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TEACHING AND LEARNING COMPLEX
CLASSROOM BUILDING

Initial Study Checklist - Documentation that the Project is within the scope of the UC Davis 2018 Long Range Development Plan EIR

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October 2018

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TABLE OF CONTENTS

Section		Page
ACRONYMS AND ABBREVIATIONS		III
1	PROJECT INFORMATION	1-1
2	INTRODUCTION	2-1
	2.1 Purpose	2-1
	2.2 Organization of the Initial Study Checklist	2-1
3	PROJECT DESCRIPTION	3-1
	3.1 Regional Location	3-1
	3.2 Project Site	3-1
	3.3 Proposed Project	3-5
	3.4 Project Elements	3-5
4	COVERAGE UNDER THE 2018 LRDP AND 2018 LRDP EIR	4-1
	4.1 2018 LRDP Objectives	4-1
	4.2 2018 LRDP Campus Population	4-2
	4.3 2018 LRDP Land Use Designation	4-2
	4.4 2018 LRDP Academic Building Space	4-3
	4.5 Environmental Review of Project Activities	4-3
5	APPLICABLE 2018 LRDP EIR MITIGATION MEASURES	5-1
6	REFERENCES	6-1

Exhibits

Exhibit 3-1	Regional Location	3-2
Exhibit 3-2	Project Location	3-3
Exhibit 3-3	Existing Site Conditions	3-4
Exhibit 3-4	Proposed Teaching and Learning Complex Site Plan	3-7
Exhibit 3-5	North and South Views	3-8
Exhibit 3-6	Rendering of Building Architecture	3-9
Exhibit 3-7	Landscape Plan	3-10
Exhibit 3-8	Site Circulation	3-11
Exhibit 3-9	Offsite Bike and Pedestrian Infrastruction Improvements	3-13
Exhibit 3-10	Preservation of Existing Trees	3-16
Exhibit 3-11	Estimated Stormwater Treatment Footprint	3-18

Tables

Table 4-1	UC Davis 2018 LRDP Projections and Teaching and Learning Complex Employment Increase	4-2

ACRONYMS AND ABBREVIATIONS

2018 LRDP	2018 Long Range Development Plan
AB	Assembly Bill
ASF	Assignable square feet
BMP	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CPEC	California Post-Secondary Education Commission
DJUSD	Davis Joint Unified School District
EH&S	Office of Environmental Health and Safety
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
GSF	gross square feet
HCP	Habitat Conservation Plan
HVAC	heating, ventilation, and air condition
I-80	Interstate Highway 80
IS	Initial Study
LEED	Leadership in Energy and Environmental Design
LOS	Level of service
MND	Mitigated ND
MS4	Municipal Separate Storm Sewer System
MSHCP	Multi-Species Habitat Conservation Plan
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
ND	Negative Declaration
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
PCBs	polychlorinated biphenyls
PM_{10}	particulate matter with an aerodynamic diameter of 10 microns or smaller
$PM_{2.5}$	particulate matter with an aerodynamic diameter of 2.5 microns or smaller
ROG	reactive organic gases
SB	Senate Bill
SO_2	sulfur dioxide
sf	square feet
SR	State Route
SVAB	Sacramento Valley Air Basin
SWPPP	stormwater pollution prevention plan
SWPPPs	Stormwater Pollution Prevention Plans

TACs	toxic air contaminants
the Program EIR	2018 LRDP EIR
UC	University of California
VMT	vehicle miles traveled
WAPA	Western Area Power Association
WDRs	Waste Discharge Requirements
YSAQMD	Yolo-Solano Air Quality Management District

1 PROJECT INFORMATION

Project title:	Teaching and Learning Complex Classroom Building
Project location:	University of California, Davis, Yolo County
Lead agency's name and address:	The Regents of the University of California 1111 Franklin Street Oakland, CA 94607
Contact person:	Matt Dulcich, Director of Environmental Planning UC Davis Campus Planning and Environmental Stewardship 530.752.9597
Project sponsor's name and address:	University of California, Davis One Shields Avenue 436 Mrak Hall Davis, CA 95616-8678
Location of administrative record:	See Project Sponsor
Previously Certified 2018 LRDP Programmatic EIR:	This checklist documents that the Project is within the scope of the Programmatic Environmental Impact Report (EIR) for the University of California (UC) Davis 2018 Long Range Development Plan (2018 LRDP) (State Clearinghouse No. 2017012008). The 2018 LRDP is a comprehensive land use plan that guides physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives. The 2018 LRDP and its EIR are available for review at the following locations: ◢ UC Davis Campus Planning and Environmental Stewardship in 436 Mrak Hall on the UC Davis campus ◢ Reserves at Shields Library on the UC Davis campus ◢ Yolo County Public Library at 315 East 14th Street in Davis ◢ Online at: http://campustomorrow.ucdavis.edu/

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2 INTRODUCTION

2.1 PURPOSE

The 2018 LRDP is a comprehensive land use plan that guides physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives (UC Davis 2018b). The UC Davis 2018 LRDP EIR (State Clearinghouse No. 2017012008) (UC Davis 2018a) was prepared in accordance with Section 15168 of the CEQA Guidelines and Public Resources Code Section 21094 and analyzed the environmental impacts of the 2018 LRDP. The 2018 LRDP EIR (Volume 1) analyzes full implementation of uses and physical development proposed under the 2018 LRDP (UC Davis 2018b), and identifies measures to mitigate the significant adverse program-level and cumulative impacts associated with that growth.

The Teaching and Learning Complex Classroom Building (the "Project"), is an element of the growth that is consistent with the land uses identified in the 2018 LRDP and the Project is within the scope of activities covered in the environmental impact evaluation in the 2018 LRDP EIR. This Initial Study Checklist (IS Checklist) is used to document that the site-specific development proposed is covered by the 2018 LRDP EIR pursuant to Section 15168(c) of the State CEQA Guidelines, which states, "subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." Pursuant to Section 15168(c)(4), an agency should use "…a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR."

The organization of project-specific environmental analysis in this IS Checklist follows the same overall format of the 2018 LRDP EIR (Volume 1); however, it avoids repetition of general background and setting information, the regulatory context, overall growth-related information, as well as issues that were evaluated fully in the 2018 LRDP EIR that require no further analysis, including cumulative impacts and alternatives to the 2018 LRDP. Instead, this project-level IS checklist evaluates the more detailed project-level information specific to the Teaching and Learning Complex Classroom Building to document that the Project activities are within the activities evaluated in the program EIR.

2.2 ORGANIZATION OF THE INITIAL STUDY CHECKLIST

This IS Checklist is organized into the following chapters:

Chapter 1 – Project Information: provides summary background information about the Project, including project location, lead agency, and contact information.

Chapter 2 – Introduction: summarizes the scope of the document, relationship to the 2018 LRDP EIR and the document's organization.

Chapter 3 – Project Description: includes a description of the Project, including all elements included in the Project.

Chapter 4 – Coverage under the 2018 LRDP and 2018 LRDP EIR: describes the consistency of the Project with the 2018 LRDP and 2018 LRDP EIR. This chapter contains the environmental checklist

for each resource topic. The impact evaluations focus on whether the Project activities are within the scope of the environmental impact analysis in the 2018 LRDP EIR.

Chapter 5 – Applicable 2018 LRDP EIR Mitigation Measures: lists measures from the 2018 LRDP EIR that are applicable to the Project.

Chapter 6 – References: lists references used in the preparation of this document.

3 PROJECT DESCRIPTION

3.1 REGIONAL LOCATION

The approximately 5,300-acre UC Davis campus is located in Yolo and Solano Counties, approximately 72 miles northeast of San Francisco, 15 miles west of the City of Sacramento, and adjacent to the City of Davis (see Exhibit 3-1). The campus is composed of four geographical areas: the central campus, the south campus, the west campus, and Russell Ranch (Exhibit 3-2). Most classroom-based academic, office, laboratory, and extracurricular activities occur within the central campus. The central campus consists of approximately 900 acres and is bounded approximately by Russell Boulevard to the north, State Route (SR) 113 to the west, Interstate Highway 80 (I-80) and the Union Pacific Railroad tracks to the south, and A Street to the east. The south campus is located south of I-80 and north of the South Fork of Putah Creek. The west campus is bounded by SR 113 to the east, Putah Creek to the south, Russell Boulevard to the north, and extends approximately one-half mile west of County Road 98 (Pedrick Road). The south and west campus units are contiguous with the central campus and are used primarily for field teaching and research and animal support uses. The approximately 1,600-acre Russell Ranch portion of the campus lies to the west, separated from the west campus by approximately one and one-half miles of privately owned agricultural land. Russell Ranch was purchased in 1990 for campus uses including large-scale agricultural and environmental research, study of sustainable agricultural practices, and habitat mitigation. Russell Ranch is bordered roughly by County Road 96 on the east, Putah Creek on the south, Covell Boulevard on the north, and Russell Boulevard and privately owned agricultural land on the west and northwest.

3.2 PROJECT SITE

The Teaching and Learning Complex project site is located in the heart of the UC Davis central campus on the south side of Hutchinson Drive, between Bioletti Way and California Avenue. The Project site is surrounded by Hutchison Drive to the north, beyond which is Haring Hall academic building; to the east is the Silo Union (food service complex) and South Silo Craft Center ("Silo Quad"); to the south of the site is a landscaped area with a section of bike path, beyond which is Bainer Hall; and to the west are the one-story Surge II and Surge III academic buildings - the future "Sciences Quad" (Exhibit 3-3).

The approximately 3.5-acre project site is occupied by Surge IV buildings, Parking Lot 43, and a loading/service area for the Silo. Surge IV is a collection of four single-story modular structures installed in 1972, totaling approximately 31,000 square feet (sf). The four modular structures are connected by a large wooden deck, which is covered by a large metal and plastic shade structure. Surge IV is deteriorating and is an inefficient use of land in the central campus. The 80-space, parking Lot 43 is approximately 2-acre parking lot is accessed from a single driveway on the south side of Hutchison Drive. In addition to core campus parking, the parking lot serves as a service driveway for large and small vehicles that deliver and pickup items from the Silo Union food service building. The parking lot is largely unused because this portion of the central campus is not publicly accessible by car and is also an inefficient use of land in the central campus.

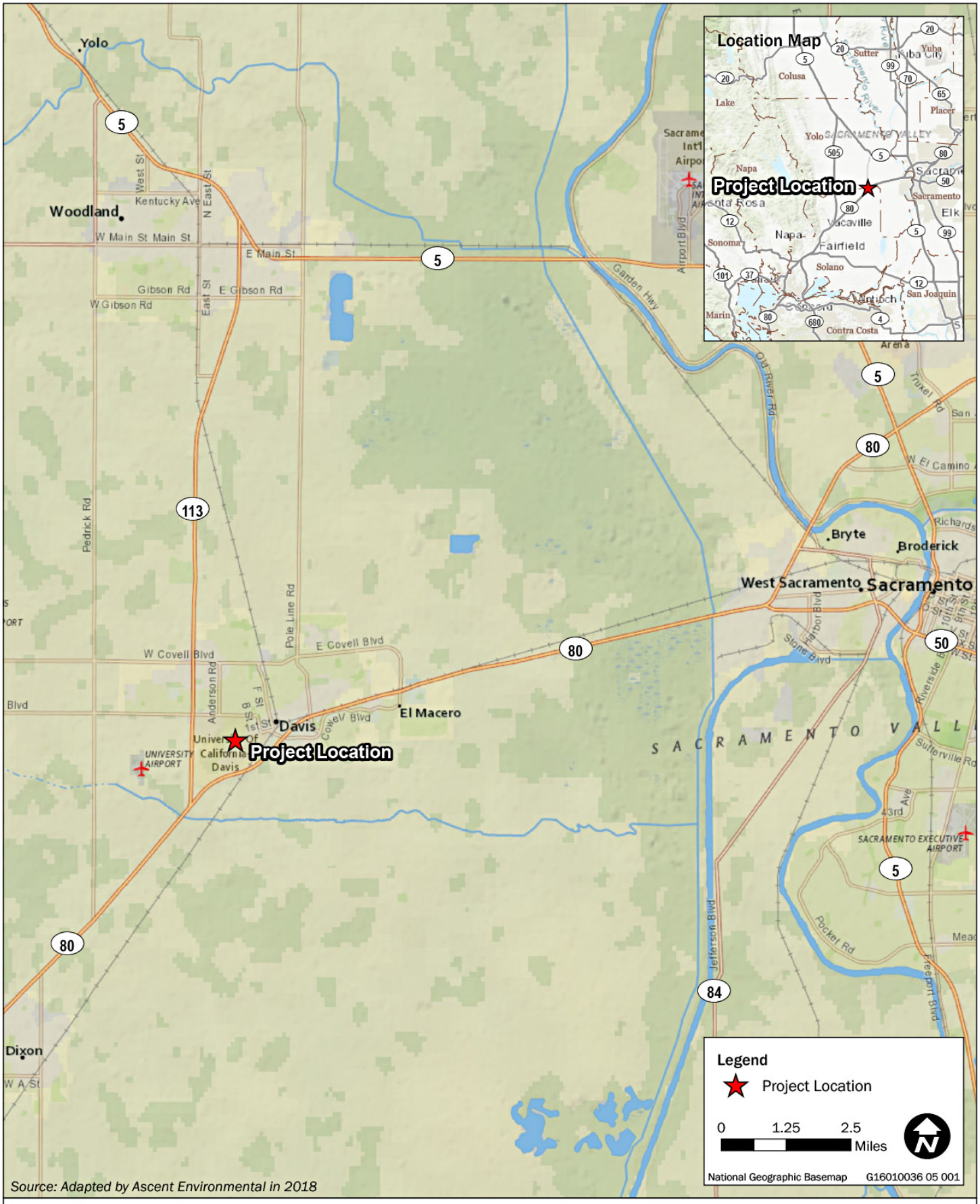

Exhibit 3-1 **Regional Location**

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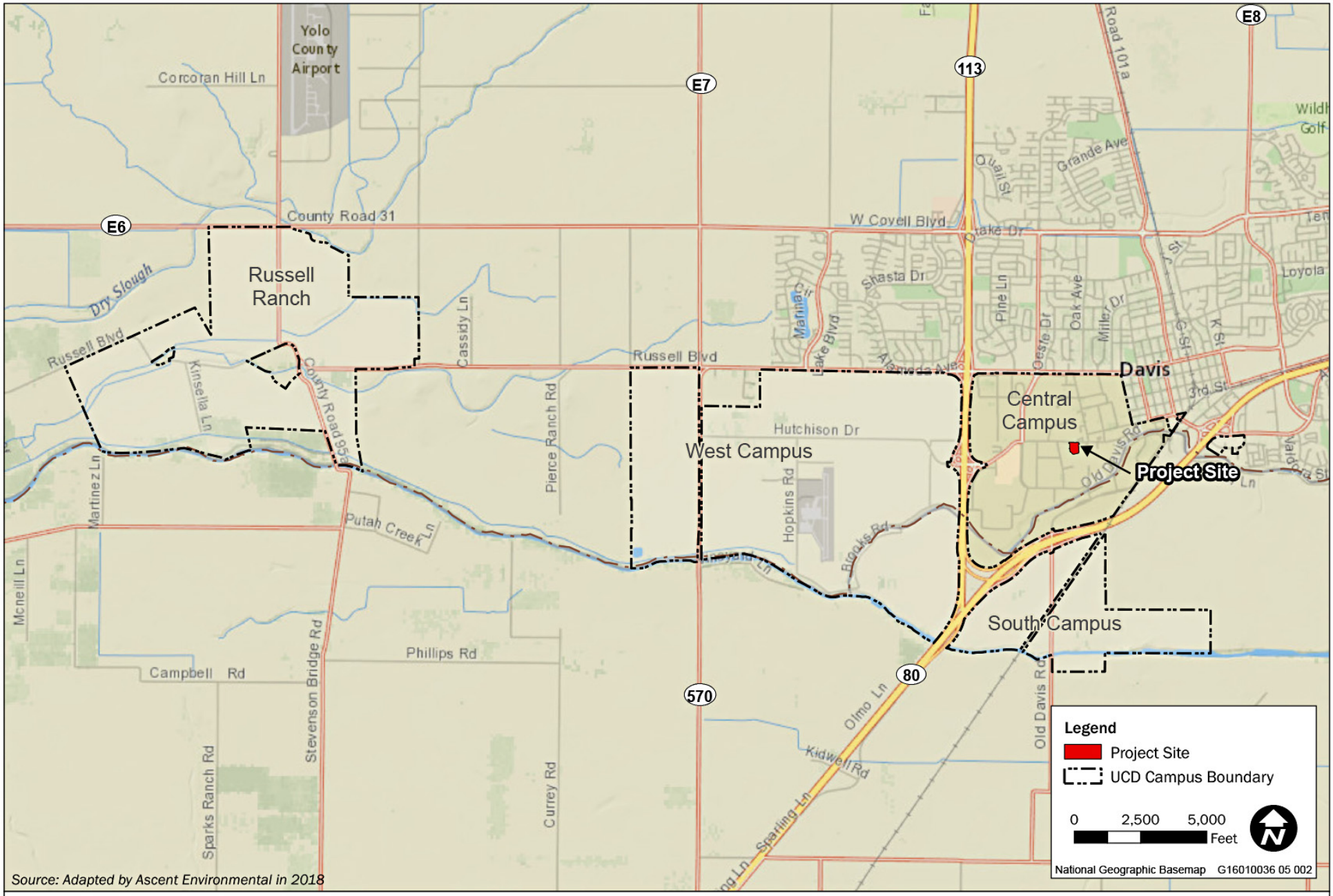

Source: Adapted by Ascent Environmental in 2018

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Exhibit 3-2 **Project Location**

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Exhibit 3-3 **Existing Site Conditions**

3.3 PROPOSED PROJECT

The UC Davis campus is currently experiencing a shortage of general assignment classrooms. Classroom capacity is an important factor for student access to courses that are necessary to support their timely progress toward graduation. Classrooms on campus are at over-capacity per California Post-Secondary Education Commission (CPEC) Standards. In relation to other UC institutions, the ratio of existing classroom seats per enrolled students indicates the need for additional classroom capacity (UC Davis 2018c). Current classrooms are oversubscribed and campus plans to upgrade existing classrooms to meet accessibility requirements will result in a reduction of the number of seats available.

3.4 PROJECT ELEMENTS

3.4.1 Demolition

The staff currently using Surge IV would be moved to other existing offices on campus, and the four modular buildings and deck comprising Surge IV (approximately 31,000 sf) and the approximately 2-acre Non-Visitor Parking Lot 43 would be demolished and removed from the site. Demolition would involve removal of all recyclable materials such as copper pipes and wiring and abatement of hazardous materials containing regulatory levels of lead, asbestos, polychlorinated biphenyls, and universal wastes (e.g., fluorescent light tubes) that contain such materials. After necessary hazardous materials abatement is completed, the pavement, buildings, and foundations would be broken up, removed, and recycled or appropriately disposed. Finally, the site soils would be stabilized for construction.

3.4.2 New Building: Auditorium, Classrooms, Offices, and Gathering Spaces

A new building would be constructed, as shown in Exhibits 3-4, 3-5, and 3-6, that provides approximately 41,500 assignable square feet (ASF) for classroom-related space, approximately 5,600 ASF of study and gathering space, approximately 12,700 ASF for faculty and administrative office space. In addition, there would be building support and circulation/structural space, resulting in a total estimated building design of approximately 100,000 ASF. The building height would range in height from one to four stories, with taller floor-to-floor spaces as needed in the larger classroom footprints.

The first three floors of the building would provide approximately 2,000 instructional seats in various configurations of flexible and traditional classrooms to meet teaching and learning objectives. The Teaching and Learning Complex building would include an auditorium with 425 seats, two extra-large classrooms with approximately 185 seats, two active learning large classrooms with approximately 125 seats, 15 small to medium classrooms ranging in size from 30–70 seats (UC Davis 2018c).

The building design provides for study and gathering spaces in open floor areas. These spaces would include semi-enclosed or open areas with desk-height tables and chairs or soft seating areas for group study, countertops and small desk-height tables and comfortable chairs for individual study, and post-class discussion spaces directly outside of the auditorium and classrooms.

The fourth floor of the building would be utilized for faculty and administrative office space, providing approximately 75 offices in approximately 12,700 ASF of space.

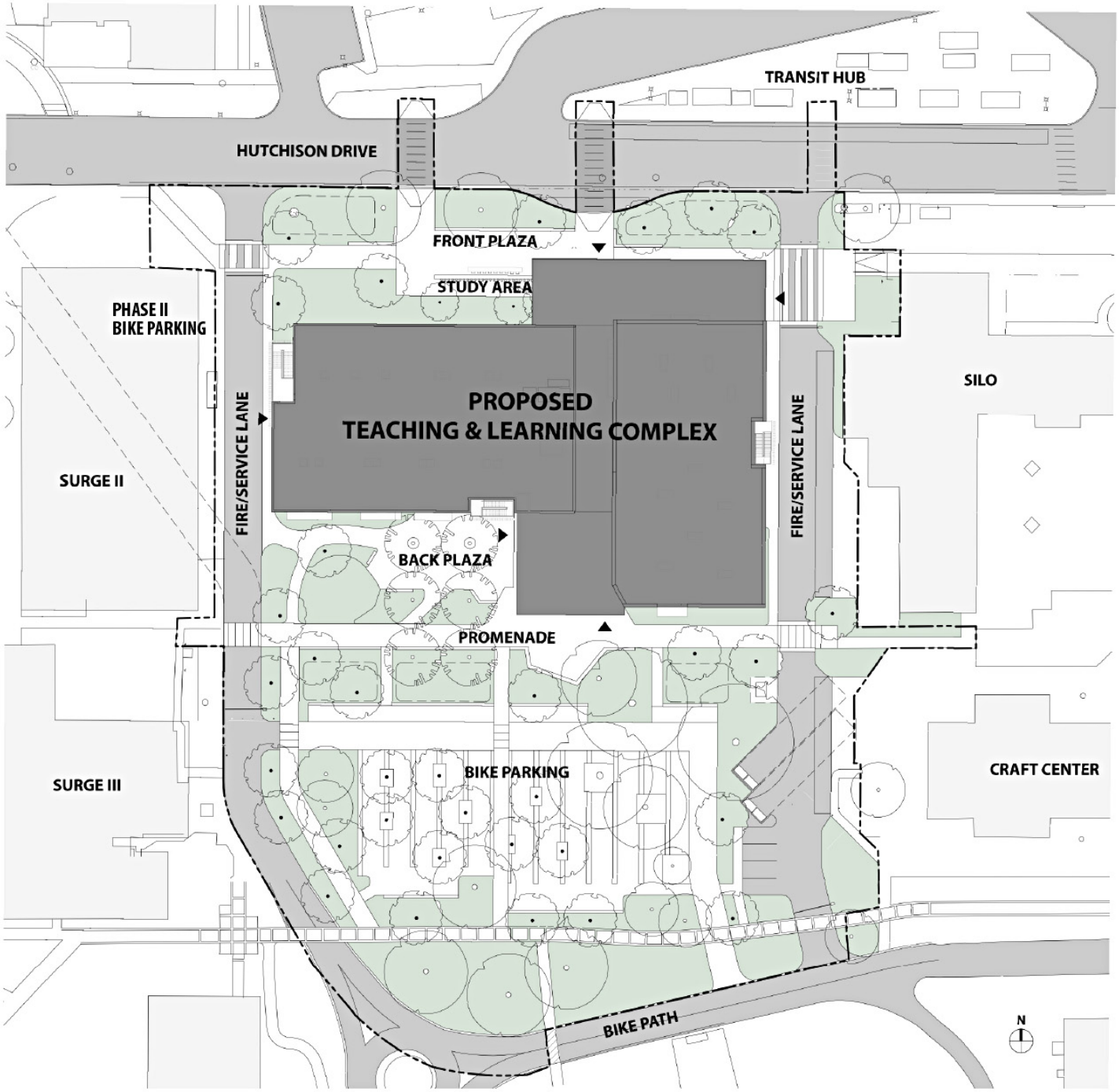
3.4.3 Exterior Space: Outdoor Study and Connectivity

The site plan includes outdoor spaces that are designed to function as a cohesive whole with the interior building spaces. The Project would create a "pedestrian-first" zone mid-block, connecting the "Silo Quad" (to the east) and the future "Sciences Quad" at the current site of the Grove (Surge III) (to the west). Building planning options include variations on a "promenade" and active "plaza" along this route connecting directly to building entries and study and gathering spaces (Exhibit 3-7).

3.4.4 Site Access and Circulation

ONSITE IMPROVEMENTS

Site improvements would be made for circulation, connecting to existing central campus pedestrian and bicycle paths (Exhibit 3-8). There would be clear separation of bike, pedestrian, and bus traffic to reduce conflicts. In addition, a "bike superblock" concept includes a large bike parking corral (with a minimum of 800 bike spaces) on the southern edge of the Project site. The Project would connect to the bike path along the southern boundary of the site, providing a bike driveway around the bicycle parking, and extending the bike path along the western boundary of the site to Hutchison Drive. The Project's pedestrian paths would connect the Silo Quad (on the east) and the future Sciences Quad (Surge III) (on the west), and also north-south through the Project site. In addition, bus service is provided on Hutchison Drive, with a bus stop located directly across from the Project site on the north side of Hutchison Drive.



Source: Adapted by Ascent Environmental in 2018

Exhibit 3-4 Proposed Teaching and Learning Complex Site Plan

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North View

South View

Source: UC Davis 2018

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Exhibit 3-5 **North and South Views**

Source: UC Davis 2018

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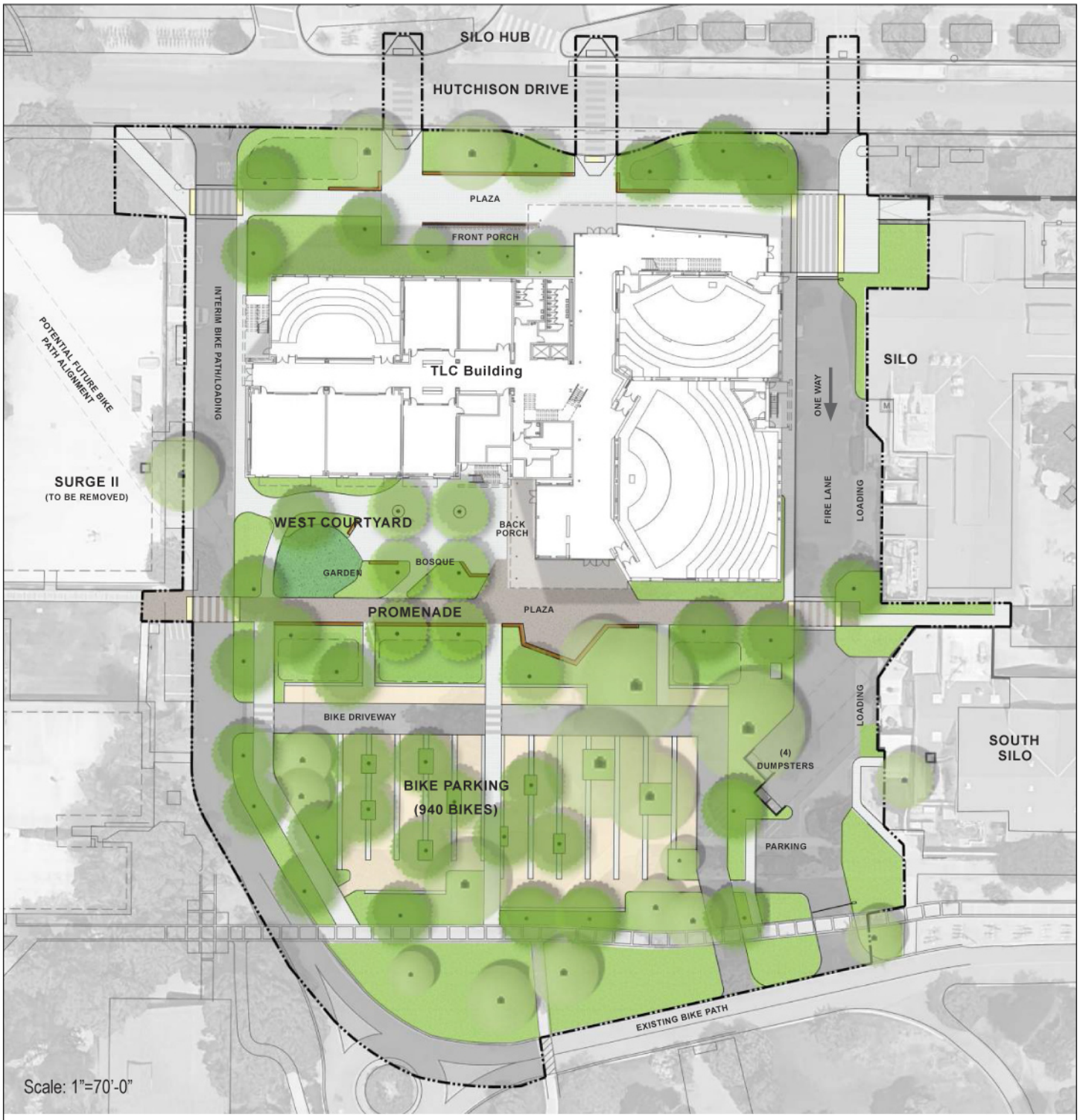
Exhibit 3-6 **Rendering of Building Architecture**



Source: UC Davis 2018

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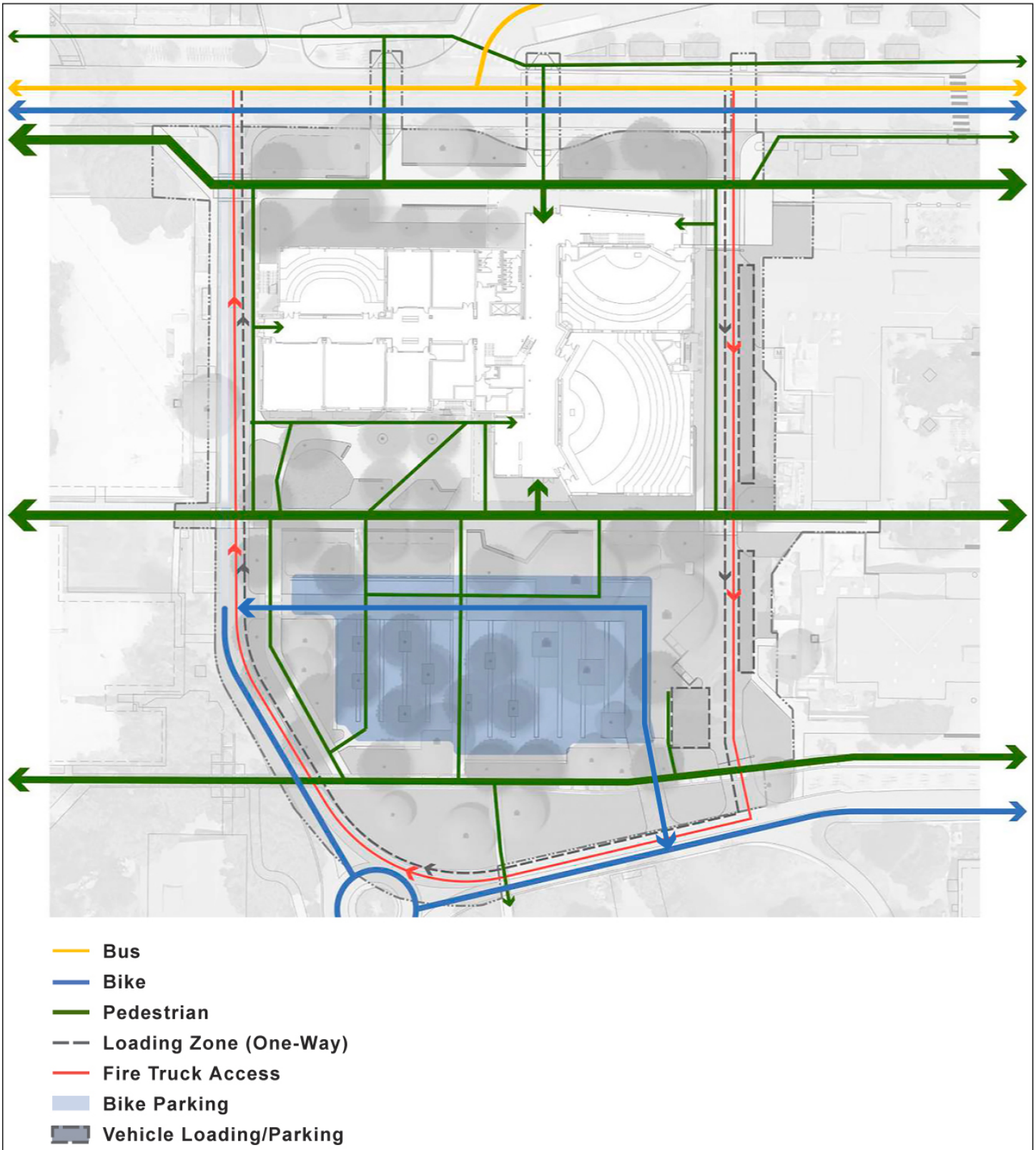
Exhibit 3-7 **Landscape Plan**



Source: UC Davis 2018

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Exhibit 3-8 **Site Circulation**

OFFSITE IMPROVEMENTS

The Project includes constructing offsite bike and pedestrian infrastructure improvements, which would align with the onsite improvements. As illustrated in Exhibit 3-9, UC Davis would:

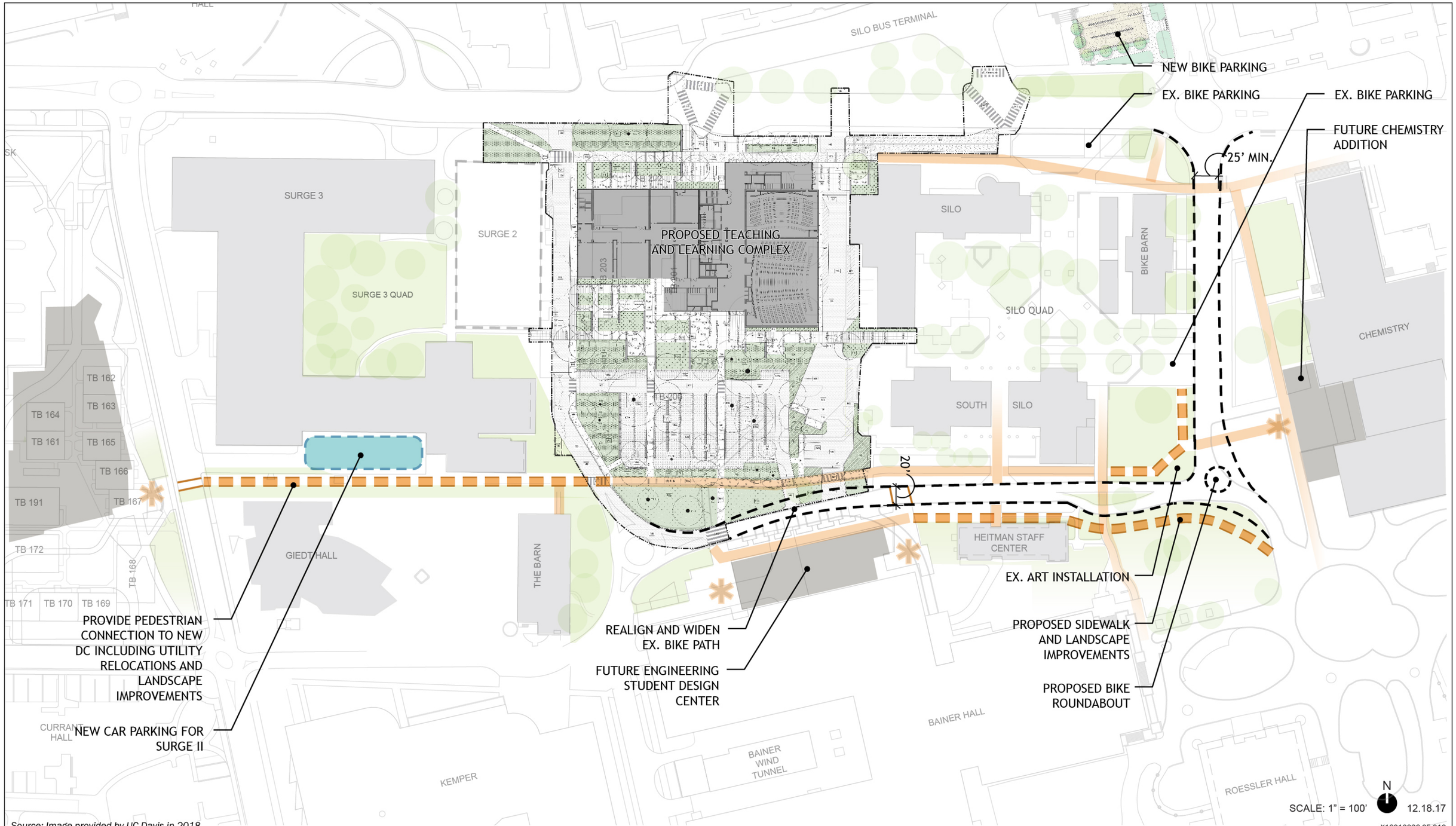
- widen the existing California Avenue bike path from Hutchison Drive south along the eastern edge of the Silo Quad to 25 feet;
- install a bike roundabout at California Avenue at the southeast corner of the Silo Quad;
- realign and widen the existing bike path at the southern end Silo Quad from California Avenue to the southwestern corner of the Project site to 20 feet wide;
- improve the sidewalk and landscaping along the southern edge of the bike path from California Avenue and in front of the Heitman Staff Center;
- create a new bike parking area in existing parking lot at the south end of Surge III;
- install a pedestrian connection to new DC, including potential utility relocations and landscape improvements.

These improvements would connect to the Project site pathways and bike parking as well as the paths and bike parking on the Silo Quad. These improvements would involve limited earth-moving activities as the upgrades would be made to and within existing developed campus facilities.

VEHICULAR ACCESS

Vehicular access to the Project site is restricted; this area of the central campus is not publicly accessible by car. However, four parking spaces would be provided for UC Davis maintenance and service vehicles and a loading zone for Americans with Disabilities Act (ADA) accessibility would be provided. A fire lane and one-way vehicular access would be established around the site, moving southward from Hutchison Drive on the east side of the new building, around the south end of the site, and back northward to Hutchison along the west side of the site (Exhibit 3-8).

A food service loading zone would be established on the south side of Hutchison Drive and north of the Silo building for large truck deliveries to prevent potential traffic hazards due to trucks needing to turn into oncoming traffic and onto the one-way vehicular access loop on a regular basis.



Source: Image provided by UC Davis in 2018

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Exhibit 3-9 Offsite Bike and Pedestrian Infrastructure Improvements

3.4.5 Landscaping and Lighting

A majority of the existing landscaped vegetation and trees would be removed from the site in relation to demolition of Surge IV and the surface parking. However, as illustrated in Exhibit 3-10, important trees have been identified for preservation: four "Most Important/Heritage Trees," six "Important Trees," and ten other trees would be fenced at their dripline to prevent disturbance during demolition, grading, and construction.

Additional landscaping would be established as generally indicated in Exhibit 3-7. The planting design would use native species and would be designed to create habitat types that support biodiversity on campus. Trees would be planted to shade pedestrian corridors and reduce heat-gain from paved surfaces.

Exterior safety lighting would be provided on buildings, pedestrian and bike pathways, and bike and vehicular parking areas. Exterior lighting would be shielded and directed down and/or to the sides, preventing light pollution in the night sky.

3.4.6 Sustainability Goals

The Project would comply with the UC Policy on Sustainable Practices and would meet the campus baseline[1] as applicable to the Project. UC Davis is using the UC's Whole Building Energy Targets (Energy Use Intensity or EUI) standard for this project's energy-efficiency goals. In addition, UC Davis implements Green Building practices under the U.S. Green Building Council's Leadership in Energy and Environmental Design program (LEED version 4). UC Davis is requiring that the Project meet LEEDv4 Silver certification for new buildings, and is striving to achieve LEEDv4 Gold certification. The Project would support the UC Carbon Neutrality Initiative by seeking carbon neutral and/or net-zero energy performance (UC Davis 2018c).

3.4.7 Utilities

The Project site is served by electricity, domestic water lines, wastewater lines, and telecommunications. The Teaching and Learning Complex would connect to these existing systems and would include mechanical, electrical, plumbing, and telecommunications systems as well as solar-ready design for on-site renewable energy generation. The building would be all electric and may include photovoltaic solar panels in the future. Although the site is served by natural gas, the new building would not connect to natural gas service, which would enable the Project to meet net-zero energy and net-zero carbon goals. The building would be designed with a commitment to seismic safety and accessibility for all. Low-flow fixtures would be used to reduce domestic water consumption and the resulting wastewater production. The new building would be equipped with fire sprinklers and the firewater layout and a hydrant flow test would be completed by the UC Davis Fire Department. Heating and cooling for the building would be served by the campus Central Heating and Cooling Plant. The Project would connect to existing conduit and telephone lines (UC Davis 2018c).

1 UC Davis has established a campus baseline, which is the minimum number of applicable *Leadership in Energy and Environmental Design* (LEED) rating system "points" that each project on the campus will achieve.

Source: UC Davis 2018

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Exhibit 3-10 **Preservation of Existing Trees**

The Project-related impervious cover would be approximately 35,000 sf of roof and 66,000 sf of paving. This would require 4,300 sf of stormwater treatment areas per code. As shown in Exhibit 3-11, stormwater treatment areas have been designed throughout the Project site to capture and treat stormwater runoff from the impervious paving and roof surfaces. These depressed landscape areas would have a sandy soil composition that accelerates infiltration and would be planted with trees and understory that are tolerant of sandy soils and periodic flooding.

3.4.8 Construction Schedule and Staging

Demolition of existing buildings is anticipated to begin in summer of 2019 with construction beginning in approximately March of 2020. Construction is projected to be complete by the end of 2021, with classes being available in the new building in spring quarter of 2022.

It is estimated that construction crews would include approximately 50 workers. Construction vehicles and trucks would use Hutchison Drive to access the site. However, no roadway closures would be necessary for construction and vehicular access on Hutchison would be maintained. Staging and contractor parking would be located on the Project site in the location of the bike parking, south of the new building area.

TLC and Surrounding Landscape

Impervious Roof:	35,000 SF
Impervious Paving:	66,000 SF

Estimated Stormwater Treatment Required by Code: 4,300 SF

Source: UC Davis 2018

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Exhibit 3-11 **Estimated Stormwater Treatment Footprint**

4 COVERAGE UNDER THE 2018 LRDP AND 2018 LRDP EIR

To determine the Project's coverage with the 2018 LRDP and 2018 LRDP EIR, the following questions must be answered:

- Are the objectives of the Project consistent with the objectives adopted for the 2018 LRDP?
- Are the changes to campus population associated with the Project included within the scope of the 2018 LRDP's population projections?
- Is the proposed location of the Project in an area designated for this type of use in the 2018 LRDP?
- Is the Project included in the amount of the development projected in the 2018 LRDP?
- Are the Project activities within the scope of the environmental analysis in the 2018 LRDP EIR?

Sections 4.1 through 4.4 document the Project's coverage by and consistency with the objectives, population projections, land use designations, and development projections contained in the 2018 LRDP. Section 4.5 contains a detailed examination of environmental topics documenting that the Teaching and Learning Complex Project is within the scope of the environmental impact analysis in the 2018 LRDP EIR.

4.1 2018 LRDP OBJECTIVES

The overall objective of the 2018 LRDP is to support the teaching, research, and public service missions of the UC. The 2018 LRDP planning goals are structured as three interrelated types of actions: support the academic enterprise, enrich community life, and create a sustainable future. The Project would support these 2018 LRDP objectives as follows.

Support the Academic Enterprise: The development of a Teaching and Learning Complex is intended to create a dynamic environment for learning and discovery. The Project would create a new central hub for undergraduate education that incorporates the range of learning opportunities that exist, from small classes to large lectures, from individual quiet study to group collaborative work; from indoor structured education to outdoor casual discussions. The Project would promote compact and clustered development, replacing the outdated Surge IV and surface parking within the heart of the central campus and providing greater connectivity between the future Sciences Quad and Silo Quad.

Enrich Community Life: The Project would create memorable and functional student study and gathering areas, enhancing the academic mission and contributing to a strong sense of community. The Project does not involve construction or alteration of any campus housing.

Create a Sustainable Future: The Project would promote compact and clustered development of academic/administrative facilities on the central campus. The Project would replace outdated modular buildings and largely unused surface parking, intensifying use of the central campus, conserving land, and utilizing existing building corridors. The Project would comply with the UC Sustainable Practices Policy. UC Davis is using the UC's Whole Building Energy Targets (EUI) standard for this project's energy-efficiency goals. In addition, UC Davis implements Green Building practices under the U.S. Green Building Council's LEED program. UC Davis is requiring that the Project meet LEEDv4 Silver certification for new buildings, and is striving to achieve LEEDv4 Gold certification. The Project would support the UC Carbon Neutrality Initiative by seeking carbon neutral and/or net-zero energy performance (UC Davis 2018c). Furthermore, the Project would remove

vehicular surface parking and would connect to existing central campus pedestrian and bicycle paths. The Project would include a large bike parking corral, new bike driveways and pedestrian paths, and the site is served by a bus stop located directly across from the Project site on the north side of Hutchison Drive.

4.2 2018 LRDP CAMPUS POPULATION

The 2018 LRDP anticipates that student enrollment may grow from 33,825 in 2016-2017 (academic year) to approximately 39,000 students by 2030-2031, an increase of 5,175 students. As of 2017-18, the academic year with the most recent available data, a portion of the enrollment growth has already occurred as shown in Table 4-1. As stated in the Teaching and Learning Complex objectives, classroom capacity is a limiting factor for student access to courses that are necessary to support their timely progress toward graduation. Additional instructional seats are necessary to serve the existing student population. The Project would not project would not specifically introduce new students and would not contribute to an increase the campus student population.

The campus faculty and staff population is projected to increase under the 2018 LRDP from approximately 12,365 in 2016-2017 to approximately 14,500, an increase of 2,135. The majority of Surge IV was vacated with the School of Veterinary Medicine Dean's office relocation to the Veterinary Medicine and Student Services facility. However, there are still 28 staff that occupy Surge IV from small academic or support units. These staff would be relocated to other campus facilities before demolition of Surge IV. The Teaching and Learning Complex would support up to 75 new staff, contributing to the projected 2018 LRDP employment increase; however, the total campus population would not exceed that contemplated in the 2018 LRDP as shown in Table 4-1, below.

Table 4-1 UC Davis 2018 LRDP Projections and Teaching and Learning Complex Employment Increase

	2018 LRDP EIR Projections for 2030	2017-2018 Actual	Expected Growth
Student Enrollment	39,000[1]	34,734	4,266
Employment	14,500	12,631	1,869
Los Rios Davis Community College Center	1,230	615	615
Dependents (of UC residents)	1,949	460	1,489
Non-UC employees (USDA, daycare, third-party support staff, mixed use, K-12)	590	285	305
Total Campus Population	57,269	48,725	8,544

Notes: 2018 LRDP = 2018 Long Range Development Plan; UC = University of California; USDA = U.S. Department of Agriculture.

1. Three-quarter average headcount of Davis-based student population.

Source: UC Davis 2018

4.3 2018 LRDP LAND USE DESIGNATION

The 2018 LRDP designates the Project site as *Academic & Administrative*, defined as land and structures that facilitate teaching, research, and the public service mission. The *Academic & Administrative* land use designation is the primary land use associated with the academic enterprise.

The buildings in this land use designation accommodate most instruction and research space. The Project would provide new classrooms, indoor and outdoor gathering spaces, and office spaces consistent with this land use designation.

4.4 2018 LRDP ACADEMIC BUILDING SPACE

The 2018 LRDP provides capacity for approximately 2 million sf of additional academic building space for classrooms and study space, instructional and research labs, faculty and administrative offices, and other programs to support the academic mission in existing space. The Project would result in the demolition and removal of Surge IV, approximately 31,000 sf, and the addition of the approximately 100,000 sf Teaching and Learning Complex building, resulting in a net increase of 69,000 sf of academic building space on the central campus.

The 2018 LRDP EIR projected that during any particular year, the 2018 LRDP EIR activities could include construction of 200,000 sf of academic space as shown in Table 3.3-4, "2018 LRDP General Construction Schedule," of the 2018 LRDP EIR. During the Teaching and Learning Complex Project construction period in 2019, 2020, and 2021, construction of academic buildings would include the 100,000 sf proposed for the Teaching and Learning Complex and approximately 60,000 sf per year of other academic buildings. During 2019-2021, the construction activities would remain below the 200,000 sf estimate used in the 2018 LRDP EIR.

The Project would support the University's effort to solve building space shortage and provide additional capacity to accommodate potential teaching and research initiatives. The Project would not exceed the academic building space contemplated in the 2018 LRDP.

4.5 ENVIRONMENTAL REVIEW OF PROJECT ACTIVITIES

INTRODUCTION

The 2018 LRDP EIR comprehensively addressed the potential environmental effects of growth and development due to implementation of activities proposed to implement the 2018 LRDP EIR. The following environmental resources, if checked below, would be potentially affected by this project and would involve at least one impact that exceeds or is otherwise outside the scope of activities evaluated for potential environmental effects in the 2018 LRDP EIR.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources (Tribal Cultural Resources)	☐ Geology and Soils
☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials	☐ Hydrology and Water Quality
☐ Land Use and Planning	☐ Mineral Resources	☐ Noise
☐ Population and Housing	☐ Public Services	☐ Recreation

☐ Transportation and Circulation	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance
		☑ None

The University has defined the column headings in this IS Checklist as follows:

Impact Examined in the 2018 LRDP EIR: This column is checked where the potential impacts of the Project were examined in the 2018 LRDP EIR and mitigation measures identified in the LRDP EIR will mitigate any impacts of the Project to the extent feasible. All applicable LRDP EIR mitigation measures are incorporated into the Project as proposed. This document summarizes and cross references the relevant analysis in the 2018 LRDP EIR.

Impact Not Examined in the 2018 LRDP EIR, No Impact: This column is checked where the potential effects of the Project were not examined in the 2018 LRDP EIR, but the potential effects of the Project would not result in any impact in the category or the category does not apply. "No impact" answers need to be adequately supported by the information sources cited or should note that the impact does not apply to projects like the one involved (e.g., the Project is 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 project specific screening analysis.)

Impact Not Examined in the 2018 LRDP EIR, Less-than-Significant Impact: This column is checked where the potential effects of the Project were not examined in the 2018 LRDP EIR, but the Project would result in less-than-significant effects. The Project impact is less than significant without incorporation of 2018 LRDP or project-level mitigation.

Impact Not Examined in the 2018 LRDP EIR, Additional CEQA Analysis Required: This column is checked for impact categories that were not examined in the 2018 LRDP EIR or have been examined the IS and determined that a new potentially significant effect would result; additional CEQA documentation would be necessary to further address the issue.

4.5.1 Aesthetics

Section 3.1 of the 2018 LRDP EIR evaluates the impacts of campus growth under the 2018 LRDP on aesthetics by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

AESTHETICS Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Have a substantial adverse effect on a scenic vista?	☑	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☑	☐	☐	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☑	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☑	☐	☐	☐

a) The Project site is located on the central campus where views are limited largely by existing development and landscaping, and long-distance views are precluded. The 2018 LRDP EIR identified significant and unavoidable impacts to scenic long-distance views from the UC Davis west campus (2018 LRDP EIR Impact 3.1-1); however, the Project is not located on the west campus and not would alter views from the west campus, and therefore, the Project would not contribute to 2018 LRDP EIR Impact 3.1-1.. Through implementation of the Physical Design Framework and adherence to the Campus Design Guide Manual, UC Davis prioritizes maintenance of existing long-distance views along existing view corridors. Development of the Project would not alter a scenic vista from within or across the central campus and the building and site improvements would be consistent with and complementary to existing central campus development. As a core campus academic building, the proposed project is within the scope of activities for scenic vista impacts evaluated in the 2018 LRDP EIR.

b) As explained in Section 3.1.3 of the 2018 LRDP EIR, I-80 and SR 113, the highways in the vicinity of the campus, are not designated as state scenic highways. Neither the campus nor the Project site is located near a state scenic highway.

c) The 2018 LRDP focuses land uses changes primarily within and around the central campus. Consistent with this focus, the Project would redevelop the site of Surge IV on the central campus. The Project is within the scope of 2018 LRDP EIR Impact 3.1-2 impact analysis. While the Project would modify the existing visual character and quality of the site, the UC Davis design review process would require consideration of and consistency with adjacent development. Factors included in this process include that the Project would be consistent with the *Academic & Administrative* land use and would conserve the existing pattern of uses on the central campus. The Project would result in a mid-rise (4 story) building, which is consistent with the heights of existing structures on the central campus (generally 4 to 6 stories with some taller structures). Further, the Project, as part of the UC Davis design review process and in

accordance with the UC Davis Physical Design Framework and Campus Design Guide Manual, would provide landscaping, fixtures, and other features consistent with existing conditions, which would soften the visual interface between the Teaching and Learning Complex and surrounding central campus structures. Therefore, although the visual character of the Project site would change, consistent with 2018 LRDP EIR Impact 3.1-2 (less than significant), the Project is within the scope of anticipated development on the central campus and within the environmental impact analysis in the 2018 LRDP EIR.

d) The central campus is a developed/urban setting. A significant amount of light fixtures (both interior and exterior) from this urban area of the UC Davis campus and adjacent City of Davis land uses already exist. The existing Surge IV buildings contain building and security lighting that are existing sources light. The 2018 LRDP EIR found that implementation of the 2018 LRDP would introduce new sources of light and glare associated with new buildings and facilities. Such lighting could contribute to indirect lighting/glare on adjacent land uses that could adversely affect daytime or nighttime views and result in additional skyglow (2018 LRDP Impact 3.1-3). Consistent with the 2018 LRDP anticipated development, new lighting for the Teaching and Learning Complex would be similar in nature to existing light sources, but it is possible that the new building and exterior spaces could change the light and glare conditions at the site. In compliance with LRDP Mitigation 3.1-3(a), the Project would use textured nonreflective exterior surfaces and nonreflective glass. The exterior lighting would be limited to building entrances, bike parking lots, and lighting along walkways. Consistent with 2018 LRDP EIR Mitigation 3.1-3(b) the all new outdoor lighting would utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting such that light spillover onto adjacent structures does not occur. The Campus Design Review Committee would also review the Project's use of non-directional lighting design to ensure that no adverse effects on nighttime views occur. The Project is within the scope of 2018 LRDP EIR impact analysis.

4.5.2 Agricultural and Forestry Resources

Section 3.2 of the 2018 LRDP EIR evaluates the effects of campus growth under the 2018 LRDP on agricultural and forestry resources by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

AGRICULTURAL AND FORESTRY RESOURCES Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☑	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☑	☐	☐	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☑	☐	☐	☐
d) Result in the loss of forest or agricultural land or conversion of forest land to non-forest or non-agricultural use?	☑	☐	☐	☐
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☑	☐	☐	☐

a) The Farmland Mapping and Monitoring Program (FMMP) designates the Project site as Urban and Built-Up Land. The Project would not convert farmland to non-agricultural use and would not contribute to 2018 LRPD EIR Impact 3.2-1. Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

b) Campus lands are state lands and are not eligible for Williamson Act agreements, nor are they subject to local zoning controls. Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

c) None of the campus lands are zoned as forest land or timberland. The demolition of Surge IV and the surface parking and development of a new academic building within the central campus would not conflict with zoning or result in rezoning of forest or timberlands. Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

d) There are no forest lands on or adjacent to the Project site. Therefore, the Project would not result in the loss of forest land or the conversion of forest land to non-forest use. This issue is not relevant to the Teaching and Learning Complex Project.

e) The Project site is not adjacent to agricultural, forest land, or timberland. Therefore, the Project would not involve any changes that could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use and would not contribute to 2018 LRPD EIR Impact 3.2-2. This issue is not relevant to the Teaching and Learning Complex Project.

4.5.3 Air Quality

Section 3.3 of the 2018 LRDP EIR addresses the air quality effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

AIR QUALITY Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Conflict with or obstruct implementation of the applicable air quality plan?	☑	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☑	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☑	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☑	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☑	☐	☐	☐

a,b,c,d) Emissions of criteria air pollutants and precursors associated with project construction and operational are discussed separately below. The following sources were used to evaluate project-specific air quality emissions:

- YSAQMD Handbook for Assessing and Mitigating Air Quality Impacts (2007)
- California Emissions Estimator Model (CalEEMod) Version 2016.3.2 (SCAQMD 2017)

Construction-Generated Emissions of Criteria Air Pollutants and Precursors

2018 LRDP EIR Impact 3.3-1 disclosed that construction under the 2018 LRDP would result in emissions of ROG, NO_x, and PM_{10} that would exceed YSAQMD's thresholds starting in 2019. The Project is an academic facilities development project that is consistent with the 2018 LRDP land use designation and development envelope that would contribute to these emissions. The Project's construction activities would result in emissions of criteria air pollutants and precursors from the use of heavy-duty construction equipment for demolition, site preparation (e.g., grading, and clearing), material delivery, and asphalt paving, and the application of architectural coatings. Emissions would also result from commute trips by construction workers to and from the Project site. Fugitive dust emissions, including PM_{10} and $PM_{2.5}$, would be generated during demolition and site preparation. Exhaust emissions of PM_{10} and $PM_{2.5}$ would also result from combustion of fuels. Ozone precursor emissions would be associated with exhaust from heavy-duty construction equipment, material haul truck trips, and worker commute trips. Emissions of ROG would also be generated during asphalt paving and the application of architectural coatings.

The 2018 LRDP EIR documented the overall expected construction emissions from activities within the 2018 LRDP implementation and identified, on an annual basis, that aggregated campus-wide construction activities during 2019 and 2020 that could result in significant impacts. The 2018 LRDP EIR projected that during any particular year, the 2018 LRDP EIR activities could include construction of 200,000 sf of academic space as shown in Table 3.3-4, "2018 LRDP General Construction Schedule," of the 2018 LRDP EIR. During the Teaching and Learning Complex Project construction period in 2019, 2020, and 2021, construction of academic buildings would include approximately 100,000 sf proposed for the Teaching and Learning Complex and approximately 60,000 sf per year of other academic buildings. During 2019-2021, the construction activities would remain below the 200,000 square foot estimate used in the 2018 LRDP EIR. The Project-related emissions would contribute to the overall 2018 LRDP construction emissions, but are within the scope of activities evaluated in the 2018 LRDP EIR.

As required by 2018 LRDP EIR Mitigation Measure 3.3-1, UC Davis would reduce emissions of ROG, NO_X, and PM_{10} by requiring the Project contractor to implement emissions reduction measures. At the program level, the 2018 LRDP EIR Impact 3.3-1 determined that construction under the 2018 LRDP, with implementation of Mitigation Measure 3.3-1, would not generate construction-related emissions of ROG or PM_{10} that exceed YSAQMD significance criteria, but NO_X emissions would be significant and unavoidable. This impact was addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2018 LRDP. No additional mitigation is necessary to reduce the Project's contribution to these impacts.

Long-Term Operational Emissions of Criteria Air Pollutants and Precursors

2018 LRDP EIR Impact 3.3-2 determined that long-term operational emissions related to the 2018 LRDP could exceed YSAQMD significance thresholds for ROG and NO_X but would not exceed YSAQMD thresholds for PM_{10} and $PM_{2.5}$. Thus, long-term operational emissions of ROG and NO_X could conflict with the air quality planning efforts and contribute substantially to the nonattainment status of Yolo County with respect to the NAAQS and CAAQS for ozone.

The Project-related vehicle trips, operational maintenance activities, and natural gas use through the Central Plant would contribute to the overall 2018 LRDP operational emissions of criteria air pollutants and precursor emissions. The Project-related increase of 75 new employees is within the scope of employees anticipated in the 2018 LRDP and the academic building is within the scope of development and land use planned for the central campus in the 2018 LRDP and evaluated in 2018 LRDP EIR. Mobile-source emissions of criteria air pollutants and precursors associated with new employee commute trips are within the scope of operational emissions evaluated in the 2018 LRDP EIR Impact 3.3-2. Operational emissions of criteria air pollutants and precursors would also be generated from building energy use through the consumption of electricity and natural gas. The new building would be all electric and may include solar panels in the future. Although the Project does not propose the direct use of natural gas within the new building, it may indirectly use natural gas through heating and cooling from the Central Plant. Consistent with the 2018 LRDP, the Project would implement the University of California Sustainable Practices Policy, which encompasses nine areas of sustainable practices to be implement by all campuses within the UC system: green building, clean energy, transportation, climate protection, sustainable operations, waste reduction and recycling, environmentally preferable purchasing, sustainable foodservice, sustainable water systems. Specifically, UC Davis is using EUI standards for energy-efficiency goals and is requiring that the Project achieve a minimum LEEDv4 Silver certification. The Project would support the UC Carbon Neutrality Initiative by seeking carbon neutral and/or net-zero energy performance (UC Davis 2018c).

As required by 2018 LRDP EIR Mitigation Measure 3.3-2, UC Davis shall implement strategies to reduce mobile-source criteria air pollutants and precursors through reductions in single occupancy vehicle trips (e.g., promoting the use of EV, carpool, transit vehicles; incentivizing carpool through access to premium parking locations on campus; and promotion of the use of electric vehicles and clean fuels for vendors on campus). The Project site is on the central campus where vehicular travel is restricted, the Project provides bicycle parking and connections to campus bike paths, and provides pedestrian pathways. The Project-related vehicle miles traveled (VMT) represent only a small portion of the total increase in VMT associated with full buildout under the 2018 LRDP. The Project would not result in subsequent emissions outside of the scope of the 2018 LRDP EIR.

Because there is uncertainty regarding the effectiveness of 2018 LRDP EIR Mitigation Measure 3.3-2 to reduce the 2018 LRDP's total emissions to less than YSAQMD thresholds for ROG and NO_X, this impact was determined to be significant and unavoidable at the program level. This impact was addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2018 LRDP. No additional mitigation is necessary or available to reduce the Project's contribution to these impacts.

Mobile-Source Carbon Monoxide Concentrations

2018 LRPD EIR Impact 3.3-3 long-term operation-related local mobile-source emissions of CO generated by 2018 LRDP development would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. As discussed in 2018 LRDP EIR Section 3.16, "Transportation, Circulation, and Parking," the increase in vehicle trips associated with buildout under the 2018 LRDP, including from the 75 new employees due to the Teaching and Learning Complex, would not result in more than 10,000 vehicles per hour at any affected intersections, even under cumulative-with-project conditions. This means that SMAQMD's recommended screening criterion of 31,600 vehicles per hour would not be exceeded at any intersection. As a result, project-generated, long-term operation-related local mobile-source emissions of CO are within the scope of the 2018 LRDP EIR Impact 3.3-3 (less than significant), would not violate the CAAQS or NAAQS or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations of carbon monoxide.

Construction-Generated Emissions of Toxic Air Contaminants

2018 LRDP EIR Impact 3.3-4 determined that 2018 LRDP construction activities would result in temporary, short-term project-generated emissions of TACs, particularly diesel PM, that could expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million or a hazard index greater than 1.0. Consistent with 2018 LRPD EIR Impact 3.3-4, project-related construction activity would result in temporary, intermittent emissions of diesel PM as a result off-road, heavy-duty diesel equipment used during construction. The maximum daily exhaust emissions of project-generated PM_{10} (considered a surrogate for diesel PM) could reach up to 1.2 lb/day during construction, which would be limited to an approximately eleven-month construction period. Diesel PM is highly dispersive and concentrations of diesel PM decline with distance from the source (e.g., decrease of 70 percent at 500 feet from a freeway) (Roorda-Knape et al. 1999 and Zhu et al. 2002, as cited in CARB 2005:9). The nearest sensitive receptors include the Bright Horizons Child Care Center, which is located approximately 2,500 feet from the western boundary of the Project site, and the Tercero Apartments, which are located approximately 550 feet from the southwest corner of the Project site. As a result, project construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in 1 million or a hazard index greater than 1.0.

Furthermore, as required by 2018 LRDP EIR Mitigation Measure 3.3-4, UC Davis shall require the Project contractor to locate diesel-powered equipment away from sensitive receptors as possible, reduce equipment idling times, and use equipment with Tier 3 engine ratings or better, and use alternatively-fueled equipment if available to further reduce TAC emissions. The Project is within the scope of 2018 LRDP EIR Impact 3.3-4 (less than significant with mitigation).

Operational Emissions of Toxic Air Contaminants

2018 LRDP EIR Impact 3.3-5 determined that the additional sources of TACs (e.g., laboratories, boilers) under the 2018 LRDP would not result in additional risks that exceed YSAQMD thresholds of 10 in one million for cancer risk and a hazard index equal to or greater than 1.0 for the maximally exposed individual. The Teaching and Learning Complex would not include laboratory facilities that include laboratory fume hoods or other sources of TAC emissions. As a result, the Project's operational sources of TACs would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in 1 million or a hazard index greater than 1.0. The Project impact is within the scope of 2018 LRDP EIR Impact 3.3-5 (less than significant).

Land Use Compatibility with Off-Site Sources of Toxic Air Contaminants and Ultrafine Particulates

As addressed in 2018 LRDP EIR Impacts 3.3-5 and 3.3-6, the 2018 LRDP would not exceed the threshold for incremental cancer risk (10 in one million), and thus, would not be considered to "exacerbate" existing environmental hazards. In addition, as described above, the Project-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in 1 million or a hazard index greater than 1.0. Furthermore, the Project site is located over a quarter mile from I-80 and does not include any housing. Therefore, the Project would not project would not introduce receptors in close proximity to existing sources of TACs and ultrafine particulates (UFPs) from I-80 or the Union Pacific Rail Road line. The Project is compatible with surrounding central campus academic and administrative land uses, does not propose housing within 1,500 feet of I-80, is within the scope of analysis is 2018 LRDP EIR Impacts 3.3-5 and 3.3-6.

e) As discussed in 2018 LRDP EIR Impact 3.3-7, the Project facilities include academic classrooms and meeting rooms that would not result in new sources of odors on campus. Although the Silo food service dumpsters may be in proximity to the Teaching and Learning Complex, the Project would not result the relocation of this existing odor sources or the development of residences near an existing odor source. The Project impact is within the scope evaluated in 2018 LRDP EIR Impact 3.3-7, and does not involve a composing facility, biomass boiler, or wastewater treatment plant improvements.

4.5.4 Archaeological, Historical, and Tribal Cultural Resources

Section 3.4 of the 2018 LRDP EIR addresses the effects of campus growth under the 2018 LRDP on archaeological, historical, and tribal cultural resources by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☑	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☑	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☑	☐	☐	☐
d) Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code § 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: 1) 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 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of 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.	☑	☐	☐	☐

a) The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. Although 2018 LRDP EIR Impact 3.4-4 determined that development under the 2018 LRDP EIR could result in adverse changes to historical resources as defined in Section 15064.5, no historic architectural resources were identified on the Project site. The four Surge IV modular buildings were built in 1972 and are not eligible for listing in the CRHR or NRHP. As a result, the buildings would not be considered significant for the purposes of CEQA, and therefore, would not contribute to 2018 LRDP EIR Impact 3.4-4.

b) The Project is within the scope of analysis in the 2018 LRDP EIR. As shown on 2018 LRDP EIR Exhibit 3.4-1, the Project site is not within an area of archaeological sensitivity. As discussed in 2018 LRDP EIR Impact 3.4-1, the potential for intact buried archaeological resources is considered "moderate" because, although the Project site has not been characterized as sensitive and is not suspected to be a likely location for archaeological resources, project construction would involve excavation below 18 inches deep on the Project site. As such, UC Davis shall implement 2018 LRDP Mitigation Measures 3.4-1a(1) and (2), which require that contractor crews attend an archaeological resource training before the start of earth moving and that a surface survey be conducted by a qualified archaeologist once the area of ground disturbance has been identified and prior the soil disturbing activities. In the event of a surface find, intensive investigation shall be implemented per 2018 LRDP Mitigation Measure 3.4-1a(3). Irrespective of findings, the qualified archaeologist shall, in consultation with the UC Davis Office of Campus Planning and Environmental Stewardship, develop an archaeological monitoring plan to be implemented during the construction phase of the Project. In the event of a discovery, the campus shall implement 2018 LRDP Mitigation Measure 3.4-1a(5). With implementation of these previously-adopted 2018 LRDP EIR mitigation measures, currently undiscovered archaeological resources would be avoided, recorded, or otherwise treated appropriately, in accordance with pertinent laws and regulations.

c) As discussed in 2018 LRDP EIR Impact 3.4-3, although unlikely, the Project has the potential to disturb human remains, including those interred outside of formal cemeteries. If human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and UC Davis shall notify the Yolo County coroner and the NAHC immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the archaeologist, and the NAHC-designated most likely descendant shall recommend the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.94. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. The Project impact is within the scope evaluated in 2018 LRDP EIR Impact 3.4-3 (less than significant).

d) As discussed in 2018 LRDP EIR Impact 3.4-2, UC Davis notifies the Yocha Dehe Wintun Nation of all projects and provides an update two or three times per year to avoid damaging effects to any tribal cultural resource. If UC Davis determines that a subsequent project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process, new provisions in the PRC describe measures that, if determined by the lead agency to be feasible, could be implemented to reduce potential effects of campus-related development on tribal cultural resources, although none were identified through AB 52 compliance for the 2018 LRDP. Compliance with PRC Section 21080.3.2 and Section 21084.3 (a) and UC Davis's continuing notification of the Yocha Dehe Wintun Nation of all projects, would provide an opportunity to avoid or minimize the disturbance of tribal cultural resources, and to appropriately treat any remains that are discovered. The Project impact is within the scope evaluated in 2018 LRDP EIR Impact 3.4-2 (less than significant).

4.5.5 Biological Resources

Section 3.5 of the 2018 LRDP EIR addresses the effects of campus growth under the 2018 LRDP on biological resources by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

BIOLOGICAL RESOURCES Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
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?	☑	☐	☐	☐
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 US Fish and Wildlife Service?	☑	☐	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☑	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☑	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☑	☐	☐	☐
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?	☑	☐	☐	☐

a) The Project site is developed and the 2018 LRDP EIR defines it as urban landscaping /developed habitat (2018 LRDP EIR Exhibit 3.5-1). The Project site does not support habitat for special-status plants, and the Project would not contribute to 2018 LRDP EIR Impact 3.5-1.

The 2018 LRDP EIR found that development under the 2018 LRDP could potentially result in impacts to Swainson's hawk and other nesting raptors (2018 LRDP EIR Impact 3.5-4). Based on a review of occurrence records, species ranges, and a reconnaissance survey conducted by Ascent Environmental on May 29, 2018, there is a potential for Swainson's hawk and white-tailed kite to nest within Jeffrey pines to the east of the Project site and within redwood trees to

the south of the Project site. While it is more likely that these species would nest in the Putah Creek riparian corridor at the south end of campus, because of the proximity to foraging habitat in the adjacent agricultural lands, they could be present in the Project area. Project construction activities could result in nest disturbance consistent with the impacts analyzed in the 2018 LRDP EIR. 2018 LRDP EIR Mitigation Measure 3.5-4(a) would be implemented as part of the Project to prevent disturbance to active nests and mitigate for disturbance if it occurs. The Project impact is within the scope evaluated in 2018 LRDP EIR Impact 3.5-4 (less than significant with mitigation).

The buildings and trees on campus generally have the potential to provide roosting habitat for bats; however, the Pallid bat (*Antrozous pallidus*), which came up in the CNDDB search results, was eliminated from further consideration because this species is very sensitive to roost disturbance and high temperatures. The Project site is subjected to disturbance from pedestrian and vehicular activity on a daily basis and the single-story Surge IV buildings are exposed to the sun and generally not shaded by trees. No evidence of bats (urine streaking on the side of the building or guano droppings on the ground) was observed during the reconnaissance survey. No other special-status species have the potential to be present on the Project site because of lack of suitable habitat.

The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. Although the 2018 LRDP EIR determined that implementation of the 2018 LRDP could result in impacts to other special-status wildlife species (2018 LRDP EIR Impacts 3.5-2, 3.5-3, 3.5-5, 3.5-6, 3.5-7, and 3.5-8), the Project site is developed, does not support habitat for special-status wildlife other than for Swainson's hawk and white-tailed kite, would not contribute to these impacts.

b,c) The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. The Project site does not contain any aquatic, wetland, or riparian habitat. The Project site contains buildings, a surface parking lot, and landscaping and is surrounded by roads, bike paths, and other facilities within the developed central campus. The Project site does not include riparian habitat or wetlands and the Project would not contribute to 2018 LRDP Impact 3.5-9.

d) The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. As described in 2018 LRDP EIR Impact 3.5-10, the Putah Creek corridor, which is the southern boundary of the UC Davis central campus, is the principal corridor for the movement of native resident and migratory fish and wildlife through the area. It is the regional connection between the hills in western Yolo County and the Sacramento River. The Project site is on the central campus, outside of the Putah Creek corridor and its associated riparian habitat. Therefore, the Project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The Project would not contribute to 2018 LRDP EIR Impact 3.5-10.

e) The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. 2018 LRDP EIR Impact 3.5-11 determined that implementation of the 2018 LRDP could result in the removal of trees recognized to meet UC Davis standards for important trees. However, the trees that would be removed because of project construction do not meet the UC Davis standards for important trees. Consistent with 2018 LRDP EIR Mitigation Measure 3.5-11, a tree survey has been conducted for the Project site. As illustrated in Exhibit 3-10, the important trees identified on the Project site would be fenced at their dripline to prevent disturbance during construction and preserved. There are no heritage oaks on the Project site and the Project would not contribute to 2018 LRPD EIR Impact 3.5-11.

f) Currently, there are no approved habitat conservation plans applicable to the plan area. As discussed in 2018 LRDP EIR Impact 3.5-12, CEQA does not require analysis of consistency with proposed plans. However, the 2018 LRDP EIR provided information on the proposed Yolo County Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) and the Solano County Multi-Species Habitat Conservation Plan (MSHCP) because portions of the UC Davis campus are located within these plan areas. Impacts to species identified in these plans would be mitigated to less-than-significant levels through the adopted 2018 LRDP EIR mitigation measures. Therefore, the 2018 LRDP, including the Project, would not conflict with these proposed plans.

4.5.6 Energy

Section 3.6 of the 2018 LRDP EIR addresses the energy impacts of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

Energy Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Result in unnecessary, inefficient, and wasteful use of energy?	☑	☐	☐	☐
b) Conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects related to energy use?	☑	☐	☐	☐

a,b) Consistent with 2018 LRDP EIR Impact 3.6-1, the one-time energy expenditure required to construct the Project would be nonrecoverable. Most energy consumption would result from operation of off-road construction equipment and on-road vehicle trips associated with commutes by construction workers and haul trucks trips. Construction equipment use and associated energy consumption would be typical of that associated with construction of new residential, educational, and industrial land uses. Idling of on-site equipment during construction would be limited to no more than five minutes in accordance with YSAQMD requirements. Further, on-site construction equipment may include alternatively-fueled vehicles (such as natural gas) where feasible, and the selected construction contractors would use the best available engineering techniques, construction and design practices, and equipment operating procedures. For operations, the Project includes energy-efficient design features that, in combination with State energy efficiency requirements, would reduce overall energy use at the Project site including no direct use of natural gas for the building. UC Davis is using the UC's Whole Building Energy Targets (Energy Use Intensity or EUI) standard for this project's energy-efficiency goals. In addition, UC Davis is requiring that the Project meet LEEDv4 Silver certification for new buildings, and is striving to achieve LEEDv4 Gold certification. The Project would support the UC Carbon Neutrality Initiative by seeking carbon neutral and/or net-zero energy performance (UC Davis 2018c). The Project's energy consumption is within the scope of 2018 LRDP EIR Impact 3.6-1 (less than significant); the Project-related energy use would not be considered inefficient, wasteful, or unnecessary.

As discussed in 2018 LRDP EIR Impact 3.6-2, development under the 2018 LRDP would exceed Title 24 Building Energy Efficiency Standards to reduce energy use, which establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building installation and roofing, and lighting. In addition, federal and State regulations including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program would reduce the transportation fuel demand. Project adherence to the increasingly stringent building and vehicle efficiency standards as well as 2018 LRDP design features consistent with UC Carbon Neutrality goals would reduce energy consumption to be consistent with applicable plans, policies, and regulations adopted for avoiding or mitigating environmental effects related to energy. The Project impact is within the scope evaluated in 2018 LRDP EIR Impact 3.6-2 (less than significant).

4.5.7 Geology, Soils, and Seismicity

Section 3.7 of the 2018 LRDP EIR addresses the geology, soils, and seismicity effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

GEOLOGY, SOILS, & SEISMICITY Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☑	☐	☐	☐
ii) Strong seismic ground shaking?	☑	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☑	☐	☐	☐
iv) Landslides?	☑	☐	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☑	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☑	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☑	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☑	☐	☐	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☑	☐	☐	☐

a,i) As stated on pages 3.7-8 and 3.7-15 of 2018 LRDP EIR Volume 1, the UC Davis campus and the surrounding area are not located within an Alquist-Priolo Earthquake Fault Zone. The nearest faults identified pursuant to the Alquist-Priolo Act are the Green Valley and Cordelia Faults, which are a part of the San Andreas Fault System, approximately 27 miles southwest of the plan area (2018 LRDP EIR Table 3.7-2). Additionally, the nearest identified active fault zone is the Dunnigan Hills Fault zone located 16.5 miles north of the plan area (2018 LRDP EIR Table 3.7-2). Therefore, the Project site would not be subject to surface fault rupture.

a,ii) As stated on pages 3.7-8 and 3.7-15 of 2018 LRDP EIR Volume 1, UC Davis is not located in a regulated Alquist-Priolo Earthquake Fault Zone or a Seismic Hazard Zone; however, there are tectonically active areas to the north and west of the Project, including the Dunnigan Hills Fault, the Cordelia Fault Zone, and the Green Valley Fault (the latter two are components of the San Andreas Fault System) (2018 LRDP EIR Table 3.7-2). As disclosed in 2018 LRDP EIR Impact 3.7-1, these fault zones are within a distance that could subject the plan area to a moderate level of seismic ground shaking, which could result in damage to structures and injury or death to people if they are within structures that fail. The peak ground acceleration for the central campus is estimated to be 0.45–0.48g. This level of seismic activity has the potential to dislodge objects from shelves and to damage or destroy buildings and other structures.

Consistent with development under the 2018 LRDP discussed in 2018 LRDP EIR Impact 3.7-1, the Project would not exacerbate seismic hazards; however, it would expose more people to risks associated with damage from earthquakes. The campus minimizes hazards associated with damage or destruction to buildings and other structures by reviewing and approving all draft building plans for compliance with the California Building Code (CBC). The CBC (Title 24 California Code of Regulations) identifies the minimum standards for structural design and construction in California, including specific requirements for seismic safety. The campus also adheres to the University of California Seismic Safety Policy, which requires compliance with the provisions of the CBC and anchorage for seismic resistance of nonstructural building elements such as furnishings, fixtures, material storage facilities, and utilities that could create a hazard if dislodged during an earthquake. The campus' Office of Environmental Health and Safety (EH&S) provides guidance for preparing department-level Illness and Injury Prevention Plans (updated in October 2015). The Safety Coordinator develops and maintains the emergency response plan, which must be submitted to the Emergency Preparedness Policy Group for annual review to assure consistency with the campus Emergency Operations Plan, including seismic safety and building evacuation procedures. The emergency procedures incorporated into campus emergency response plans further reduce the hazards from seismic shaking by preparing faculty, staff, and students for emergencies. The Project impact is within the scope evaluated in 2018 LRDP EIR Impact 3.7-1 (less than significant).

a,iii) See the discussion in item (c) below.

a,iv) As stated on page 3.7-15 of the 2018 LRDP EIR, the potential for landslides within the UC Davis campus is low because of the lack of significant slopes and acting gravitational forces. The Project site, which is located on a topographically flat site on the central campus, would not be subject to landslides.

b) 2018 LRDP EIR Impact 3.7-8 identified the potential for 2018 LRDP construction activities to disturb soils and result in erosion or loss of top soil. The Project would involve clearing and grading the Project site and some trenching for utility connections. Topsoil would be cleared and would be temporarily stockpiled for reuse on site. The 3.5 acre project site is located on Sycamore Series (S) soils (2018 LRDP EIR Exhibit 3.7-1), which are well drained and comprised of silt loam and silty clay loam. Soil characteristics include: moderately slow permeability and slow surface water runoff, and low erosion hazard (2018 LRDP EIR Exhibit 3.7-3). However, there is an elevated risk of erosion associated with construction activity. Consistent with the 2018 LRDP, the Project would have to comply with relevant National Pollutant Discharge Elimination System (NPDES) permits, including the General Permit for Storm Water Discharges Associated with Construction Activity (General Construction Permit) and the General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Phase II Small MS4 Permit), which require soil erosion control measures. Consistent with 2018 LRDP EIR Impact 3.7-3 (less

than significant), the regulatory environment for building construction and stormwater control provides adequate protection against soil erosion during and as a result of construction.

Consistent with 2018 LRDP EIR Impact 3.7-4, the Project would redevelop the Surge IV site and would involve changes to the stormwater infrastructure at the site. While the 2018 LRDP projects would be regulated by the Phase II Small MS4 Permit program, this program would not necessarily reduce or eliminate the collection of flows during high precipitation events or during wet times of the year. Large quantities of overland flow could result in rill or gully erosion and decrease soil stability and productivity. As required by 2018 LRDP EIR Mitigation Measure 3.7-4, UC Davis conducted a drainage study for the Project site and has designed the Project to include the necessary onsite stormwater detention facilities with appropriate sizing for anticipated storm events as illustrated in Exhibit 3-11. The Project's impact is within the scope of analysis in 2018 LRDP EIR Impact 3.7-4 (less than significant with mitigation).

c) The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. As discussed in 2018 LRDP EIR Impact 3.7-2, the UC Davis campus is located in a seismically active area with soils that could be susceptible to liquefaction and structural settlement in the event of an earthquake. The Project site is located on Sycamore Series (S) soils (2018 LRDP EIR Exhibit 3.7-1), which are well drained and comprised of silt loam and silty clay loam. Soil characteristics include moderately slow permeability and slow surface water runoff, and low erosion hazard. Campus policy requires compliance with the CBC and the University of California Seismic Safety Policy. The CBC requires that a geotechnical investigation that addresses the potential for liquefaction, lateral spreading, and other types of ground failure be performed to provide data for the architect and/or engineer to responsibly design the Project. The Project shall comply with the CBC and the University of California Seismic Safety Policy and is within the scope of analysis in 2018 LRDP EIR Impact 3.7-2 (less than significant).

   As disclosed in 2018 LRDP EIR Impact 3.7-6, subsidence on campus related to groundwater withdrawals from the shallow/intermediate aquifers has been observed and documented. While groundwater extractions from the shallow/intermediate aquifer is not expected to increase with implementation of the Project, continued long-term use of this water for campus needs will continue to promote regional subsidence trends. The regional nature of this subsidence is not expected to have localized, acute effects on individual structures or infrastructure. Additionally, clay compaction from groundwater withdrawal would be mitigated through compliance with the CBC, which requires geotechnical investigations and appropriate engineering measures including excavation and placement of fill, where appropriate. The Project impact is with the scope of analysis in 2018 LRDP EIR Impact 3.7-6 (less than significant) and shall comply with the CBC.

d) As disclosed in 2018 LRDP EIR Impact 3.7-5, UC Davis is host to several soil units with a high shrink-swell potential. The Project site is located on Sycamore Series (S) soils (2018 LRDP EIR Exhibit 3.7-1), which have low to moderate shrink-swell potential. Shrinking and swelling can result in differential ground movement, which can cause damage to building foundations. However, projects implemented under the 2018 LRDP are subject to compliance with the CBC, including the provision for a pre-development geotechnical investigation and implementation of structural design features to eliminate weak soil characteristics would result in a less-than-significant impact related to hazardous soil characteristics. The campus Office of Design and Construction Management also requires geotechnical investigations for every applicable project managed by that office, and the UC Davis Campus Design Guide incorporates guidelines for geotechnical investigations, including estimated settlement. The Project impact is with the scope of analysis in 2018 LRDP EIR Impact 3.7-5 (less than significant) and shall comply with the CBC and the UC Davis Campus Design Guide.

e) Although 2018 LRDP EIR Impact 3.7-7 addresses replacement or construction of new septic systems, that impact is related to a few areas of west campus, south campus, and Russell Ranch. The Project site is located on central campus, which is served by the campus wastewater treatment system. No septic tanks or alternative wastewater disposal systems are included in the Project. Therefore, the Project would not contribute to 2018 LRDP EIR Impact 3.7-7.

f) As discussed on page 3.7-15 of the 2018 LRDP EIR, the UC Davis campus, including the Project site, is underlain by quaternary alluvium from the Holocene period that is generally less than 10,000 years old. This alluvium consists of sand, silt, and gravel deposited in fan, valley fill, terrace, or basin environments. These alluvial deposits contain vertebrate and invertebrate remains of extant, modern taxa, which are generally not considered paleontologically significant. The Project site is developed and has been subject to historical disturbance of the land, and therefore is unlikely to yield heretofore unknown or undiscovered paleontological resources during project development. Moreover, the UC Davis campus is situated within the Sacramento/Central Valley, which does not have any notable bedrock outcroppings. The soils of the area are deep, unconsolidated, alluvial units with a low likelihood of producing fossils. Therefore, the 2018 LRDP EIR determined that the 2018 LRDP would not impact paleontological resources. Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

4.5.8 Greenhouse Gas Emissions and Climate Change

Section 3.8 of the 2018 LRDP EIR explains the physical scientific basis of greenhouse gas (GHG) emissions and climate change, presents regulatory setting and significance criteria, describes the analysis methodology, presents the GHG sources and emissions associated with construction activities and campus operations, and evaluates the various types of adverse climate change-related effects on the environment.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

GREENHOUSE GAS EMISSIONS Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☑	☐	☐	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose or reducing the emissions of greenhouse gases?	☑	☐	☐	☐

a) The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. 2018 LRDP EIR Impact 3.8-1 discloses that the 2018 LRDP would result in increased GHG emissions caused by increases to sources such as construction activity, on-road VMT, building energy consumption, wastewater, and new stationary sources. The 2018 LRDP would result in UC Davis campus emissions four percent below 1990 levels by 2020 and 59 percent below 1990 levels by 2030, which exceeds the state GHG reduction targets proportionally applied to UC Davis. The analysis of GHG emissions in 2018 LRDP EIR Impact 3.8-1 determined that, with implementation of the UC Sustainable Practices Policy at UC Davis and the sustainability actions outlined in the UC Davis Climate Action Plan, the 2018 LRDP "Scope 1" and "Scope 2" emissions would be reduced to zero by 2025. Scope 1 emissions include all direct GHG emissions from sources controlled by the reporting entity, including the campus vehicle fleet, backup generators, and fugitive emissions from processes. Scope 2 emissions include the GHG emissions associated with purchased electricity. If all GHG reductions to achieve the targets in the UC Davis Sustainable Practices Policy cannot be met through on-site projects, UC Davis would purchase carbon offsets to achieve the GHG reduction targets. However, UC Davis plans to prioritize reducing emissions through on-site projects before it purchases any carbon offset credits to achieve the GHG targets established by the UC Davis Sustainable Practices Policy. The 2018 LRDP EIR determined that both the 2020 and 2030 emissions would meet and exceed the state's GHG reductions goals of reducing GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030, as proportionally applied to UC Davis and would be consistent with the statewide GHG reduction goals and would not considerably contribute to climate change.

Construction and operation of the Teaching and Learning Center would result in GHG emissions from demolition, construction vehicle trips, construction equipment, building energy use, and mobile sources. Emissions associated with energy use would include the consumption of natural gas for space and water heating (through the Central Plant), and the consumption of electricity, including electricity associated with the treatment and conveyance of water. The Project would include multiple design elements that would reduce overall building energy use and associated GHG emissions. These design elements would help achieve the Project goal of being certified, at

a minimum, as a LEEDv4 Silver building and achieve building energy efficiency of 20 percent better than 2016 Title 24 Energy Efficiency Standard. These design elements include:

- Building orientation to maximize south and north-facing exposure resulting in reduce energy use associated with lighting and space heating.
- Architectural designs that promote daylighting of classrooms to reduce energy use associated with lighting and space heating.
- Use of building materials in the building envelope that reduce the building cooling load and overall building energy use, while increasing thermal comfort.
- Use of energy-efficient lighting and equipment in the building to reduce the building's overall energy demand.

As discussed in 2018 LRDP EIR Impact 3.8-1, UC Davis is working to reduce GHG emissions in line with UC Sustainable Practices Policies. UC Davis campus personnel have calculated the GHG reduction potential of the following proposed projects:

- Energy efficiency projects, including the Active Commissioning Enterprise, and Phase 3 of the Smart Lighting Initiative, with estimated emission reductions of 14,211 $MTCO_2e$/year.
- The District Heating Infrastructure Steam to Hot Water Conversion Project, with estimated emission reductions of 17,179 to 19,994 $MTCO_2e$/year, depending on the technology selected.
- Potential future on-site renewable energy generation through installation of solar PV systems.
- Green energy purchases to replace existing fossil fuel energy sources (biomethane purchases and green electricity purchases), with estimated emission reductions of up to 69,509 $MTCO_2e$/year.
- Electrification of the Unitrans bus fleet, with estimated emission reductions of 1,079 $MTCO_2e$/year.

Although the Project would result in GHG emissions, through the initiatives to reduce campus-wide GHG emissions, project emissions related to energy use would be reduced or offset over time. The Project-related GHG emissions are within the scope of analysis in 2018 LRDP EIR Impact 3.8-1 (less than significant).

b) As discussed in 2018 LRDP EIR Impact 3.8-2, UC Davis lies within the Sacramento Area Council of Government (SACOG) planning area. SACOG is tasked with implementing the 2035 MTP/SCS, which includes per-capita GHG targets for the region. As noted in Section 3.16, "Transportation, Circulation, and Parking," of the 2018 LRDP EIR, the modeling conducted for the 2018 LRDP, includes SACOG's planned transportation projects under the 2035 MTP/SCS. The analysis concluded implementation of the 2018 LRDP would not limit SACOG's ability to implement projects under the 2035 MTP/SCS or reach the GHG targets in the plan.

As discussed in Sections 4.1 through 4.4 of this IS Checklist, the Project is consistent with the 2018 LRDP. As discussed under a), above, UC Davis has chosen to implement a series of policies through the 2018 LRDP which would reduce campus GHG emissions and achieve the targets established by the UC Sustainability Practices Policy. Through the implementation of this policy, the 2018 LRDP would meet or exceed the statewide targets set for 2030 and would not impede on progress towards the long-term GHG reduction goal established for 2050. As part of the implementation of to the 2018 LRDP:

- Existing campus facilities would be redeveloped to be more energy efficient, resulting in less energy use and generating less emissions than existing conditions;

- New on-campus facilities would be developed to meet or exceed energy efficiency standards with a commitment to achieve LEEDv4 Silver, thereby resulting in fewer emissions from electricity and natural gas use compared to similar new facilities built elsewhere in the states;
- New solar generation facilities would be operated on campus, off-setting emissions associated with electricity generation;
- Land use and planned infrastructure would be developed to discourage personal vehicle use, such as through limited parking for personal vehicles and shared vehicle provisions, as well as the construction of bicycle and transit infrastructure, thereby reducing transportation-related emissions; and
- Any remaining GHG emissions that need to be reduced after the physical implementation of the 2018 LRDP to meet UC Davis' GHG reduction targets would be abated by verified carbon offset purchases made by UC Davis.

Implementation of these strategies would support the University's efforts in reaching the UC Sustainable Practices Policy target of climate neutrality for Scope 1 and 2 emissions by 2025 and climate neutrality for Scope 3 emissions by 2050, which are in line with the University of California Carbon Neutrality Initiative and the UC Davis Climate Action Plan.

As evaluated in the 2018 LRDP EIR Impact 3.8-1 and discussed in response a) above, the Project would not conflict with University of California Sustainable Practices Policy, the UC Davis Climate Action Plan, or SACOG's 2035 MTP/SCS. Consistent with the overall 2018 LRDP, the Teaching and Learning Complex would not conflict with an applicable plan, policy, or regulation adopted for the purpose or reducing the emissions of greenhouse gases.

4.5.9 Hazards and Hazardous Materials

Section 3.9 of the 2018 LRDP EIR addresses the hazards and hazardous materials effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

HAZARDS & HAZARDOUS MATERIALS Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☑	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☑	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☑	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☑	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☑	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☑	☐	☐	☐
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☑	☐	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☑	☐	☐	☐

a) The Teaching and Learning Complex is within the scope of analysis in 2018 LRDP EIR Impact 3.9-1, which determined that construction and operation of the development identified in the

2018 LRDP would result in transport, use, and disposal of hazardous materials to and from the plan area. However, adherence to existing regulations and compliance with safety standards would result in a less-than-significant impact.

Hazardous Chemicals Use During Construction. Project-related construction activities would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and petroleum products (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals) that are commonly used at construction sites. Hazardous waste generated during construction may consist of welding materials, fuel and lubricant containers, paint and solvent containers, and cement products containing strong basic or acidic chemicals.

SWRCB Construction General Permit (2009-0009 DWQ) requires spill prevention and containment plans to avoid spills and releases of hazardous materials and wastes into the environment. Inspections would be conducted to verify consistent implementation of general construction permit conditions and best management practices (BMPs) to avoid and minimize the potential for spills and releases, and of the immediate cleanup and response thereto. BMPs include, for example, the designation of special storage areas and labeling, containment berms, coverage from rain, and concrete washout areas.

Hazardous Materials Transport. Although the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion, the USDOT Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR. These standard accident and hazardous materials recovery training and procedures are enforced by the state and followed by private state-licensed, certified, and bonded transportation companies and contractors.

Hazardous Materials Use During Operation. Workers could be exposed to hazardous chemicals through inhalation, skin absorption (contact), ingestion, and injection (cuts). UC Davis policies and procedures as well as Occupational Safety and Health Act (Cal/OSHA) requirements address the procurement, handling, and disposal of carcinogenic, controlled, volatile, flammable, and explosive substances. Safety Services is charged with implementing measures, directly and through campus departments, designed to ensure compliance with applicable laws and regulations.

Radioactive Materials. According the Gerry Westcott, UC Davis Campus Radiation Safety Officer, no radiation nor radioactive materials were ever stored nor used at Surge IV (UC Davis EH&S 2018). However a lab at Surge IV may have contained biohazardous material and small quantities of laboratory chemical waste may have been generated at the site in the past. Any laboratory chemical waste would have been collected according to campus hazardous waste policy and disposed of appropriately by Environmental Services Facility staff. The use of radioactive or biohazardous materials is not proposed within the Teaching and Learning Complex. No impact related to use of radioactive or biohazardous materials would occur.

Consistent with 2018 LRDP EIR Impact 3.9-1 (less than significant), the Project would adhere to existing regulations and compliance with the safety procedures mandated by applicable federal, state, university, and local laws and regulations, which would minimize the risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes.

b) Consistent with 2018 LRDP EIR Impact 3.9-2, demolition of the Surge IV modular buildings, Parking Lot 43, and associated infrastructure and grading and excavation activities for the new Teaching and Learning Complex could expose construction personnel and the public to

hazardous substances present in the soil or in built structures, which could pose health and safety risks. To minimize risks that the Project would take place on a site with unknown contamination, the campus prepared a "due diligence" assessment, i.e., a Preliminary Phase I Environmental Site Assessment (ESA) (UC Davis EH&S 2018), which identified the following demolition hazards on the Project site.

Naturally Occurring Asbestos. Analysis of five soil samples collected at the Project site identified chrysotile asbestos at concentrations ranging from <0.25 percent to 0.50 percent. Since naturally occurring asbestos was detected in samples at concentrations above the California Air Resources Board (CARB) regulatory limit of 0.25 percent, material excavated on the site may be reused on or offsite provided that it is not used in such a way as to fall under the definition of surfacing (Title 17 CCR, §93106(i)(26) and Title 17 CCR, §93105(e)(4)(G)), which requires that disturbed asbestos-containing soil (0.25 percent asbestos or greater) must be stabilized via options that include paving or covering with at least 3 inches of non-asbestos-containing material (less than 0.25 percent asbestos).

PCBs. All four Surge IV transformers may contain polychlorinated biphenyls (PCBs). If the transformers are removed as part of the Project, they must be tested for PCBs prior to removal. If they contain PCBs, the PCB oil must be removed and disposed of appropriately as a hazardous waste.

Asbestos. All four Surge IV modular structures contain asbestos and/or asbestos containing material.

Lead Based Paint. All four Surge IV modular structures contain paint with detectable amounts of lead.

Demolition of project site structures could result in inadvertent release or improper disposal of debris containing potentially hazardous materials; however, federal, state, and local regulations have been developed to address potential impacts related to the handling and disposal of hazardous materials during demolition. Potential impacts would be minimized through adherence to regulatory standards (such as Cal/OSHA regulations) that prescribe specific methods of material characterization and handling, as described in 2018 LRDP EIR Impact 3.9-2. Furthermore, consistent with 2018 LRDP EIR Mitigation Measures 3.9-2a, soil conditions on-site shall be confirmed before development and any identified contamination shall be appropriately remediated. Consistent with 2018 LRDP EIR Mitigation Measure 3.9-2b, UC Davis shall establish a contingency plan that describes the necessary actions to be taken if evidence of contaminated soil or groundwater is encountered during construction, including cessation of work until the potential contamination is characterized and properly contained or remediated. Consistent with 2018 LRDP EIR Mitigation Measure 3.9-2c, UC Davis shall minimize the potential for release of potentially hazardous construction materials during demolition by requiring that asbestos-containing building materials, lead-based paint, and other hazardous substances in building components are identified, removed, packaged, and disposed of in accordance with applicable state laws and regulations. Prior to abatement/ demolition activities, an asbestos/ demolition notification shall be submitted to the YSAQMD. Following implementation of regulatory requirements and implementation of these measures would minimize the risk of an accidental release of hazardous substances that could adversely affect human health or the environment. The Project impact is within the scope of analysis in 2018 LRDP EIR impact analysis.

c) Consistent with 2018 LRDP EIR Impact 3.9-4 (less than significant), hazardous materials and waste could be handled within 0.25 mile of an existing or proposed school as a result of the

Project. However, handling, storage, and disposal of hazardous materials associated with the Project would be subject to campus safety programs and procedures.

d) The Project site is not located on a contaminated site pursuant to Government Code Section 65962.5 (2018 LRDP EIR Impact 3.9-2). Two sites of potential concern were identified within the 2018 LRDP planning area: the UC Davis-USDA Weed Control Lab and the Lab for Energy Related Health Research. Both of these sites are under the jurisdiction of state agencies, and are currently under remediation and subject to development of Waste Discharge Requirements, respectively. The Project would not disturb these sites and activities involving the assessment, cleanup, and monitoring of these sites would continue regardless of approval of the Project. Furthermore, to address the potential for undocumented contamination that has not been characterized or remediated at the Project site, UC Davis shall implement 2018 LRDP EIR Mitigation Measures 3.9-2a, soil conditions on-site shall be confirmed before development and any identified contamination shall be appropriately remediated. Consistent with 2018 LRDP EIR Mitigation Measure 3.9-2b, UC Davis shall establish a contingency plan that describes the necessary actions to be taken if evidence of contaminated soil or groundwater is encountered during construction, including cessation of work until the potential contamination is characterized and properly contained or remediated.

   As discussed in 2018 LRDP EIR Impact 3.9-3, the 2018 LRDP includes development of academic and administrative land uses, campus infrastructure, and student housing in close proximity to the UPRR line, which is used to transport potentially hazardous and flammable materials. Construction and operation of the 2018 LRDP would not increase the hazard associated with operation of the highway and railroad, but would increase the number of people potentially exposed to hazardous conditions. However, the Project site is located over a quarter mile from I-80 and the UPRR line and does not include any housing. Therefore, construction and operation of the Project would not increase the hazard associated with these transportation corridors.

e) As shown in 2018 LRDP EIR Exhibits 3.9-2 and 3.9-3 of the 2018 LRDP EIR, the Project site is not within any of the airport safety compatibility zones for the University Airport or the Yolo County Airport (2018 LRDP EIR Impact 3.9-5). Therefore, the Project would not conflict with airport operations. This issue is not relevant to this project and was adequately addressed in the 2018 LRDP EIR.

f) As stated on page 3.9-29 of the 2018 LRDP EIR Volume 1, the University Airport is a public use airport, not a private airstrip. There are no private airstrips located within 2 miles of the plan area. As a result, impacts related to safety hazards associated with the operation of a private airstrip would not occur. This issue is not relevant to this project.

g) The Project could result in short-term, temporary impacts to street traffic because of the presence of construction vehicles or potential extension of construction activities into the right-of-way. This could result in a temporary reduction in the number of lanes or temporary closure of certain street segments. As evaluated in 2018 LRDP EIR Impact 3.9-6, any such impacts would be limited to the construction period and would affect only adjacent streets or intersections. The Project would not modify the existing central campus roadway network and is unlikely to interfere with response times of emergency vehicles during operation. As required by 2018 LRDP EIR Mitigation 3.9-6, UC Davis shall prepare and implement a site-specific construction traffic management plan for any project-related construction within existing roadways. The plan would adequately address any potential conflicts with emergency access or evacuation routes during construction by communicating proposed lane and road closures with first responders and allowing first responders to plan accordingly to ensure that emergency response times and

maintain adequate emergency access. The Project's impact is within the scope of 2018 LRDP EIR Impact 3.9-6 (less than significant with mitigation).

h) As stated on page 3.9-29 of the 2018 LRDP EIR Volume 1, the Project site is not located in or near a fire hazard severity zone established by CAL FIRE. The potential for wildland fire is low.

4.5.10 Hydrology and Water Quality

Section 3.10 of the 2018 LRDP EIR addresses the hydrology and water quality effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

HYDROLOGY & WATER QUALITY Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Violate any water quality standards or waste discharge requirements?	☑	☐	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☑	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☑	☐	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☑	☐	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☑	☐	☐	☐
f) Otherwise substantially degrade water quality?	☑	☐	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☑	☐	☐	☐
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☑	☐	☐	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☑	☐	☐	☐
j) Inundation by seiche, tsunami, or mudflow?	☑	☐	☐	☐

a,f) Construction. 2018 LRDP EIR Impact 3.10-1found that construction on campus under the 2018 LRDP would not contribute substantial loads of sediment or other pollutants to stormwater runoff. Construction on campus is covered under the NPDES state-wide General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activity (General Permit). As part of the General Permit, campus construction projects managed by outside contractors and disturbing over one acre (including the Project) must implement Stormwater Pollution Prevention Plans (SWPPPs), which specify Best Management Practices (BMPs) to reduce the contribution of sediments, spilled and leaked liquids from construction equipment, and other construction-related pollutants to stormwater runoff. The UC Davis campus is required to comply with the NPDES state-wide General Permit requirements. This regulatory framework provides adequate protection from stormwater contamination and provides water quality protection from construction activities on campus. The Project is within the scope of analysis in 2018 LRDP EIR Impact 3.10-1 (less than significant).

Operation. As described in 2018 LRDP EIR Impact 3.10-2, new impervious surfaces created by development of the 2018 LRDP would result in new sources of stormwater runoff and contamination, as well as an increased risk of erosion and sedimentation. However, campus development, including the Project, is covered under the Phase II Small MS4 Permit, which requires management of long-term stormwater discharges and implementation of pollution protection measures. These management practices are enforced under the campus stormwater management program and ensure long-term protection related to stormwater pollution. The Project is within the scope of analysis in 2018 LRDP EIR Impact 3.10-2 (less than significant).

As described in 2018 LRDP EIR Impact 3.10-3, expansion of the campus population and campus facilities under the 2018 LRDP would result in an increase in the amount of wastewater generated; however, the types of chemical constituents in wastewater would remain approximately the same. The Project would contribute to this increase. By continuing to adhere to the provisions of NPDES permit CA0077895, the wastewater treatment plant would continue to comply with Waste Discharge Requirements (WDRs). The Project is within the scope of analysis in 2018 LRDP EIR Impact 3.10-3 (less than significant).

b) Deep Aquifer. Under the 2018 LRDP, UC Davis will continue to draw domestic water from the six campus wells in the deep aquifer, during Term 91 conditions and to supplement water from the Woodland-Davis Clean Water Agency, to meet increased demand attributable to campus growth. The Project would contribute to this demand, within the limits of the demand projections identified in the 2018 LRDP EIR. The Project is within the scope of 2018 LRDP EIR Impact 3.10-4 (less than significant), which determined that campus use of groundwater supplies, including for the Project would not substantially affect the available supplies within or ability for recharge of the deep aquifer.

Shallow/Intermediate Aquifer. As identified in the 2018 LRDP EIR, implementation of the 2018 LRDP is not expected to increase groundwater withdrawals from the shallow/intermediate aquifer; however, recharge infiltration patterns could be affected by the increase in development. The Project would contribute to this impact by constructing approximately 35,000 sf of roof and 66,000 sf of paving. Consistent with Mitigation Measure 3.10-6 of the 2018 LRDP EIR, which requires implementation of project-level storm controls, the Teaching and Learning Complex includes stormwater treatment areas throughout the Project site to capture and treat stormwater runoff from the impervious paving and roof surfaces. As shown on Exhibit 3-11, the Project includes 4,300 sf of stormwater treatment areas per code. The Project includes stormwater treatment areas and is consistent with 2018 LRDP EIR Impact 3.10-5 (less than significant).

c,e) The 2018 LRDP EIR Impact 3.10-6 found that new development on campus would result in an overall increase in impervious surfaces and produce changes to site-specific stormwater infrastructure. The Project would contribute to this impact by installing approximately 35,000 sf of impervious roof and 66,000 sf of impervious paving. Consistent with Mitigation Measure 3.10-6 of the 2018 LRDP EIR, which requires implementation of project-level storm controls, the Teaching and Learning Complex includes stormwater treatment areas throughout the Project site to capture and treat stormwater runoff from the impervious paving and roof surfaces. As shown on Exhibit 3-11, the Project includes 4,300 sf of stormwater treatment areas per code and is within the scope of the 2018 LRDP EIR impact analysis.

Water quality impacts related to stormwater runoff are evaluated in checklist item a, f), above.

g,h) The Project site is not located within a 100-year flood hazard area (see 2018 LRDP EIR, Exhibit 3.10-2, Designated 100-Year Flood Zones). The Project would not place any housing or structures within a 100-year flood hazard area. The Project would not contribute to 2018 LRDP EIR Impact 3.10-7.Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

i) UC Davis is located within the inundation area of the Monticello Dam, such that up to two meters of water would be present in certain areas of campus for a period of approximately 24 hours. However, the dam structure is carefully managed by state and federal agencies and is capable of withstanding strong seismic shaking. The Project is within the scope of analysis in 2018 LRDP EIR Impact 3.10-8 (less than significant), which found that the risk of inundation of any portion of the campus, including the Project site, from a failure of the Monticello Dam is low and.

j) The campus is not subject to inundation by seiche, tsunami, or mudflow. The campus is generally flat and is not located near any large water bodies. Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

4.5.11 Land Use and Planning

Section 3.11 of the 2018 LRDP EIR addresses the land use and planning effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

LAND USE & PLANNING Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Physically divide an established community?	☑	☐	☐	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☑	☐	☐	☐
c) Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses?	☑	☐	☐	☐

a) There is no housing on the Project site and the Project would have no potential to physically divide an established community. Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

b,c) UC holds jurisdiction over campus-related projects and projects carried out by UC Davis would be consistent with the 2018 LRDP (2018 LRDP EIR Impact 3.11-1). The Project would result in a new academic classroom building consistent with the *Academic & Administrative* designation for the Project site, which is currently developed with academic buildings and parking and surrounded by academic and administrative facilities on the core campus. The Project would maintain the compact central campus footprint, enhance student interaction, conserve land, and utilize existing building corridors, consistent with the intent of the 2018 LRDP. In addition, the Project does not include any housing and would not contribute to 2018 LRDP EIR Impact 3.3-6 regarding land use compatibility with off-site sources of toxic air contaminants and ultrafine particles. The Project is compatible with surrounding central campus academic and administrative land uses. As a core campus academic building, the proposed project is within the scope of activities for land use impacts evaluated in the 2018 LRDP EIR.

4.5.12 Mineral Resources

Section 3.7, "Geology, Soils, and Seismicity," of the 2018 LRDP EIR briefly addresses mineral resources issues under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

MINERAL RESOURCES Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☑	☐	☐	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☑	☐	☐	☐

a,b) As described on page 3.7-15 of the 2018 LRDP EIR Volume 1, the LRDP plan area, including the Project site, is located in MRZ-1, which is an area where there is sufficient information to determine that no significant mineral deposits (specifically aggregate rock) are present. Additionally, the LRDP plan area, including the Project site, is not indicated as a locally important mineral resource site and the 2018 LRDP EIR would not result in the loss of availability of mineral resources. The Project activities are within the scope of the 2018 LRDP and the environmental impact analysis contained in the 2018 LRDP EIR.

4.5.13 Noise

Section 3.12 of the 2018 LRDP EIR addresses the noise effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

NOISE Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☑	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☑	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☑	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☑	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☑	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☑	☐	☐	☐

a,c,d) **Construction Noise.** 2018 LRDP EIR Impact 3.12-1 determined that implementation of the 2018 LRDP would result in construction activities, that although would be intermittent and temporary in nature, may still result in noise levels that impact nearby noise sensitive land uses and could disturb people. The 2018 LRDP would necessitate construction activities near adjacent, existing development, including on-campus facilities and could exceed acceptable noise levels or require nighttime construction.

Consistent with 2018 LRDP EIR Impact 3.12-1, project-related construction activity would result in temporary noise increases on and near the Project site, which is on the central campus and surrounded by academic and administrative facilities. Construction of the Project is anticipated to occur over approximately two years, beginning in June of 2019. Construction activity would involve the demolition of existing facilities on the Project site and the construction of new facilities using conventional construction techniques and equipment. As a result, construction activity would result in a noise level increase on and surrounding the Project site, although noise level increases would be temporary and would vary considerably depending on the construction phase. No blasting or pile driving would occur.

Based on project characteristics, the greatest noise levels would occur during the demolition of the existing Surge IV building and the grading and earth movement site preparation of construction because of the types of heavy-duty construction equipment involved, including graders, excavators, and dozers. As evaluated in the 2018 LRDP EIR, typical noise levels from these construction phases, with the typical number of equipment operating on the site, (i.e. one loader, one grader, one excavator, and one dozer) range from 86 to 90 dB at a distance of 50 feet, from 80 to 84 dB at a distance of 100 feet, and from 66 to 70 dB at a distance of 500 feet (although noise levels would likely be lower due to additional attenuation from ground effects, and shielding from intervening buildings on campus). Construction noise levels would be less than the significance criteria of 80 dB L_{eq} at a distance of 500 feet or more from the Project site. During the loudest phases of construction activity, academic buildings within 100 feet of the Project site could experience construction noise that exceeds the significance criterion of 80 dB Leq.

2018 LRDP EIR Mitigation Measure 3.12-1 requires construction noise minimization measures. Mitigation Measure 3.12-1 limits the hours when construction activity can take place (i.e., between 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends, and not during finals week), requires the use of noise control technologies (e.g. noise-reduction intake and exhaust mufflers and engine shrouds), and strategies to reduce potential impacts on sensitive receptors (e.g. locating equipment as far as possible from nearby noise-sensitive land uses). Project implementation of Mitigation Measure 3.12-1 would serve to reduce construction noise impacts on sensitive receptors to prevent the exposure of noise-sensitive receptors to construction noise that exceeds the significance criterion of 80 dB L_{eq}. The Project impact is within the scope of analysis of 2018 LDRP EIR Impact 3.12-1 (less than significant with mitigation).

Operational Noise – Stationary Noise Sources. 2018 LRDP EIR Impact 3.12-2 determined that new buildings under the 2018 LRDP may include new stationary noise sources and equipment (e.g., mechanical equipment, backup generators), and loading docks that, depending on location of new and existing sensitive land uses, could result in noise levels that disturb people while sleeping or substantial increases in noise over existing levels.

The Project would include roof-mounted HVAC equipment that could generate noise heard at nearby land uses. The Project-related operational noise is within the scope of activities analyzed in the 2018 LRDP EIR and the noise effects would be consistent with 2018 LRDP EIR Impact and Mitigation 3.12-2. Due to attenuation rates, distances to sensitive receptors, and designing the Project to ensure interior noise levels do not exceed 45 dB CNEL (California Code of Regulations, Title 24 Section 1207.4), the Project is within the scope of noise impact analysis in the 2018 LRDP EIR.

Operational Noise - Traffic Noise. 2018 LRDP EIR Impact 3.12-4 determined that although long-term population growth and development under the 2018 LRDP would result in some increases in traffic on local and regional roadways, the future roadway noise volumes would not exceed the criterion of 70 dB CNEL.

The Project would provide workspace for an estimated new 75 employees, which would contribute to increases on local and regional roads. Generally, a doubling of a noise source (such as twice as much traffic) is required to result in an increase of 3 dB, which is perceived as barely noticeable by people and a 5 dB increase in distinctly noticeable (Egan 2007:21). Therefore, an increase in 5 dB or more in traffic noise would be considered substantial. Consistent with 2018 LRDP EIR Impact 3.12-4, the vehicle trips associated with the Project would not increase traffic

noise levels along area roadways by 5 dB or more. The Project is within the scope of analysis in 2018 LRDP EIR Impact 3.12-4 (less than significant).

b) As discussed on page 3.12-20 of the 2018 LRDP EIR Volume 1, pile driving, blasting, or other substantial vibration-inducing construction equipment or techniques are not anticipated to be necessary during construction of the land uses identified under the 2018 LRDP. Consistent with this, the Project would not involve pile driving, blasting, or other substantial vibration-inducing construction equipment or techniques for demolition of Surge IV or construction of the new building. The Project would require over-excavation and compaction 5 feet below the bottom of footings; however, this is a typical construction activity and would not generate substantial levels of vibration or groundborne noise. Page 3.12-21 of the 2018 LRDP EIR (Impact 3.12-1) discusses typical excavation and compaction of soils; the Teaching and Learning Complex Project would be consistent with this type of activity and the noise impact analysis previously completed in the 2018 LRDP EIR.

   Also discussed on 2018 LRDP page 3.12-20 of the 2018 LRDP EIR Volume 1, the 2018 LRDP would not involve the development of uses that would result in a substantial increase in rail or heavy truck traffic in the area. Some additional truck deliveries (primarily light- to medium- duty trucks) could be associated with new academic land use designations and/or uses supporting on-site residents. However, vibration associated with such trucks would be localized and similar to existing conditions because of their sporadic nature along a given roadway and thus would not be considered a substantial generator of operational vibration. Consistent with this, the Teaching and Learning Complex would be an academic classroom building and would result in only sporadic truck deliveries.

   Finally, 2018 LRDP EIR Impact 3.12-3 discloses that although the 2018 LRDP would result in new development, it would not result in any increase in airport, rail, or stadium noise. However, the 2018 LRDP planned development could locate new sensitive land uses in close proximity (i.e., within 750 feet) to existing rail lines, potentially resulting in sleep disturbance at these new uses. However, the Project site is not within 750 feet of existing rail lines and would not involve construction of housing. Therefore, this issue is not relevant to the Teaching and Learning Complex project.

e) 2018 LRDP EIR Impact 3.12-3 discussed the potential for additional development on campus to result in the exposure of sensitive receptors to existing noise and vibration levels, including the University Airport. The 2018 LRDP would not place any student housing within the 55 dBA CNEL contour of the airport and the 2018 LRDP, including the Project, does not propose changes to University Airport operations that would result in increases in associated airport noise. The Teaching and Learning Complex would not expose people to excessive noise levels associated with this public use airport because project site is located approximately 1.75 miles east of the University Airport and outside of the airport's 55 dB CNEL (UC Davis 2018a). Therefore, this issue is not relevant to this project.

f) The University Airport is a public use airport, not a private airstrip. No other private airport facilities are within the immediate vicinity of the campus. This issue is not relevant to this project and was adequately addressed in the 2018 LRDP EIR.

4.5.14 Population and Housing

Section 3.13 of the 2018 LRDP EIR addresses the population and housing effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

POPULATION & HOUSING Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☑	☐	☐	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☑	☐	☐	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☑	☐	☐	☐
d) Create a demand for housing that cannot be accommodated by local jurisdictions?	☑	☐	☐	☐

a,d) The direct and indirect inducement of population growth and housing demand caused by implementation of the 2018 LRDP is analyzed in 2018 LRDP EIR Impact 3.13-1. As identified in the 2018 LRDP EIR, while student housing is tight, with low local (city of Davis) vacancy rates, adequate housing opportunities in the overall region are available and would continue to be available during implementation of the 2018 LRDP such that new employees associated with the 2018 LRDP would not necessitate the construction of new housing. In addition, while the 2018 LRDP would induce population growth in the region; the projected increase in employment at UC Davis under the 2018 LRDP is well within existing regional growth projections and projected housing stock, and as a result is not considered substantial. It is noted that over 5,000 beds of student housing are planned to be constructed in the near term (Wet Village and Orchard Park); project level analyses of these projects are included in the 2018 LRDP EIR. However, the Project would not provide for student enrollment growth. The Project-related increase of 75 staff is within the scope of anticipated employment growth and housing demand evaluated in the 2018 LRDP EIR.

Implementation of the Project would also contribute to the physical environmental effects that were analyzed throughout the 2018 LRDP EIR, some of which are significant and unavoidable. These impacts were addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2018 LRDP.

b,c) No housing units exist on the Project site. The Project would not displace any existing housing units or people. Therefore, this issue is not relevant to the Teaching and Learning Complex Project.

4.5.15 Public Services

Section 3.14 of the 2018 LRDP EIR addresses the public services effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

PUBLIC SERVICES Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
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:				
i) Fire protection?	☑	☐	☐	☐
ii) Police protection?	☑	☐	☐	☐
iii) Schools?	☑	☐	☐	☐
iv) Parks?	☑	☐	☐	☐
v) Other public facilities?	☑	☐	☐	☐

a) The Project activities are within the scope of the environmental impact analysis contained in the 2018 LRDP EIR. As identified by 2018 LRDP EIR Impacts 3.14-1 and 3.14-2 (less than significant), implementation of the 2018 LRDP could increase the demand for fire and police services. The Project-related increase of 75 new employees is within the scope of employees anticipated in the 2018 LRDP and would not result in the need for additional fire or police protection facilities. Demand for additional fire or police protection facilities associated with new employees was analyzed in the 2018 LRDP EIR.

As identified in 2018 LRDP EIR Impact 3.14-3 (less than significant), the increase in campus population that is expected to occur under the 2018 LRDP would result in an increased demand for schools; the Project would contribute to this demand. However, enrollment for DJUSD has declined in 7 of the last 11 years and existing schools would have adequate capacity to accommodate the increase in students. No new facilities would be needed.

As identified in 2018 LRDP EIR Impact 3.14-4 (less than significant), the increase in campus population that is expected to occur under the 2018 LRDP could result in an increased demand for public facilities such as libraries and parks; the Project would contribute to this demand. However, this increase in demand is covered as part of the 2018 LRDP and the Project would not result in the need for new or expanded public facilities.

4.5.16 Recreation

Section 3.15 of the 2018 LRDP EIR addresses the environmental effects associated with modifying recreational resources to meet campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

RECREATION Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☑	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☑	☐	☐	☐

a) The Project activities are within the scope of the environmental impact analysis contained in the 2018 LRDP EIR. 2018 LRDP Impacts 3.15-1 and 3.15-2 (less than significant) found that the 2018 LRDP would have a less-than-significant increase in demand for recreation facilities. The Project would increase the campus population by up to 75 employees, consistent with 2018 LRDP growth assumptions, which would contribute to demand and use for parks and recreation facilities on and off campus. However, the additional employees are expected to choose residential locations in Davis and throughout the region, with their associated recreational facility use distributed throughout the region.

b) The Project site plan includes pedestrian and bike paths that align with existing central campus pathways. Installation of these pathways would require ground-disturbance, which would result in typical construction-related impacts. These types of impacts are address throughout this IS Checklist (e.g., within Section 4.5.3, “Air Quality,” Section 4.5.5, “Biological Resources,” and Section 4.5.10, “Hydrology and Water Quality”); all of which are considered within the scope of the 2018 LRDP EIR.

4.5.17 Transportation, Circulation, and Parking

Section 3.16 of the 2018 LRDP EIR addresses the transportation, circulation, and parking effects of campus growth under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

TRANSPORTATION & TRAFFIC Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☑	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards established by the county congestion management agency for designated roads and highways?	☑	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☑	☐	☐	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☑	☐	☐	☐
e) Result in inadequate emergency access?	☑	☐	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☑	☐	☐	☐

a,b) Construction of the Project would generate vehicle trips on adjacent roadways, entailing periodic deliveries of building materials, construction equipment trips, and construction labor commute trips. Given the relatively small size of the Project site and project elements, it would be expected that there would not be a substantial number of construction-related vehicle trips.

With regard to operations, the Project would add up to 75 staff to the campus. This is expected to slightly increase morning and afternoon peak traffic volumes by up to 75 vehicles during each peak period, assuming that all employees drive individually to the Project site.

The 2018 LRDP EIR found that implementation of the 2018 LRDP would cause unacceptable level of service conditions at several on-campus intersections (2018 LRDP EIR Impact 3.16-2). 2018 LRDP EIR Mitigation Measures 3.16-2(a-e) require the UC Davis to implement Transportation Demand Management strategies to reduce vehicle trips, monitor peak hour traffic operations at critical locations, review individual projects to determine if intersection operations degrade to unacceptable levels, and implement physical improvements when intersection operations degrade. However, this LRDP impact is identified as significant and unavoidable for some intersections because it is uncertain whether the mitigation would sufficiently reduce LOS conditions to acceptable levels. Project-related construction and operation traffic would contribute to 2018 LRDP EIR Impact 3.16-2; however, the Project contribution is within the scope of traffic volumes contemplated by the 2018 LRDP EIR. This impact was examined in the 2018 LRDP EIR and was addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2018 LRDP. No additional mitigation is available to reduce the Project's contribution to this impact.

The 2018 LRDP EIR determined that implementation of the 2018 LRDP would contribute to existing unacceptable LOS F conditions on portions of I-80 (2018 LRDP EIR Impact 3.16-1). 2018 LRDP EIR Mitigation Measure 3.16-1 requires the campus to implement Transportation Demand Management strategies to reduce vehicle trips on I-80. However, this LRDP impact is identified as significant and unavoidable because, despite implementation of mitigation, unacceptable LOS F conditions will continue to occur along I-80. Project-related construction and operation traffic would contribute to 2018 LRDP EIR Impact 3.16-1; its contribution is within the scope of traffic volumes contemplated by the 2018 LRDP EIR. This impact was examined in the 2018 LRDP EIR and was addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2018 LRDP. No additional mitigation is available to reduce the Project's contribution to this impact.

c) The Project would result in no change to air traffic patterns. The UC Davis airport is the closest airport and the Project would have no effect on the number of flights or the operation of the airport. This issue is not relevant to this project and was adequately addressed in the 2018 LRDP EIR.

d) Vehicular access to the Project site, located on the central campus, is restricted. However, the site plan identifies ingress and egress for emergency access and ADA access, and the Project would be designed and constructed according to adopted UC Davis standards to minimize traffic hazards.

e) 2018 LRDP EIR Impact 3.9-6 (less than significant with mitigation) identified that implementation of the 2018 LRDP could interfere with the campus' Emergency Operations Plan through construction-related road closures. Construction of the Project would not any require road closures. A fire lane and one-way vehicular access would be established around the site, moving southward from Hutchison on the east side of the new building, around the south end of the site, and back northward to Hutchison along the west side of the site, thereby ensuring adequate emergency access. In addition, as required by 2018 LRDP EIR Mitigation Measure 3.9-6, UC Davis shall prepare and implement a Construction Traffic Management Plan to adequately address any potential conflicts with emergency access or evacuation routes during construction by communicating proposed lane and road closures with first responders and allowing first responders to plan accordingly to ensure that emergency response times are maintained along with adequate emergency access.

f) As stated in the 2018 LRDP EIR, implementation of the 2018 LRDP would not conflict with any adopted policies, plans, or programs regarding public transit (Impact 3.16-3), bicycle (Impact 3.16-4), or pedestrian (Impact 3.16-5) facilities.

The 2018 LRDP assumed that student, employee, and on-campus housing growth resulting from its implementation would generate an estimated 4,600 new bicyclists on the UC Davis campus. The Project would require 75 new staff, which would contribute to use of public transit, bicycle, or pedestrian facilities in the Project vicinity; this is within the scope of growth contemplated by the 2018 LRDP EIR. In addition, the Project would provide a minimum of 800 bicycle parking spaces as well as connections to existing campus bike and pedestrian paths.

Implementation of the 2018 LRDP would increase automobile, transit, bicycle, and pedestrian trips to, from, and within the UC Davis campus, which would increase the competition for physical space between the modes and increase the potential for collisions. The 2018 LRDP EIR identified several mitigation measures to reduce impacts related to the performance or safety of public transit, bicycle, or pedestrian facilities. Applicable measures, which would be implemented as part of the Teaching and Learning Complex Project, are:

- Mitigation Measure 3.16-3a: Monitor transit service performance and support transit improvements
- Mitigation Measure 3.16-3b: Monitor transit-related collisions and implement countermeasures to minimize potential conflicts with transit service and facilities.
- Mitigation Measure 3.16-4: Monitor bicycle-related collisions to implement countermeasures minimizing potential conflicts with bicycle facilities.
- Mitigation Measure 3.16-5: Monitor pedestrian-related collisions implement countermeasures minimizing potential conflicts with pedestrian facilities.

As shown in Exhibits 3-8 and 3-9, onsite and offsite improvements would be made for circulation, connecting to and improving existing central campus pedestrian and bicycle paths. Although the 80-space Visitor Parking Lot 43 would be removed, this surface parking is largely unused because this portion of the central campus is not publicly accessible by car and is an inefficient use of the central campus. However, four parking spaces would be provided for UC Davis maintenance and service vehicles and a loading zone for ADA accessibility would be provided. There would be clear separation of bike, pedestrian, and bus traffic to reduce conflicts. The Project's impact is within the scope of 2018 LRDP EIR Impacts 3.16-3, 3.16-4, and 3.16-5, which addressed impacts related to the performance or safety of public transit, bicycle, or pedestrian facilities.

4.5.18 Utilities and Service Systems

Section 3.17 of the 2018 LRDP EIR addresses the effects of campus growth on utility systems under the 2018 LRDP by providing regulatory setting information, environmental setting information, analysis methodology, significance criteria, and a detailed environmental impact evaluation.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

UTILITIES & SERVICE SYSTEMS Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☑	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☑	☐	☐	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☑	☐	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☑	☐	☐	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments?	☑	☐	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☑	☐	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☑	☐	☐	☐
h) Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts?	☑	☐	☐	☐
i) Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts?	☑	☐	☐	☐

a) The Project would add 75 staff and include minor landscaping, which would result in a negligible increase in domestic water use and associated wastewater production. This increase is within the scope analyzed in 2018 LRDP EIR Impact 3.17-1 (less than significant). The permitted peak monthly average capacity of the campus WWTP is currently 3.85 mgd, which can accommodate the projected growth under the 2018 LRDP, including the Project. Past trends in influent flow

rate to the WWTP indicate that the WWTP will continue to have design capacity for many years, including with implementation of the Project.

As described in 2018 LRDP EIR Impact 3.10-3 (less than significant) and addressed in Section 4.5.10, "Hydrology and Water Quality," (see checklist item a,f), it is expected that the types of chemical constituents in wastewater would remain approximately the same with implementation of the 2018 LRDP, including the Project. By continuing to adhere to the provisions of NPDES permit CA0077895, the wastewater treatment plant would continue to comply with WDRs.

b,e) As described above in checklist item a), adequate capacity remains at the campus WWTP to accommodate projected growth under the 2018 LRDP, including the Project. Implementation of the 2018 LRDP includes potential wastewater infrastructure improvement projects to ensure water quality and reliability of campus wastewater collection/treatment infrastructure. Consistent with the analysis in 2018 LRDP EIR Impacts 3.17-2 and 3.17-3 (less than significant), the Teaching and Learning Complex would utilize the wastewater infrastructure contemplated in the 2018 LRDP and would not require additional or expanded facilities. Therefore, the Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR.

c) The Project-related impervious cover would be approximately 35,000 sf of roof and 66,000 sf of paving. This would require 4,300 sf of stormwater treatment areas per code. Pursuant to Mitigation Measure 3.10-6 of the 2018 LRDP EIR, which requires implementation of project-level storm controls, the Teaching and Learning Complex includes stormwater treatment areas throughout the Project site to capture and treat stormwater runoff from the impervious paving and roof surfaces (refer to Exhibit 3-11 for the locations of these areas). Installation of these project-specific stormwater treatment areas would require ground-disturbance, which would result in typical construction-related impacts. These types of impacts are address throughout this IS Checklist (e.g., within 3.3, "Air Quality;" 3.5, "Biological Resources," 3.10, "Hydrology and Water Quality"); all of which are within the scope of the 2018 LRDP EIR.

d) The Project is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR. Water used within the UC Davis campus is provided by three major sources: WDCWA surface water, SCWA surface water, and groundwater; the Teaching and Learning Complex would utilize any or all these water sources. The increase in water demand attributable to the needs of 75 staff and landscaping is within the increase considered in 2018 LRDP Impact 3.17-1 (less than significant). Consistent with the LRDP's conservation strategies, the Project would also use low-flow fixtures to reduce domestic water consumption. The Project water demand is within that contemplated for the campus by the 2018 LRDP. The 2018 LRDP EIR determined that sufficient water supplies are available to meet projected demand and no new or expanded entitlements are required.

f) Implementation of the Project, particularly the addition of 75 staff, would result in a negligible increase in solid waste. The waste disposal needs of the Project would be served by the county landfill. The additional staff and associated waste generation were contemplated in 2018 LRDP and evaluated in the 2018 LRDP EIR. Impact 3.17-4 (less than significant) of the 2018 LRDP EIR determined that Yolo County Central Landfill could accommodate any waste generated by implementation of the 2018 LRDP, which includes the Project. Because of increased diversion rate requirements, landfilled quantities are anticipated to be substantially decreased by 2030-2031 (as described in 3.17.1 "Regulatory Setting" of the 2018 LRDP EIR).

g) Materials generated during the demolition phase of the Project would be separated into different categories for reuse, recycling or landfill disposal. Most of the furnishings, fixtures, and equipment from the buildings would be reused in other campus buildings. As the building spaces

are demolished, some materials such as copper from pipes and wiring and other metals will be gathered for recycling. Demolition of the buildings would be preceded by abatement of hazardous materials such as lead and asbestos. Low concentration of asbestos can be sent to certain landfills that are certified to accept low levels of asbestos. The closest landfill that accepts asbestos contaminated material is Recology Hay Road Landfill in Vacaville which is approximately 15 miles to the south of the Project site.

As part of the UC Sustainable Practices Policy, UC Davis has several campus-directed waste reduction strategies/actions in place that would substantially reduce landfill contributions through 2030. Student staff members and interns with the Waste Reduction and Recycling program monitor recycling at campus construction sites by performing site waste assessments and reporting the ultimate diversion rates. Compliance with the UC Sustainable Practices Policy would continue to reduce landfill contributions, consistent with CIWMA, Assembly Bill (AB) 341, Senate Bill (SB) 1374, AB 1826, and SB 1383. The Project would implement these campus waste reduction strategies/actions, as contemplated in 2018 LRDP EIR Impact 3.17-4 (less than significant) and would comply with all applicable statutes and regulations related to solid waste.

h) The Project would be served by the Central Heating and Cooling Plant. The Project would extend 6-inch chilled and hot water lines into Hutchinson Drive to tie in with the existing mains. The new building would connect to the campus electrical service system via one medium voltage loop and a new transformer at the south-east corner of the building. The new transformer would be tied from the UC Davis medium voltage distribution system.

   The 2018 LRDP EIR identified that campus development under the 2018 LRDP would require extension of electrical utilities as well as expansion of chilled water to serve specific projects and determined impacts would be less than significant (2018 LRDP EIR Impacts 3.17-5 and 3.17-6 [less than significant]). The Project's interconnection to campus utilities is within the scope of activities and impact analysis evaluated in the 2018 LRDP EIR.

i) The Project would connect to the existing campus telecommunications system. No additional capacity would be needed to serve the Project and no off-site construction would be required.

4.5.19 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE Would the Project…	Impact Examined in 2018 LRDP EIR	Impact Not Examined in 2018 LRDP EIR		
		No Impact	Less-than-Significant Impact	Additional CEQA Analysis Required
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☑	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☑	☐	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☑	☐	☐	☐

a) All applicable mitigation measures identified in the 2018 LRDP EIR to avoid and reduce impacts are integrated the Teaching and Learning Complex Project. Given the nature of the Project (i.e., re-development of a previously developed site) and the integration of these measures, the Project would not substantially degrade the quality of the environment. As described in Section 4.5.5, "Biological Resources," of this IS Checklist, the Project would not significantly affect fish or wildlife habitat or species. The site is developed and mostly devoid of sensitive biological resources, except potential nest trees for special-status birds, which would be addressed by 2018 LRDP EIR mitigation measures.

   As described in Section 4.5.4, "Archeological, Historical, and Tribal Cultural Resources," no historic architectural resources were identified on the Project site and the Project site is not within an area of archaeological sensitivity. Measures integrated into the Project would avoid disturbance, disruption, or destruction of inadvertent archaeological resource discoveries. Therefore, the Project would not eliminate any examples of the major periods of California history or prehistory.

b) The 2018 LRDP EIR identified significant and unavoidable impacts to aesthetics (scenic vistas), agriculture (conversion to non-agricultural use), air quality (construction and operation emissions), land use (compatibility with off-site sources of toxic air contaminants and ultrafine particulates), historical resources, biological resources (removal of heritage or specimen trees), population and housing (physical effects of development), traffic and transportation (freeway and intersection LOS impacts).

The Project is within the scope of campus development and population evaluated in the 2018 LRDP EIR. As documented throughout the environmental checklist in this IS, the Project would not affect and therefore would not contribute to significant unavoidable impacts to the following resources as identified in the 2018 LRDP EIR: aesthetics, land use, historical resources, biological resources, population and housing.

The Project would incrementally contribute to air quality and traffic impacts that were identified as cumulatively considerable in the 2018 LRDP EIR. The Project's construction and operation emissions as well as the Project's contribution to level of service degradation are within the scope of impacts examined in the 2018 LRDP EIR. These impacts were also addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2018 LRDP. No conditions have changed, and no new information has become available since certification of the 2018 LRDP EIR that would alter this previous analysis. No additional mitigation is available to reduce the Project's contribution to cumulative impacts.

c) The Project would incrementally contribute to air quality and traffic impacts that were identified as significant and unavoidable as well as cumulatively considerable in the 2018 LRDP EIR. The Project's construction and operation emissions as well as the Project's contribution to level of service degradation are within the scope of impacts examined in the 2018 LRDP EIR. These impacts were also addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2018 LRDP. Effects of the Project would not result in substantial adverse effects on human beings beyond those analyzed in the 2018 LRDP EIR. No conditions have changed, and no new information has become available since certification of the 2018 LRDP EIR that would alter this analysis. No additional mitigation is available to reduce the Project's contribution these impacts. Other impacts with the potential to affect human beings were determined to be less than significant.

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5 APPLICABLE 2018 LRDP EIR MITIGATION MEASURES

The following mitigation measures were adopted upon approval of the 2018 LRDP EIR and would be applicable to the mitigation of impacts associated with the proposed Teach and Learning Complex Classroom Building.

Mitigation Measure 3.1-3a: Building surfaces.

UC Davis shall require the use of textured, non-reflective exterior surfaces and non-reflective (mirrored) glass during design review of all new/redeveloped structures.

Mitigation Measure 3.1-3b: Lighting fixtures.

UC Davis shall require all new outdoor lighting to utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting such that light spillover onto adjacent structures does not occur. Verification of inclusion in project design shall be provided at the time of design review.

Mitigation Measure 3.3-1: Reduce construction-generated emissions of ROG, NO_X, and PM_{10}.

Land use development project implemented under the 2018 LRDP shall require its prime construction contractor to implement the following measures:

1) Use construction equipment with engines rated at Tier 3 or better prior to 2025 and Tier 4 or better beginning in 2025.

2) Use no- or low-solids content (i.e., no- or low-VOC) architectural coatings with a maximum VOC content of 50 g/L.

3) Limit passenger vehicles (i.e., non-vendor and non-hauling vehicles) from being driven on extended unpaved portions of project construction sites. UC Davis shall provide off-site paved parking and compliant site-transport arrangements for construction workers, as needed.

4) Water all active construction sites at least twice daily.

5) Plant vegetative ground cover in disturbed areas as soon as possible.

6) Apply soil stabilizers on unpaved roads and inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).

7) Establish a 15 mile-per-hour speed limit for vehicles driving on unpaved portions of project construction sites.

UC Davis shall ensure that the implementation of this mitigation measure is consistent with the UC Davis stormwater program and the California Stormwater Quality Association *Stormwater BMP Handbook for New Development/Redevelopment* and does not result in off-site runoff as a result of watering for dust control purposes.

Mitigation Measure 3.3-2: Reduce emissions of ROG and NO_X.

UC Davis shall implement the following measures to reduce operational emissions to the extent feasible:

1) Implement a program that incentivizes employees and students living off-campus to carpool, use EVs, or use public transit to commute to and from the campus. This program shall provide preferential parking to carpool vehicles, vanpool vehicles, and EVs. At a minimum, the program shall include a virtual or real "ride board" for employees and students to organize carpools and incentives for employees using public transit to commute to and from campus. The program shall include, but is not limited to, the following features.

    a) Limit parking capacity to meet on-site demand. Provide no more on-site parking spaces than necessary to accommodate the number of employees working at a project site and/or the number of residents living at a project site, as determined by the Project size and design.

    b) Non-residential land uses with 20 or more on-site parking spaces shall dedicate preferential parking spaces to vehicles with more than one occupant and Zero Emission Vehicles (including battery electric vehicles and hydrogen fuel cell vehicles). The number of dedicated spaces should be no less than two spaces or 5 percent of the total parking spaces on the Project site, whichever is greater. These dedicated spaces shall be in preferential locations such as near the main entrances to the buildings served by the parking lot and/or under the shade of a structure or trees. These spaces shall be clearly marked with signs and pavement markings. This measure shall not be implemented in a way that prevents compliance with requirements in the California Vehicle Code regarding parking spaces for disabled persons or disabled veterans.

2) Work with Unitrans to convert natural gas buses to electric or lower-emission fuels or implement emission control technologies to reduce criteria air pollutant emissions from existing conditions.

3) Implement a program that incentivizes vendors to reduce the emissions associated with vehicles and equipment serving the campus. The goal of the program is to reduce ROG and NO_X emissions from vendors trip by at least 50 percent by 2030 as compared to existing conditions. The program shall implement the following sub-measures to reduce vendor-related, mobile-source emissions.

    a) Incentivize the use of EVs or other clean fuels in their trucks and equipment to reduce ROG and NOX emissions.

    b) Work with vendors, especially those using trucks, to reduce the number of vendor trips made to the campus through trip chaining, reducing the number of shipments, or other methods.

4) Convert landscaping equipment to electric or alternatively-fueled equipment.

Mitigation Measure 3.3-4: Reduce short-term construction-generated TAC emissions.

UC Davis shall require construction activities under the 2018 LRDP to follow YSAQMD recommended mitigation measures for construction exhaust emissions. To ensure sensitive receptors are not exposed to substantial TAC concentrations, UC Davis shall require its prime construction contractor to implement the following measures prior to project approval:

1) Locate operation of diesel-powered construction equipment as far away from sensitive receptors as possible;

2) Limit excess equipment idling to no more than 5 minutes;

3) Use construction equipment with engine ratings of Tier 3 or better (included in Mitigation Measure 3.3-1); and

4) Use electric, compressed natural gas, or other alternatively fueled construction equipment instead of the diesel counterparts, where available.

In addition, for any construction site located within 150 feet of a childcare center or park/recreation field, UC Davis shall schedule the use of heavy construction equipment to times when children are not present. Alternatively, UC Davis shall arrange for temporary relocation of childcare facilities to areas outside of a 150-foot buffer or temporarily close available park space within the 150-foot buffer during operation of heavy construction equipment.

Mitigation Measure 3.4-1a: Identify and protect unknown archaeological resources.

During project-specific environmental review of development under the 2018 LRDP, the campus shall define each project's area of effect for archaeological resources. The campus shall determine the potential for the Project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. The campus shall determine the level of archaeological investigation that is appropriate for the Project site and activity, as follows:

- Minimum: excavation less than 18 inches deep and less than 1,000 sf of disturbance (e.g., a trench for lawn irrigation, tree planting, etc.). Implement Mitigation Measure 3.4-1a(1).
- Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized as sensitive and is not suspected to be a likely location for archaeological resources. Implement Mitigation Measure 3.4-1a(1) and (2).
- Intensive: excavation below 18 inches and/or over a large area on any site that is within the zone of archaeological sensitivity identified in Exhibit 3.4-1, or that is adjacent to a recorded archaeological site. Implement Mitigation Measure 3.4-1a(1), (2), and (3).

UC Davis shall implement the following steps to identify and protect archaeological resources that may be present in the Project's area of effects:

1) For project sites at all levels of investigation, contractor crews shall be required to attend a training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts and what steps shall be taken to avoid impacts to those sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the UC Davis Office of Campus Planning and Environmental Stewardship if any are found. In the event of a find, the campus shall implement item (5), below.

2) For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist once the area of ground disturbance has been identified and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (3), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the UC Davis Office of Campus Planning and Environmental Stewardship, develop an archaeological monitoring plan to be implemented during the construction phase of the Project. If the Project site is located within the zone of archaeological sensitivity or it is recommended by the archaeologists, the campus shall notify the appropriate Native American tribe and extend an invitation for monitoring. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of construction activities, and results during the monitoring period. A written report of the results of the monitoring will be prepared and filed with the appropriate Information Center of the California

Historical Resources Information System. In the event of a discovery, the campus shall implement item (5), below.

3) For project sites requiring intensive investigation, irrespective of surface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the Project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the Project's area of effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and a written report of the results of investigations and filed with the appropriate Information Center of the California Historical Resources Information System.

   If it is determined that the resource extends into the Project's area of effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the Project's area of effects, this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction. In the event of a discovery item (5), below shall be implemented.

4) If archaeological material within the Project's area of effects is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the UC Davis Office of Campus Planning and Environmental Stewardship shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement Mitigation Measure 3.4-1b.

5) If archaeological material is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The UC Davis Office of Campus Planning and Environmental Stewardship shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the Project area to determine whether the resource is significant and would be affected by the Project. Mitigation Measure 3.4-1a, steps (3) and (4) shall be implemented.

Mitigation Measure 3.5-4a: Avoidance of Swainson's hawk and other nesting raptors.

For any projects implemented under the 2018 LRDP that would require the removal of mature trees, the following measures will be implemented prior to initiation of construction to avoid, minimize, and fully mitigate impacts to Swainson's hawk, as well as other special-status raptors:

1) Before tree removal occurs, a qualified biologist will determine whether it has been previously recorded or used as a Swainson's hawk or other special-status raptors nest tree. If it is not known to have supported Swainson's hawks or other special-status raptors in the past, the tree will be removed when no active nests are present, generally between September 2 and February 14 if feasible. If the tree to be removed is known to have supported nesting Swainson's hawk or other special-status raptors in the past, UC Davis will implement measures to prevent the potential the net loss of Swainson's hawk or other special-status raptors territories, which may include providing alternative nest trees or protected habitat. UC Davis will consult with CDFW prior to removal of the nest tree and obtain take authorization under Section 2081 of the Fish and Game Code if needed.

2) For construction activities, including tree removal, that begin between February 15 and September 1, qualified biologists will conduct preconstruction surveys for Swainson's hawk and other nesting

raptors to identify active nests on and within 0.5 mile of the Project site. The surveys will be conducted before the beginning of any construction activities between February 15 and September 1.

3) Impacts to nesting Swainson's hawks and other raptors will be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. Project activity will not commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or that reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile-wide buffer for Swainson's hawk and 500 feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist and UC Davis, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.

4) Trees will not be removed during the breeding season for nesting raptors unless a survey by a qualified biologist verifies that there is not an active nest in the tree.

Mitigation Measure 3.5-11: Tree surveys and tree removal mitigation.

Before a project is approved, UC Davis will perform a tree survey of the Project site. The Office of Campus Planning and the Office of Environmental Stewardship and Design and Construction Management will provide input about tree classifications and will modify project design to avoid important trees if feasible. If a project cannot avoid an important tree, the following measures will apply:

1) If a project would necessitate removal of a heritage tree, replacement plantings of the same species will be provided by UC Davis at a ratio of 3:1 within two years of removal.

2) If a project would necessitate removal of a Specimen Tree, the Project will relocate the tree if feasible, or will replace the tree with the same species or species of comparable value (relocation or replacement will occur within the Project site if feasible).

Mitigation Measure 3.7-4: Manage stormwater flows to reduce soil erosion.

Prior to approval of individual projects proposed under the 2018 LRDP, UC Davis shall conduct a drainage study in the vicinity of the site proposed for development to determine if the development could produce additional runoff that may exceed the capacity of campus stormwater infrastructure, cause localized ponding to worsen, or increase the potential for property damage from flooding. Recommendations identified in the drainage study shall be incorporated into project design such that any projected increase in surface water runoff is detained/retained in accordance with applicable requirements and does not exceed current flow rates. Measures may include, but are not limited to, installation of detention/retention basins to capture and manage water, installation of water-retaining landscaping or green-roof features, modifications to existing stormwater capture/conveyance systems, and/or other measures at project-level or campus-wide to capture and manage stormwater.

Mitigation Measure 3.9-2a: Site-specific investigation and work plan implementation.

Where initial investigations indicate the potential for contamination, UC Davis shall conduct soil sampling within the boundaries of the plan area prior to initiation of grading or other groundwork. This investigation will follow the American Society for Testing and Materials standards for preparation of a Phase II Environmental Site Assessment and/or other appropriate testing guidelines. If the results indicate that contamination exists at levels above regulatory action standards, then the site will be

remediated in accordance with recommendations made by applicable regulatory agencies, including YCEHD, RWQCB, and DTSC. The agencies involved shall depend on the type and extent of contamination.

Based on the results and recommendations of the investigation described above, UC Davis shall prepare a work plan that identifies any necessary remediation activities, including excavation and removal of on-site contaminated soils, and redistribution of clean fill material within the plan area. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil removed from the site.

Mitigation Measure 3.9-2b: Hazardous materials contingency plan.

Prior to initiation of grading or other groundwork, UC Davis shall provide a hazardous materials contingency plan to Campus Safety Services and YCEHD, as appropriate. The plan will describe the necessary actions that would be taken if evidence of contaminated soil or groundwater is encountered during construction. The contingency plan shall identify conditions that could indicate potential hazardous materials contamination, including soil discoloration, petroleum or chemical odors, and presence of underground storage tanks or buried building material.

If at any time during the course of construction, evidence of soil and/or groundwater contamination with hazardous material is encountered, UC Davis shall immediately halt construction and contact Campus Safety Services and YCEHD. Work shall not recommence until the discovery has been assessed/treated appropriately (through such mechanisms as soil or groundwater sampling and remediation if potentially hazardous materials are detected above threshold levels) to the satisfaction of YCEHD, RWQCB, and DTSC (as applicable).

The plan, and obligations to abide by and implement the plan, shall be incorporated into the construction and contract specifications of the Project.

Mitigation Measure 3.9-2c: Minimization of hazards during demolition.

Minimize potential for accidental release of hazardous materials during demolition. Prior to demolition of existing structures, UC Davis shall complete the following:

1) Locate and dispose of potentially hazardous materials in compliance with all applicable federal, state, and local laws. This shall include: 1) identify locations that could contain hazardous residues; 2) remove plumbing fixtures known to contain, or potentially containing, hazardous materials; 3) determine the waste classification of the debris; 4) package contaminated items and wastes; and 5) identify disposal site(s) permitted to accept such wastes.

2) Provide written documentation to the appropriate County (Yolo or Solano) department that asbestos testing and abatement, as appropriate, has occurred in compliance with applicable federal, state, and local laws.

3) Provide written documentation to the appropriate County (Yolo or Solano) department that lead-based paint testing and abatement, as appropriate, has been completed in accordance with applicable state and local laws and regulations. Abatement shall include the removal of lead contaminated soil (considered soil with lead concentrations greater than 400 parts per million in areas where children are likely to be present). If lead-contaminated soil is to be removed, UC Davis shall submit a soil management plan to YCEHD.

Mitigation Measure 3.9-6. Prepare and implement site-specific construction traffic management plans.

UC Davis shall prepare and implement site-specific construction traffic management plans for any construction effort that would require work within existing roadways. To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways during construction activities. At any time only a single lane is available due to construction-related road closures, the campus shall provide a temporary traffic signal, signal carriers (i.e., flag persons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway, the campus shall provide appropriate signage indicating alternative routes. To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, the campus shall inform emergency services, including the UC Davis Police Department, UC Davis Fire Department, and American Medical Response, of the closures and alternative travel routes.

Mitigation Measure 3.10-6: Implement project-level stormwater controls.

Implement Mitigation Measure 3.7-4.

Mitigation Measure 3.12-1: Reduce construction noise.

For all construction activities, UC Davis shall implement or incorporate the following noise reduction measures into construction specifications for contractor(s) implementation during project construction:

1) Construction activity shall be limited to the daytime hours between 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends and holidays, where possible.

2) All construction equipment and equipment staging areas shall be located as far as possible from nearby noise-sensitive land uses, and/or located to the extent feasible such that existing or constructed noise attenuating features (e.g., temporary noise wall or blankets) block line-of-site between affected noise-sensitive land uses and construction staging areas.

3) All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.

4) Individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site) where feasible and consistent with building codes and other applicable laws and regulations.

5) Stationary noise sources such as generators or pumps shall be located 100 feet away or more from noise-sensitive land uses, as feasible.

6) Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) shall not be scheduled during finals week and preferably during holidays, summer/winter break, Thanksgiving break, and spring break.

7) No less than one week prior to the start of construction activities at a particular location, notification shall be provided to academic, administrative, and residential uses located within 100 feet of the construction site.

8) When construction would occur within 100 feet of sensitive receptors and may result in temporary noise levels in excess of 86 dBA L_{max} at the exterior of the adjacent receptor, temporary noise

barriers (e.g., noise-insulating blankets or temporary plywood structures) shall be erected that reduce construction-related noise levels to less than 86 dBA L_{max} at the receptor.

9) For any construction activity that must extend beyond the daytime hours of 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends and occur within 1,120 feet of a building where people sleep, UC Davis shall ensure that interior noise levels of 45 dBA L_{max} are not exceeded at any receiving land use by not exceeding 70 dBA L_{max} at the receiving land use property line. Typical residential structures with windows closed achieve a 25-30 dBA exterior-to-interior noise reduction (Caltrans 2002). Thus, using the lower end of this range, an exterior noise level of 70 dBA L_{max} would ensure interior noise levels do not result in an increased risk for sleep disturbance. To achieve this performance standard, the following measures shall be implemented:

   a) Use of noise-reducing enclosures and techniques around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors).

   b) Installation of temporary noise curtains installed as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s) and consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot.

   c) Retain a qualified noise specialist to conduct noise monitoring to ensure that noise reduction measures are achieved the necessary reductions such that levels at the receiving land uses do not exceed exterior noise levels of 70 dBA L_{max}. Exceedances of noise standards shall result in immediate halt of construction until additional noise-reduction measures are implemented.

Mitigation Measure 3.12-2: Reduce noise exposure from new stationary noise sources.

During project design of individual projects proposed under the 2018 LRDP, UC Davis shall review and ensure that external mechanical equipment, including HVAC units associated with new/renovated buildings, incorporates features designed to reduce noise to below 63 dB Leq at any nearby building where people sleep. Design features may include, but are not limited to, locating equipment within equipment rooms or enclosures that incorporate noise reduction features, such as acoustical louvers, and exhaust and intake silencers. Equipment enclosures shall be oriented so that major openings (i.e., intake louvers, exhaust) are directed away from nearby noise-sensitive receptors.

Mitigation Measure 3.16-1: Implement TDM strategies to reduce peak hour vehicle trips on I-80.

UC Davis shall use the 2016-2017 academic year as the baseline by which to determine 2018 LRDP-related growth in peak hour student and employee commute vehicle trips on I-80. During the 2018-2019 academic year and every two years thereafter, UC Davis shall determine the number of peak hour student and employee commute vehicle trips that utilize I-80. In instances where this figure exceeds baseline levels, UC Davis shall institute TDM strategies to reduce campus-related peak hour vehicle trips on I-80. This figure could be estimated from the results of the annual Campus Travel Survey administered by the UC Davis Institute of Transportation Studies. The implementation of TDM strategies shall reduce peak hour student and employee commute vehicle trips on I-80 equal to or below baseline levels.

TDM strategies that would reduce peak hour vehicle trips on I-80 include strategies to reduce commute and business vehicle trips to and from campus using I-80. Specific potential TDM strategies include, but are not limited to, the following:

- expand public transit service, including additional regional service for UC Davis students and employees living off-campus and outside of Davis,
- support alternative congestion management policies/projects on I-80, including a toll for all vehicles utilizing I-80 across the Yolo Causeway,
- implement a fair value commuting program, where fees charged to SOV commuters (e.g., through parking pricing) are tied to UC Davis vehicle trip reduction targets and fee revenue is rebated to non-SOV commuters, or other pricing of vehicle travel and parking,
- provide carpool and/or vanpool incentive programs,
- allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and
- offer remote working options.

The TDM strategies implemented to reduce peak hour vehicle trips on I-80 will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce peak hour trips to baseline levels, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour trips to baseline levels.

Mitigation Measure 3.16-2a: Implement TDM strategies to reduce peak hour vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection.

During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the Hutchison Drive/SR 113 NB Ramps intersection. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the Hutchison Drive/SR 113 NB Ramps intersection for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the intersection. When operations at the Hutchison Drive/SR 113 NB Ramps intersection are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay, or when a project-level analysis indicates the same, UC Davis shall institute TDM strategies to reduce peak hour vehicle trips and, in turn, vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection.

The implementation of TDM strategies shall reduce peak hour average intersection delay caused by the 2018 LRDP to acceptable levels in accordance with the intersection level of service significance criteria, including the level of service thresholds established by Caltrans or the Yolo County CMP. Since the 2018 LRDP would cause intersection operations at Hutchison Drive/SR 113 NB Ramps to degrade from an acceptable LOS to an unacceptable LOS, TDM strategies would be required to reduce peak hour intersection delay to an acceptable LOS. According to the Yolo County CMP, LOS E or better, or 50 seconds or less, is acceptable for the Hutchison Drive/SR 113 NB Ramps stop-controlled intersection.

The growth at West Village accounts for most of the increase (approximately 280 trips) in the stop-controlled northbound left-turn volume during the p.m. peak hour between 2030 no project and 2030 plus 2018 LRDP conditions. This movement is largely responsible for the high intersection delays. These trips tend to be longer distance commute trips using SR 113 and I-80. As such, TDM strategies that would reduce peak hour intersection delay at this location include strategies to reduce commute and business vehicle trips utilizing the Hutchison Drive/SR 113 interchange as well as strategies to reduce peak hour vehicle trip use of Hutchison Drive between the central campus and west campus. Specific potential TDM strategies include, but are not limited to, the following:

- expand public transit service, including additional service connecting West Village and the central campus,
- shift UC Davis service vehicles to use the Garrod Drive overcrossing of SR 113,
- promote bicycle use between West Village and the central campus,
- implement a fair value commuting program or other pricing of vehicle travel and parking,
- provide carpool and/or vanpool incentive programs,
- allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and
- offer remote working options.

The TDM strategies implemented to reduce peak hour intersection delay at this location will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce peak hour intersection delay consistent with the significance criteria, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour intersection delay consistent with the significance criteria.

Mitigation Measure 3.16-2b: Modify SR 113/Hutchison Drive interchange.

During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the SR 113/Hutchison Drive interchange. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the SR 113/Hutchison Drive interchange for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the interchange. When operations at the SR 113/Hutchison Drive ramp terminal intersections are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay criteria, or when a project-level analysis indicates the same, the SR 113/Hutchison Drive interchange shall be modified to increase the capacity of the ramp terminal intersections and to modify uncontrolled turning movements that conflict with bicycle and pedestrian movements as specified in WVE Mitigation Measure 3.16-4a. Potential modifications include ramp widening and alignment changes plus the addition of ramp approach turn lanes, traffic signals, or roundabouts. Both ramp terminal intersections meet peak hour signal warrants with the Project. Implementation of signals alone would be sufficient to provide acceptable peak hour traffic operations. Since the interchange is owned and operated by Caltrans, any improvements will be subject to Caltrans review, project development procedures, and approval.

Mitigation Measure 3.16-2c: Implement TDM strategies to reduce peak hour vehicle delay at the First Street/D Street and Russell Boulevard/Fifth Street/B Street intersections.

The First Street/D Street and Russell Boulevard/Fifth Street/B Street intersections and the adjacent intersections are part of the downtown grid street system. This network is limited in terms of physical modification or expansion due to right-of-way constraints. As such, reducing vehicle delays for these intersections will require UC Davis to implement its TDM program to reduce vehicle travel to and from campus.

During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the First Street/D Street and Russell Boulevard/Fifth Street/B Street intersections. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the First Street/D Street and Russell Boulevard/Fifth Street/B Street

intersections for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the intersection. When operations at the First Street/D Street and Russell Boulevard/Fifth Street/B Street intersections are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay, or when a project-level analysis indicates the same, UC Davis shall institute TDM strategies to reduce peak hour vehicle trips and, in turn, vehicle delay at the First Street/D Street and Russell Boulevard/Fifth Street intersections.

The implementation of TDM strategies shall reduce peak hour average intersection delay caused by the 2018 LRDP to acceptable levels in accordance with the intersection level of service significance criteria, including the level of service thresholds established by the City of Davis. Since the 2018 LRDP would cause intersection operations at First Street/D Street and Russell Boulevard/Fifth Street/B Street to degrade from an acceptable LOS to an unacceptable LOS, TDM strategies would be required to reduce peak hour intersection delay to an acceptable LOS. According to the City of Davis General Plan, LOS E or better, or 80 seconds or less, is acceptable for the First Street/D Street and Russell Boulevard/Fifth Street signalized intersections.

TDM strategies that would reduce peak hour intersection delay at these locations include strategies to reduce vehicle travel to and from campus. Specific potential TDM strategies include, but are not limited to, the following:

- promote walking and bicycling for student and employee trips between UC Davis, City of Davis residential neighborhoods, and Downtown Davis,
- shift the timing of service vehicles and/or deliveries from peak periods,
- expand public transit service, including additional service connecting UC Davis and City of Davis residential neighborhoods,
- implement a fair value commuting program or other pricing of vehicle travel and parking,
- provide carpool and/or vanpool incentive programs,
- allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and
- offer remote working options.

The TDM strategies implemented to reduce peak hour intersection delay at this location will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce peak hour intersection delay consistent with the significance criteria, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour intersection delay consistent with the significance criteria.

Mitigation Measure 3.16-2d: Implement TDM strategies to reduce peak hour vehicle delay at study intersections on the Old Davis Road corridor.

During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the Old Davis Road corridor study intersections between and inclusive of the Old Davis Road/I-80 EB Ramps and First Street/A Street intersections. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the Old Davis Road corridor study intersections between and inclusive of the Old Davis Road/I-80 EB Ramps and First Street/A Street intersections for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the intersections. When operations at the Old

Davis Road corridor study intersections between and inclusive of the Old Davis Road/I-80 EB Ramps and First Street/A Street intersections are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay, or when a project-level analysis indicates the same, UC Davis shall institute TDM strategies to reduce peak hour vehicle trips and, in turn, vehicle delay at study intersections located on the segment of Old Davis Road between I-80 and First Street.

The implementation of TDM strategies shall reduce peak hour average intersection delay caused by the 2018 LRDP to acceptable levels in accordance with the intersection level of service significance criteria, including the level of service thresholds established by UC Davis, the City of Davis, and Caltrans. Every study intersection along this segment of Old Davis Road would operate at LOS F conditions during the p.m. peak hour both with and without the 2018 LRDP. Moreover, the 2018 LRDP would increase delay in excess of 10 percent at each study intersection along the Old Davis Road corridor. Therefore, for each Old Davis Road corridor study intersection between and inclusive of the Old Davis Road/I-80 EB Ramps and First Street/A Street intersections, UC Davis shall implement TDM strategies to reduce the 2018 LRDP's contribution to LOS F conditions until the incremental increase in peak hour intersection volume or delay caused by the 2018 LRDP does not exceed 10 percent compared to 2030 no project conditions.

TDM strategies that would reduce peak hour intersection delay at these locations include strategies to reduce commute and business vehicle trips utilizing the Old Davis Road corridor. Specific potential TDM strategies include, but are not limited to, the following:

- promote walking and bicycling for student and employee trips during peak periods,
- shift the timing of service vehicles and/or deliveries from peak periods,
- expand public transit service, including additional regional service for UC Davis students and employees living off-campus and outside of Davis as well as local service for on-campus residents traveling to nearby destinations on-campus and in Davis,
- manage parking lot access along Old Davis Road,
- limit parking supply and/or unbundle parking costs for future student housing located along the Old Davis Road corridor,
- implement a fair value commuting program or other pricing of vehicle travel and parking,
- provide carpool and/or vanpool incentive programs,
- allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and
- offer remote working options.

The TDM strategies implemented to reduce peak hour intersection delay at this location will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce peak hour intersection delay consistent with the significance criteria, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour intersection delay consistent with the significance criteria.

Mitigation Measure 3.16-2e: Upgrade Old Davis Road between I-80 and First Street to an arterial.

Implement 2018 LRDP Mitigation Measure 3.16-7, which will monitor traffic volumes and upgrade the segment of Old Davis Road between I-80 and First Street to arterial status under both 2030 and 2036 plus project conditions. Unacceptable roadway operations can be attributed to substantial growth in on- and off-campus student housing within the immediate vicinity of the affected roadway segment, as well as the incompatibility between the existing roadway segment design and anticipated peak hour vehicle, bicycle, and pedestrian traffic demand. These factors would be present under both 2030 and 2036 plus 2018 LRDP conditions.

Mitigation Measure 3.16-3a: Monitor transit service performance and support transit improvements.

Currently, Unitrans regularly monitors transit service performance and adjusts service levels, as feasible, according to established service standards. Unitrans shall continue to implement this monitoring and service change process annually over the duration of the 2018 LRDP implementation.

UC Davis shall work with Unitrans staff to identify and support the implementation of transit service and/or facility improvements necessary to adhere to established service standards and, in turn, maintain a high quality customer experience so as not to deter existing and potential ridership. Potential transit improvements include modifying existing transit routes or adding new routes to serve areas of the campus underserved by transit, adding service capacity (through increased headways and/or larger vehicles) to prevent chronic overcrowding, improving terminal facilities to accommodate additional passengers and transit vehicles, and improving coordination between transit providers.

Transit improvements shall result in service performance that meets the capacity standard established in the most up-to-date City of Davis Short Range Transit Plan. Currently, this standard requires Unitrans to maintain acceptable loading conditions (fewer than 150 percent of seated capacity) on more than 95 percent of all bus trips and for more than 90 percent of bus passengers.

Transit facility and roadway improvements shall be designed and constructed in accordance with industry best practices and applicable UC Davis, City of Davis, and State of California standards. Improvements shall be implemented or constructed in a manner that would not physically disrupt existing transit service or facilities (e.g., additional bus service that exceeds available bus stop or transit terminal capacity) or otherwise adversely affect transit operations.

Mitigation Measure 3.16-3b: Monitor transit-related collisions and implement countermeasures to minimize potential conflicts with transit service and facilities.

During the 2018-2019 academic year and every two years thereafter, UC Davis shall record on-campus collisions involving a transit vehicle and establish a transit vehicle collision rate. The rate should be sensitive to transit provider, location context (e.g., campus core area versus West Village) and facility type (e.g., intersection versus segment). UC Davis shall determine the on-campus transit vehicle collision rate as part of its biennial mitigation monitoring program established in the LRDP EIR. In instances where the rate increases from the prior observation period, UC Davis shall develop and implement countermeasures that address collision hot-spots and common primary collision factors. UC Davis shall also identify and develop countermeasures for locations where the change in the mix of travel patterns and behavior is determined to be incompatible with the facility as designed. Potential countermeasures include physically separating modes in shared operating environments, particularly high- versus low-speed travel modes, and increased education and enforcement.

At a minimum, UC Davis shall include the following locations in the mitigation monitoring program:

- Silo Terminal,
- Memorial Union Terminal,
- La Rue Road,
- Hutchison Drive,
- Howard Way,
- Sage Street, and
- Russell Boulevard.

Transit facility and roadway improvements that intend to minimize conflicts between transit vehicles and other travel modes shall be designed and constructed in accordance with industry best practices and applicable UC Davis, City of Davis (for facilities within the City of Davis), and State of California standards. Improvements shall be implemented or constructed in a manner that would not physically disrupt existing transit service or facilities or otherwise adversely affect transit operations.

Mitigation Measure 3.16-4: Monitor bicycle-related collisions to implement countermeasures minimizing potential conflicts with bicycle facilities.

During the 2018-2019 academic year and every two years thereafter, UC Davis shall record on-campus bicycle volumes and collisions involving bicyclists and establish a bicycle collision rate. The rate should be sensitive to context (e.g., campus core area versus West Village) and facility type (e.g., intersection versus segment). UC Davis shall determine the on-campus bicycle collision rate as part of its biennial mitigation monitoring program established in the LRDP EIR. In instances where the rate increases from the prior observation period, UC Davis shall develop and implement countermeasures designed to reduce the rate and primary collision factors. UC Davis shall also identify and develop countermeasures for locations where the change in the mix of travel patterns and behavior is determined to be incompatible with the facility as designed. Potential countermeasures include the following:

- construct physically separated facilities for each mode in shared operating environments (particularly high- versus low-speed travel modes),
- restrict select modes in certain areas where one mode is prioritized over another to minimize collision potential,
- widen existing facilities,
- construct new facilities,
- increase the number of bicycle parking facilities and distribute them to minimize crowding on connecting bicycle facilities,
- consider TDM measures that would alter demand to minimize collision potential,
- enforcement of ‘rules of the road’ per the California Vehicle Code and applicable University policies,
- education of existing and prospective bicyclists to give people the skills and abilities to ride,
- control class schedules and passing periods to minimize effects of peak bicycle traffic, and
- expand core area restrictions on service vehicles.

Anticipated increases in bicycle activity would be concentrated near focal points for students and staff activities, including new on-campus housing developments, existing and new academic and recreational facilities (e.g., classrooms, lecture halls, athletic fields) in the core campus area, off-campus activity centers (e.g., Downtown Davis, University Mall) and along bicycle facilities connecting activity generators. Therefore, at a minimum, UC Davis shall include the following locations in the mitigation monitoring program:

- core campus area;
- La Rue Road between Russell Boulevard and Old Davis Road;
- SR 113 bike/pedestrian overcrossing, Orchard Park Circle, and Orchard Road;
- Sprocket Bikeway;
- California Avenue between Russell Boulevard and Old Davis Road;
- Hutchison Drive between Sage Street and Old Davis Road;
- Old Davis Road between I-80 and First Street;
- Howard Way between Russell Boulevard and North Quad;
- Third Street between A Street and Downtown Davis;
- First Street between A Street and Downtown Davis;
- Russell Boulevard corridor between SR 113 and Downtown Davis (including intersections with north-south roadways, especially those involving campus connections); and
- West Village.

Bicycle facility and roadway improvements that intend to minimize conflicts between bicyclists and other travel modes shall be designed and constructed in accordance with applicable UC Davis, City of Davis, and State of California standards.

Mitigation Measure 3.16-5: Monitor pedestrian-related collisions implement countermeasures minimizing potential conflicts with pedestrian facilities.

During the 2018-2019 academic year and each two years thereafter, UC Davis shall record on-campus pedestrian volumes and collisions involving pedestrians and establish a pedestrian collision rate. The rate should be sensitive to context (e.g., campus core area versus West Village) and facility type (e.g., intersection versus segment). UC Davis shall determine the on-campus pedestrian collision rate as part of its biennial mitigation monitoring program established in the LRDP EIR. In instances where the rate increases from the prior observation period, UC Davis shall develop and implement countermeasures to reduce the rate and address primary collision factors. UC Davis shall also identify and develop countermeasures for locations where the change in the mix of travel patterns and behavior is determined to be incompatible with the facility as designed. Potential countermeasures include the following:

- construct physically separated facilities for each mode in shared operating environments (particularly high- versus low-speed travel modes),
- restrict select modes in certain areas where one mode is prioritized over another to minimize collision potential,
- widen existing facilities,
- construct new facilities, and

- consider TDM measures that would alter demand to minimize collision potential.

Anticipated increases in pedestrian activity would be concentrated near focal points for students and staff activities, including new on-campus housing developments, existing and new academic and recreational facilities (e.g., classrooms, lecture halls, athletic fields) in the core campus area, off-campus activity centers (e.g., Downtown Davis, University Mall) and along pedestrian facilities connecting activity generators. Therefore, at a minimum, UC Davis shall include the following locations in the mitigation monitoring program:

- core campus area;
- La Rue Road between Russell Boulevard and Old Davis Road;
- SR 113 bike/pedestrian overcrossing, Orchard Park Circle, and Orchard Road;
- Sprocket Bikeway;
- Hutchison Drive between Sage Street and Old Davis Road;
- Old Davis Road between I-80 and First Street;
- Howard Way between Russell Boulevard and North Quad;
- Third Street between A Street and Downtown Davis;
- First Street between A Street and Downtown Davis;
- Russell Boulevard corridor between SR 113 and Downtown Davis (including intersections with north-south roadways, especially those involving campus connections); and
- West Village.

Pedestrian facility and roadway improvements that intend to minimize conflicts between pedestrians and other travel modes shall be designed and constructed in accordance with applicable UC Davis, City of Davis, and State of California standards.

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