incidents within the City of Fresno and on the campus. The department employs approximately 300 uniformed firefighter members (City of Fresno 2018c). The Fresno State campus is served by the Fresno State Police Department (FSPD) for its law enforcement needs. FSPD operates all year, 24 hours a day, and includes 27 sworn officers, 16 community service specialists, 1 parking officer, 7 dispatchers, and 5 administrative support staff members within two operational areas, Patrol Operations and Traffic Operations (Fresno State 2018c).

DISCUSSION

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

Fire and police protection? (No Impact)

The FFD and FSPD currently support the Project site and would continue to provide fire and police protection services to the Project site. The Project would not result in population growth within the area (see Section 3.14). Additionally, the Project would support existing activities and events currently held on the campus and geared toward the campus population and would not result in a change in the frequency or size of these existing events. Given the above, the Project would not result in increased demand for fire or police protection services on the campus. Therefore, the Project

would not result in the need for new or physically altered fire or police protection facilities and no impact would occur.

Schools, parks, and other public facilities? (No Impact)

Because the Project would serve the existing campus population and would not result in the generation of new students or employees, the Project would not result in substantial school, park, or other public services impacts, as the Project site would continue to support existing activities on campus. As the demand for services would not substantially increase, the Project would not result in the need for new or physically altered schools, parks, or other public facilities and no impact would occur.

3.16 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

Fresno State contains several existing on-campus athletic and recreational facilities, which serve its existing population. These include a student recreation center, an aquatics center, a gymnasium complex, tennis courts, a football stadium, and baseball and softball diamonds.

DISCUSSION

- 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? (No Impact)***

and

- 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? (No Impact)***

The Project would be constructed entirely on CSU property and would not include or remove recreational facilities. Given adequate existing and planned recreational facilities on campus and the fact that the Project would not result in population growth within the area (see Section 3.14), the Project would not require the construction or expansion of recreational facilities. Therefore, implementation of the Project would not result in significant use of off-campus parks or recreational facilities, or generate the need for new or expanded recreational facilities. No impacts to parks and recreational facilities would result with construction and operation of the Project.

3.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

Shaw Avenue provides regional access to/from the southern end of the campus, including the Project site, to SR 41 (Yosemite Freeway) to the west, and SR 168 (Sierra Freeway) to the east. Shaw Avenue is an east-west, six-lane divided roadway that is designated as an arterial in the City's Mobility Element. As shown on Figure 2, primary vehicular access to the Project site

would be provided from Keats Avenue, which provides access to Parking Lot 31 adjacent, and to the west, of the Project site. Keats Avenue is an east-west, two-lane, undivided roadway within the Fresno State campus with unsignalized intersections at Barton Avenue and Maple Avenue that provide access to Shaw Avenue.

DISCUSSION

a) *Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? (Less than Significant)*

As the Project would not result in an increase in enrollment capacity or employment growth on campus and would serve the existing campus population, programs, and events, Project operation would not generate new on-road vehicle trips. Therefore, Project operation would not result in impacts to transit, roadway, bicycle, and pedestrian facilities. Additionally, no changes to vehicular, pedestrian, or bicycle circulation external to the Project site are proposed with the Project. However, Project construction would generate temporary traffic to and from the Project site from construction workers and construction-related trucks. As such, the following traffic analysis focuses on the temporary, construction-period traffic generated by the Project and any related effects on roadway facilities.

Project construction would be anticipated to commence in 2020/2021 and last for approximately 15 to 18 months. Construction hours would be from 8:00 a.m. to 8:00 p.m., Monday through Friday. However, to be conservative and account for the winter months with limited daylight, the traffic analysis assumes that construction workers would be leaving the site during the PM peak period (i.e., 4:00 to 6:00 p.m.).

Project construction would consist of the following phases: Demolition, Site Preparation, Grading, Paving, and Architectural Coating. Based on construction vehicle data calculated from CalEEMod, the highest volume of construction traffic would be generated during the Building Construction phase, which would occur from April 2020 to April 2021. Per CalEEMod, the Building Construction phase would generate temporary traffic from 34 construction workers and 13 vendor trucks per day. Table 13 presents the temporary trip generation estimates of the peak construction phase.

As shown in Table 13, the peak construction phase (Building Construction) of the Project would generate approximately 94 daily trips, with 36 trips each in the AM and PM peak hours. As these trips would be generated by both cars and trucks, a passenger-car equivalence (PCE) factor was applied to truck trips to account for the greater impact from truck modes of transport on traffic variables compared to a single car. With the application of the PCE factor for trucks (i.e., 2.0 PCE for vendor trucks), the Project would generate a total of 120 PCE daily trips, with 38 PCE trips each in the AM and PM peak hours, during the peak construction phase.

TABLE 13
PEAK CONSTRUCTION PHASE TRIP GENERATION

Vehicle Type	Daily Quantity	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation								
Workers	34 workers	68	34	0	34	0	34	34
Vendor Trucks	13 trucks	26	1	1	2	1	1	2
Total		94	35	1	36	1	35	36
Trip Generation w/PCE								
Workers (1.0 PCE) ¹	34 workers	68	34	0	34	0	34	34
Vendor Trucks (2.0 PCE) ²	13 trucks	52	2	2	4	2	2	4
Total (w/PCE)		120	36	2	38	2	36	38

PCE – Passenger Car Equivalent

Notes:

¹ PCE factor of 1.0 was utilized for worker passenger cars

² PCE factor of 2.0 was utilized for vendor trucks

As shown on Figure 7, all construction-related traffic would access the site from Shaw Avenue, via the signalized intersection of Maple Avenue/Shaw Avenue, then via the unsignalized intersection of Maple Avenue/Keats Avenue. The west leg of Maple Avenue/Keats Avenue would be temporarily closed during Project construction (approximately 800 feet of Keats Avenue would be closed between Parking Lot 31 and Maple Avenue for construction activities and access). Therefore, all construction traffic would travel to/from Shaw Avenue and access the Project site via the signalized intersection of Maple Avenue/Shaw Avenue. As described above, during the AM and PM peak hours, the peak construction phase would add 36 (38 PCE) AM peak hour trips, and 36 (38 PCE) PM peak hour trips to this intersection. Those trips would then be split and distributed to the east, towards SR 168, and to the west, towards SR 41.

The signalized intersection of Maple Avenue/Shaw Avenue contains two separate southbound lanes which are comprised of a shared left through lane and a dedicated right turn lane, both with up to 450 feet (or up to 20 vehicles per lane) of vehicular storage. The eastbound left turn lane on Shaw Avenue has 400 feet of storage (for approximately 18 vehicles) with protected left-turn phasing; while, the westbound right lane on Shaw Avenue has 150 feet of storage (for approximately 7 vehicles). Given the existing vehicle capacity of the Maple Avenue/Shaw Avenue intersection, the addition of the Project's construction traffic volumes to this intersection during the AM and PM peak hours would not significantly impact intersection operations at Maple Avenue/Shaw Avenue, nor at any other surrounding intersections and roadway segments.

A detailed transportation impact assessment is not warranted for the Project, as this Initial Study does not identify potentially significant transportation impacts, per the CSU Transportation Impact Study Manual (Fehr & Peers 2012). Additionally, the Project would not result in the addition of more than 100 peak-hour trips to the roadway network, which is one of the thresholds for detailed traffic study per the *City of Fresno*

Traffic Impact Study Report Guidelines (City of Fresno Department of Public Works 2006). Project-related traffic would be comprised of temporary vehicle and truck trips, which would cease upon completion of Project construction. Given the above, the Project's temporary construction traffic impacts related to conflicts with an applicable program, plan, ordinance, or policy addressing the circulation system would be less than significant.

b) *Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? (No Impact)*

CEQA Guidelines Section 15064.3(b) establishes vehicle miles traveled (VMT) as the criterion for evaluating a project's transportation impacts. As the Project would not result in an increase in enrollment or employment on the campus, nor would it result in an increase in the frequency of existing events currently held on the campus, no increase in VMT would occur with Project operation. Therefore, the Project would have no impact regarding conflicts with CEQA Guidelines Section 15064.3(b).

c) *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Less than Significant)*

A new loading dock would be constructed as part of the new Student Union building to allow for delivery vehicle access to the building. Vehicles would access the new loading dock via a new or existing vehicle access point from the existing parking lot to the west (Parking Lot 31) of the Project site. Parking Lot 31 would serve the Project. Parking Lot 31 is currently underutilized and would have adequate capacity to serve the Project; no new parking stalls would be added. Therefore, no hazardous design features would result from implementation of the Project.

Construction would be performed by qualified contractors. Plans, specifications, and construction contracts would incorporate stipulations regarding standard CSU requirements and acceptable construction practices, which includes safety measures, vehicle operation and maintenance, traffic circulation, and public safety. Therefore, with the implementation of CSU construction practices throughout the Project's construction phase, impacts due to increased hazards (temporary roadway closures) or incompatible uses (temporary construction activities) would be less than significant.

d) *Would the project result in inadequate emergency access? (Less than Significant)*

All areas of the Project site would be accessible to emergency responders, and the Project would be designed and constructed in accordance with all applicable provisions of the fire code.

Traffic circulation may be temporarily affected during construction as a result of increased traffic flow from construction vehicles and heavy equipment. Additionally, portions of Keats Avenue would be closed during construction. A construction site access plan (see Figure 7) was developed for demolition activities and construction of

the Project, indicating limits of construction disturbance (including the Keats Avenue street closure), construction staging and laydown areas, and vehicle access routes. Per the required CSU construction practices, temporary signage would be posted and detour routes would be identified to facilitate movement of traffic flow, including emergency vehicles, during the 15 to 18 month construction period. As construction activities would be temporary in nature and access to the surrounding buildings would remain open and accessible during construction, impacts associated with emergency access would be less than significant.

3.18 TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SETTING

Assembly Bill 52 requires that California lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe. No Native American tribe has contacted Fresno State or the Trustees of the CSU and requested consultation related to Fresno State properties or projects.

Assembly Bill 52 also specifies that a project with an effect that may cause a substantial adverse change in the significant of a tribal cultural resource (TCR) is a project that may have a significant effect on the environment. Defined in Section 21074(a) of the Public Resources Code, a TCR is a site feature, place, cultural landscape, sacred place, or object, which is of cultural value to a California Native American tribe and is either listed in or eligible for listing in

the California Register of Historical Resources or a local historic register, or the lead agency, at its discretion, chooses to treat the resource as a TCR.

DISCUSSION

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? (No Impact)***

As described in Section 3.5, the existing structures on the Project site are neither listed in nor eligible for the NRHP, CRHR, CHL, or local register of historic resources. Furthermore, the site is within the developed Fresno State campus core. Therefore, the Project would not cause a substantial adverse change in the significance of a TCR listed in or eligible for listing in the NRHP, CRHR, CHL, or a local register and no related impact would occur.

- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (Less than Significant with Mitigation Incorporated)***

As described above in Section 3.5, a CHRIS records search and NAHC Sacred Lands File search were conducted for the Project site (see Appendix C). There are no known Native American resources within or adjacent to the Project area. Consultation with tribes culturally affiliated to the Project area, detailed in Appendix C, did not reveal any concerns with respect to tribal cultural resources. The Project site has previously been disturbed. Given the context of the Project area within the developed Fresno State campus, there is a low potential for encountering unrecorded TCRs. In the event that a TCR is discovered on the Project site, Mitigation Measures CUL-1 and CUL-3 described in Section 3.5 would ensure that potential impacts would be less than significant.

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

Fresno State has its own water supply and distribution system. Fresno State presently, and historically, depends on groundwater as the source of its domestic water supply. The campus groundwater system consists of six domestic groundwater wells located primarily along the west and north sides of the main academic core of the campus, one elevated storage tank and approximately seven miles of water mains that provide service throughout the campus, including near the Project site. The total pumping capacity of the existing domestic water wells on campus is 2,782 gallons per minute, or 4 mgd. The campus currently pumps a yearly average of approximately 0.8 mgd to meet the various water needs of the campus (Land Use Associates 2006). Total pumping capacity was increased in 2015 with an upgrade to Well #5 (Johnson pers. comm. 2017). Therefore, excess pumping capacity exists in the Fresno State groundwater system.

Wastewater is directed to the City of Fresno's wastewater collection and treatment system, which conveys wastewater to the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF), located southwest of the City. The Fresno/Clovis RWRF has a permitted capacity of

80 mgd as an annual monthly average flow, and 88 mgd as a maximum monthly average flow (City of Fresno 2018b); as of December 2018, the facility treats an average of approximately 57 mgd (Harman pers. comm. 2018).

Fresno State's Waste Disposal and Recycling Contract is currently with Mid Valley Disposal. Recycle materials are hauled to the Elm Avenue Materials Recovery Facilities (MRF) and Transfer Station for further processing. Refuse (trash) materials are hauled to the Cedar Avenue Recycling and Transfer Station (CARTS) and waste is then directed to the American Avenue Landfill is owned and operated by Fresno County. It is estimated that the landfill will be able to continue operation through August 2031 when it is expected to reach capacity and will have to be closed (CalRecycle 2018a, City of Fresno 2018a).

DISCUSSION

- a) ***Would the project require or result in the relocation or construction of new or expanded water, or wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (Less than Significant with Mitigation Incorporated)***

As described in Section 2.2.2, the Central Plant on the campus has insufficient capacity to serve the Project, and the Project would be served by independent and dedicated HVAC systems, which are analyzed in this initial study as part of the Project. Likewise, the Project would be connected to existing electrical, natural gas, and telecommunications systems located near the Project site and these connections are also analyzed in this initial study as part of the Project. All potentially significant impacts associated with construction of the Project, including these improvements and connections, would be reduced to a less-than-significant level with mitigation measures identified in this initial study.

The Project would be served by the existing water and wastewater infrastructure near the Project site with new service connections provided for the new building. The Project's estimated water use would be 2 million gallons per year, which would result in a net increase of 1.8 million gallons per year on the Project site considering that the existing Keats building would be demolished. Given that the domestic water wells on campus have a total pumping capacity of 4 mgd and the campus uses an average of 0.8 mgd, the campus has ample existing water supply capacity to serve the Project. The Project's estimated wastewater generation would be 1.8 million gallons per year, which would represent a net increase of 1.6 million gallons per year on the Project site. As the Fresno/Clovis RWRF has a treatment capacity of 88 mgd and treats an average of 57 mgd, the facility has sufficient capacity to serve the Project. Therefore, as the Project would not require the construction of new or expansion of existing water supply or wastewater treatment infrastructure, the impact would be less than significant.

The Project would result in an increase in impervious surface area on the Project site and an associated increase in stormwater runoff, which would have the potential to exceed the capacity of existing stormwater facilities. However, with implementation of Mitigation Measure HYD-I described in Section 3.10, the Project's contribution of stormwater runoff to the stormwater drainage system would be reduced to a less-than-significant level.

b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? (Less than Significant)*

As described above in Section 3.19(a), the campus has sufficient excess capacity in its groundwater pumping system to accommodate the Project and likely other campus projects that may be contemplated in the near-term future. As Fresno State relies on groundwater, the use of groundwater by other entities using the Kings Subbasin could potentially affect the long-term reliability of groundwater sources used by Fresno State. However, as noted in Section 3.10, groundwater level declines in the Kings Subbasin have decreased substantially since 2004, as water conservation, groundwater recharge, and use of reclaimed water from surface water treatment facilities has increased substantially. The 2015 UWMP indicates that the City of Fresno would have a reliable water supply through 2040 during normal year supply and demand scenarios; single dry year supply and demand scenarios; and multiple dry year supply and demand scenarios. This provides an indication of the reliability of Fresno State's groundwater resources. In addition, in accordance with the SGMA, the City and other regional stakeholders have formed a GSA to ensure the continued beneficial use of groundwater supplies. Therefore, as it is anticipated that the Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during various conditions, the impact would be less than significant.

c) *Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (Less than Significant)*

As stated above in Section 3.19(a), although the Project would generate more wastewater than under existing conditions, the Fresno/Clovis RWRf has available capacity and services to accommodate the Project. Therefore, the Project would have a less-than-significant impact related to wastewater treatment capacity.

d) Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Less than Significant)

Based on estimated solid waste generation rates provided by CalRecycle (CalRecycle 2018b), the Project could generate an estimated 560 pounds per day (102 tons per year) of solid waste.⁶ Based on these same rates, the estimated existing solid waste generation on the Project site is approximately 52 pounds per day (9.5 tons per year). This would result in a net increase in solid waste generation over existing conditions of approximately 508 pounds per day (93 tons per year).

The American Avenue Landfill has a maximum permitted throughput of 2,200 tons per day. As of 2005 (the latest available data on remaining landfill capacity), the American Avenue Landfill had a remaining capacity of over 29.3 million cubic yards, which was nearly 90 percent of its maximum permitted capacity of 32.7 million cubic yards (CalRecycle 2018a). While the Project would result in an increase in solid waste generation over existing conditions, the American Avenue Landfill is expected to have capacity until 2031. The amount of solid waste generated by the Project would constitute a negligible portion of the remaining available landfill capacity. Therefore, the Project would have a less-than-significant impact on landfill capacity.

d) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (No Impact)

The Project would comply with all applicable regulations related to solid waste and no impact would occur.

3.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁶ Assumes 0.007 pounds per square foot per day for public/institutional generation sources.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The California Department of Forestry and Fire Protection (CAL FIRE) maps areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors, pursuant to Public Resources Code 4201-4204 and Government Code 51175-51189. These areas are referred to as Fire Hazard Severity Zones (FHSZs) and are identified for areas where the state has financial responsibility for wildland fire protection (i.e., state responsibility areas, or SRAs), and areas where local governments have financial responsibility for wildland fire protection (i.e., local responsibility areas, or LRAs). There are three FHSZ mapped for SRAs (moderate, high, and very high), while only lands zoned as very high are identified in LRAs (CAL FIRE 2007). The Project site is located within a LRA and is not located near a SRA or a very high FHSZ (CAL FIRE 2012).

DISCUSSION

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan? (No Impact)

and

b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (No Impact)

and

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? (No Impact)

and

- d) **Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (No Impact)**

As the Project site is not located in or near SRAs or lands classified as very high FHSZs, no impact would occur related to wildfire hazards, including emergency response/evacuation, pollutants and uncontrolled wildfire spread, associated infrastructure, or post-fire effects.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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 the past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

- a) ***Would the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? (Less than Significant with Mitigation Incorporated)***

The Project would not substantially reduce habitat of fish or wildlife species or other special-status species, as the Fresno State campus constitutes a built environment. There are no sensitive habitats or wetlands located on the Project site, and no special-status species are known to or have the potential to occupy the site. However, other protected birds could potentially nest in trees on the Project site and could be disturbed during construction activities or tree removal; implementation of Mitigation Measure BIO-1, which requires preconstruction nesting bird surveys and other measures if demolition or construction occurs during the typical avian nesting season (see Section 3.4), would ensure that impacts to nesting protected birds would be reduced to a less-than-significant level.

The Project would not result in impacts to built historic resources, as none are located on or near the Project site. Although it is not anticipated that new archaeological resources or TCRs would be encountered, Mitigation Measures CUL-1 and CUL-2 would be implemented with the Project to ensure that impacts related to inadvertent discovery of cultural resources would be reduced to a less-than-significant level.

- b) ***Would the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? (Less than Significant)***

The Project would not result in cumulatively considerable impacts. As indicated in Section 3.3, the Project would not result in cumulatively considerable air quality impact as annual construction emissions associated with the Project would not exceed the SJVAPCD significance thresholds, the Project would not result in an increase in long-term operational emissions over existing conditions, and the Project would not conflict with the SJVAPCD Ozone Attainment Plans, or the PM₁₀ or PM_{2.5} Attainment Plan, which address the cumulative emissions in the SJVAB. As indicated in Section 0, the Project would not result in significant impacts related to GHG emissions and, therefore, the Project would not result in a cumulatively considerable contribution to global climate change. Additionally, the Project would not generate an increase in vehicle trips or vehicle miles traveled and, therefore, would not result in a cumulatively considerable contribution to congestion on area roadways. Given the foregoing, the Project’s cumulative impacts would be less than significant.

c) *Would the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (Less than Significant with Mitigation Incorporated)*

Implementation of the Project would not result in any impacts that are significant and unavoidable or cumulatively considerable, including those related to hazardous materials, emergency response, proximity to airport activities, or transportation hazards. The implementation of the mitigation measures identified herein would reduce all potentially significant impacts to a less-than-significant level. Therefore, the Project would not result in impacts that would cause substantial adverse effects on human beings, either directly or indirectly.

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5 FINDINGS

The Board of Trustees of the California State University (Board of Trustees) finds that the proposed California State University, Fresno (Fresno State) New Student Union Project (Project) would not have a significant adverse effect on the environment, based on the Initial Study Environmental Checklist and the Evaluation of Environmental Impacts (see Chapter 3). Some potentially significant effects have been identified, and mitigation measures have been incorporated into the Project to ensure that these effects remain at less-than-significant levels. A mitigated negative declaration is therefore proposed to satisfy the requirements of the California Environmental Quality Act (CEQA). The conclusion that there would be not significant effects is supported by the following findings.

- 1) **Aesthetics.** Project implementation would not significantly affect aesthetic resources (see Section 3.1, Aesthetics).
- 2) **Agriculture and Forestry Resources.** Project implementation would not significantly affect agricultural resources (see Section 3.2, Agriculture and Forestry Resources).
- 3) **Air Quality.** Project implementation would not significantly affect air quality (see Section 3.3, Air Quality).
- 4) **Biological Resources.** A mitigation measure has been incorporated into the Project to reduce potential impacts to biological resources to below a level of significance (see Section 3.4, Biological Resources).
- 5) **Cultural Resources.** Mitigation measures have been incorporated into the Project to reduce potential impacts to cultural resources to below a level of significance (see Section 3.5, Cultural Resources).
- 6) **Energy.** Project implementation would not significantly affect energy consumption (see Section 3.6, Energy).
- 7) **Geology and Soils.** Project implementation would not significantly affect geology and soils (see Section 3.7, Geology and Soils).
- 8) **Greenhouse Gas Emissions.** Project implementation would not significantly affect global climate change due to GHG emissions (see Section 3.8, Greenhouse Gas Emissions).
- 9) **Hazards and Hazardous Materials.** Project implementation would not result in significant effects related to hazards and hazardous materials (see Section 3.9, Hazards and Hazardous Materials).
- 10) **Hydrology and Water Quality.** Project implementation would not significantly affect hydrology and water quality (See Section 3.10, Hydrology and Water Quality).

- 11) **Land Use and Planning.** The Project would be compatible with existing and planned land uses in the Project vicinity and, with the approval of the major master plan revision as part of the Project, would not conflict with the applicable land use plan for the campus (see Section 3.11, Land Use and Planning).
- 12) **Mineral Resources.** Project implementation would not affect mineral resources (see Section 3.12, Mineral Resources).
- 13) **Noise.** Project implementation would not significantly increase ambient noise (see Section 3.13, Noise).
- 14) **Population and Housing.** Project implementation would not significantly increase population or displace people or housing (see Section 3.14, Population and Housing).
- 15) **Public Services.** The Project would not affect public services (see Section 3.15, Public Services).
- 16) **Recreation.** The Project would not result in an increase in the use of parks or recreational facilities and would not require construction or expansion of parks or recreation facilities (see Section 3.16, Recreation).
- 17) **Transportation and Traffic.** Project implementation would not significantly affect area circulation or roadways (see Section 3.17, Transportation and Traffic).
- 18) **Tribal Cultural Resources.** The Project would not affect TCRs (see Section 3.18, Tribal Cultural Resources).
- 19) **Utilities and Service Systems.** Project implementation would not significantly affect utilities and service systems (see Section 3.19, Utilities and Service Systems).
- 20) **Wildfire.** Project implementation would not affect wildland fire risk or hazards (see Section 3.20, Wildfire).
- 21) **Mandatory Findings of Significance.** The Project would have limited potential to degrade the quality of the environment and would not result in the number of a threatened, endangered, rare or otherwise sensitive plant or wildlife species dropping below population-sustaining levels, nor would the Project eliminate an important cultural resource. Project impacts would not be cumulatively considerable. Finally, no feature of the Project would result in substantial adverse effects on human beings, either directly or indirectly. As indicated in items 4 and 5 above, mitigation measures have been incorporated into the Project to reduce potential impacts to below a level of significance (see Section 3.21, Mandatory Findings of Significance).

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