



**USDA SUSTAINABLE AGRICULTURE WATER SYSTEMS RESEARCH UNIT-
PHASE II**

**Addendum to the
UC Davis 2018 Long Range Development Plan EIR**

State Clearinghouse No. 2017012008

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LIST OF ABBREVIATIONS

2018 LRDP	University of California Davis 2018 Long Range Development Plan
AB	Assembly Bill
BMP	best management practices
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
dB	decibel
dBA	A-weighted decibel
diesel PM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
HCP	Habitat Conservation Plan
I-80	Interstate Highway 80
LOS	level of service
L_{max}	maximum noise level (the maximum instantaneous noise level during a specific period)
LEED	Leadership in Energy and Environmental Design
MND	mitigated negative declaration
MS4	Municipal Separate Storm Sewer System
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NAHC	Native American Heritage Center
NCCP	Natural Community Conservation Plan
NOA	naturally occurring asbestos
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
Phase II Small MS4 Permit	General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems
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
Project	USDA Sustainable Agricultural Water Systems Research Unit–Phase II Project
PRC	Public Resources Code
ROG	reactive organic gases
RWQCB	regional water quality control board
SACOG	Sacramento Area Council of Government
SB	Senate Bill
sf	square feet
SR	State Route
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminant
the Program EIR	2018 LRDP EIR
UC	University of California
UFP	ultrafine particles
VMT	vehicle miles traveled
WDR	waste discharge requirements
YCEHD	Yolo County Environmental Health Division
YSAQMD	Yolo-Solano Air Quality Management District

1 PROJECT INFORMATION

Project title: USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project

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
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Davis, CA 95616-8678

Location of administrative record: See Project Sponsor

Previously Certified 2018 LRDP Programmatic EIR: This addendum documents that none of the conditions described in Section 15162 of the State CEQA Guidelines have occurred and the Project will not have any significant effects that were not already discussed in 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://environmentalplanning.ucdavis.edu>

Please note that due to Covid-19 and California’s State of Emergency (Executive Order N-54-20) the UC Davis and Yolo County libraries and UC Davis offices are closed. Providing hard copies at these locations may not be feasible at this time. Please contact UC Davis Environmental Planning office if you need assistance accessing the appropriate documents.

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2 INTRODUCTION

2.1 PURPOSE OF THIS ADDENDUM

After certification of the environmental impact report (EIR) and adoption of the Long Range Development Plan (LRDP) for the UC Davis campus in 2018, the University has proposed the U.S. Department of Agriculture (USDA) Sustainable Agricultural Water Systems Research Unit – Phase II Project (Project). The Project is consistent with the land uses and intensities designated in the 2018 LRDP but was not specifically described in the 2018 LRDP EIR. This addendum describes the Project, which involves the construction and operation of an approximately 4,000-square foot (sf) single-story pre-engineered building and a parking lot with 5 vehicle spaces, and evaluates how this modification to the 2018 LRDP is covered by the 2018 LRDP EIR. No subsequent CEQA document is necessary for this Project.

2.1.1 2018 Long Range Development Plan Environmental Impact Report

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 Resource Code (PRC) 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 USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project is consistent with the *Academic and Administrative* land use identified in the 2018 LRDP; however, because this Project was not specifically identified in the 2018 LRDP and LRDP EIR, it would represent a minor modification to the LRDP involving: site preparation, limited tree removal, concrete sidewalk removal, installation of a pre-engineered building, and construction of a new parking lot with 5 spaces and associated sidewalk construction. This addendum utilizes a modified checklist format to document that the infrastructure improvements are 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 within the scope of the program EIR.” The checklist is set up to document that none of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred and an addendum to the 2018 LRDP EIR may be prepared (per CEQA Guidelines Section 15164).

The organization of project-specific environmental analysis in this addendum 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 addendum evaluates the more detailed project-level information specific to the USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project to document that the Project is within the activities evaluated in the program EIR and that no subsequent EIR is required.

2.1.2 State CEQA Guidelines Regarding an Addendum

If, after certification of an EIR, minor technical changes or additions are necessary or none of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred, an addendum to the EIR may be prepared.

PRC Section 21166 and Sections 15162 through 15163 of the State CEQA Guidelines describe the conditions under which subsequent document would be prepared. In summary, when an EIR has been certified or a mitigated negative declaration (MND) adopted for a project, no subsequent document shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- ▲ substantial changes are proposed in the project that will require major revisions of the previous EIR or MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- ▲ substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR or MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- ▲ new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR or MND was certified as complete was adopted, shows any of the following:
 - the project will have one or more significant effects not discussed in the previous EIR or MND;
 - significant effects previously examined will be substantially more severe than shown in the previous EIR or MND;
 - mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR or MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15164 of the CEQA Guidelines provides that a lead agency may prepare an addendum to a previously adopted EIR if some changes or additions are necessary, but none of the conditions described above for Section 15162 calling for preparation of a subsequent document have occurred. CEQA allows lead agencies to restrict review of modifications to a previously approved project to the incremental effects associated with the proposed modifications, compared against the anticipated effects of the previously approved project at build-out.

Changes to the approved LRDP in connection with the Project and any altered conditions since certification of the EIR in July 2018 would:

- ▲ not result in any new significant environmental effects, and
- ▲ not substantially increase the severity of previously identified significant effects.

In addition, no new information of substantial importance has arisen that shows that:

- ▲ the Project would have new significant effects,
- ▲ the Project would have substantially more severe effects,
- ▲ mitigation measures or alternatives previously found to be infeasible would in fact be feasible, or
- ▲ mitigation measures or alternatives that are considerably different from those analyzed in the EIR would substantially reduce one or more significant effects on the environment.

As described in Chapter 3 of this document, “Project Description,” and Chapter 4, “Coverage Under the 2018 LRDP and 2018 LRDP EIR,” none of the conditions described above from Section 15162 calling for preparation of a subsequent document have occurred. Therefore, the differences between the approved LRDP, as described in the certified EIR, and the Project modifications now being considered, constitute changes that are consistent with CEQA Guidelines Section 15164 that may be addressed in an addendum to the EIR.

2.2 ORGANIZATION OF THE ADDENDUM

This addendum is organized into the following chapters:

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

Chapter 2 – Introduction: summarizes the purpose of the addendum, the 2018 LRDP EIR, and this document’s organization.

Chapter 3 – Project Description: includes a description of all elements of the Project triggering the addendum.

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, and includes an environmental checklist for each resource topic. This section of the addendum analyzes the potential effects on the existing physical environment from implementation of the proposed modifications, as compared to the approved 2018 LRDP. This analysis has been prepared to determine whether any of the conditions described above that would require preparation of a subsequent or supplemental EIR would occur as a result of the project modification.

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.

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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 Figure 3-1). The campus is composed of four geographical areas: the central campus, the south campus, the west campus, and Russell Ranch (Figure 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 USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project site is located on the west campus between the Hopkins Building and Pomology Field House C. The site is located at northwest corner of the intersection of Hopkins Road and Bee Biology Road (Figure 3-3). The approximately 1.1-acre project site is flat, mostly undeveloped, and wholly within the area designated as *Academic and Administrative* under the LRDP.

3.3 PROPOSED PROJECT

The USDA Agricultural Research Services (USDA ARS) Office of National Programs has directed the Area Director of the Pacific West to establish a new research unit for “Management Strategies to Sustainably Intensify the Agroecosystems in California.” The goal of program is to conduct research on sustainable agricultural production systems that reduce economic risks and increase farm profitability; improve soil quality and productivity; and reduce the effects of short-term droughts. Specifically, the mission of the new research unit is to make greater use of existing and alternative water sources, both for irrigation and for recharging depleted aquifers.

The USDA has a ground lease of approximately 1 acre on the west campus, and has already installed one approximately 4,000-sf single-story pre-engineered building and surface parking on the site. The current Project proposes the second phase of the project, involving the installation of a second approximately 4,000-sf single-story pre-engineered building (Figure 3-4) to provide space for the research activities, along with a parking lot with 5 vehicle spaces (Figure 3-3). The Project building would include three laboratories, one cold storage room, one controlled temperature room, and one autoclave sterilization room to support collaborative studies of agricultural eco-system productivity and sustainability. The Project would be built, operated, and maintained by the USDA ARS under the terms of their ground lease with the University.

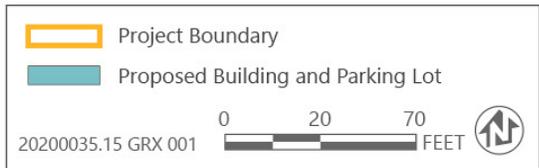
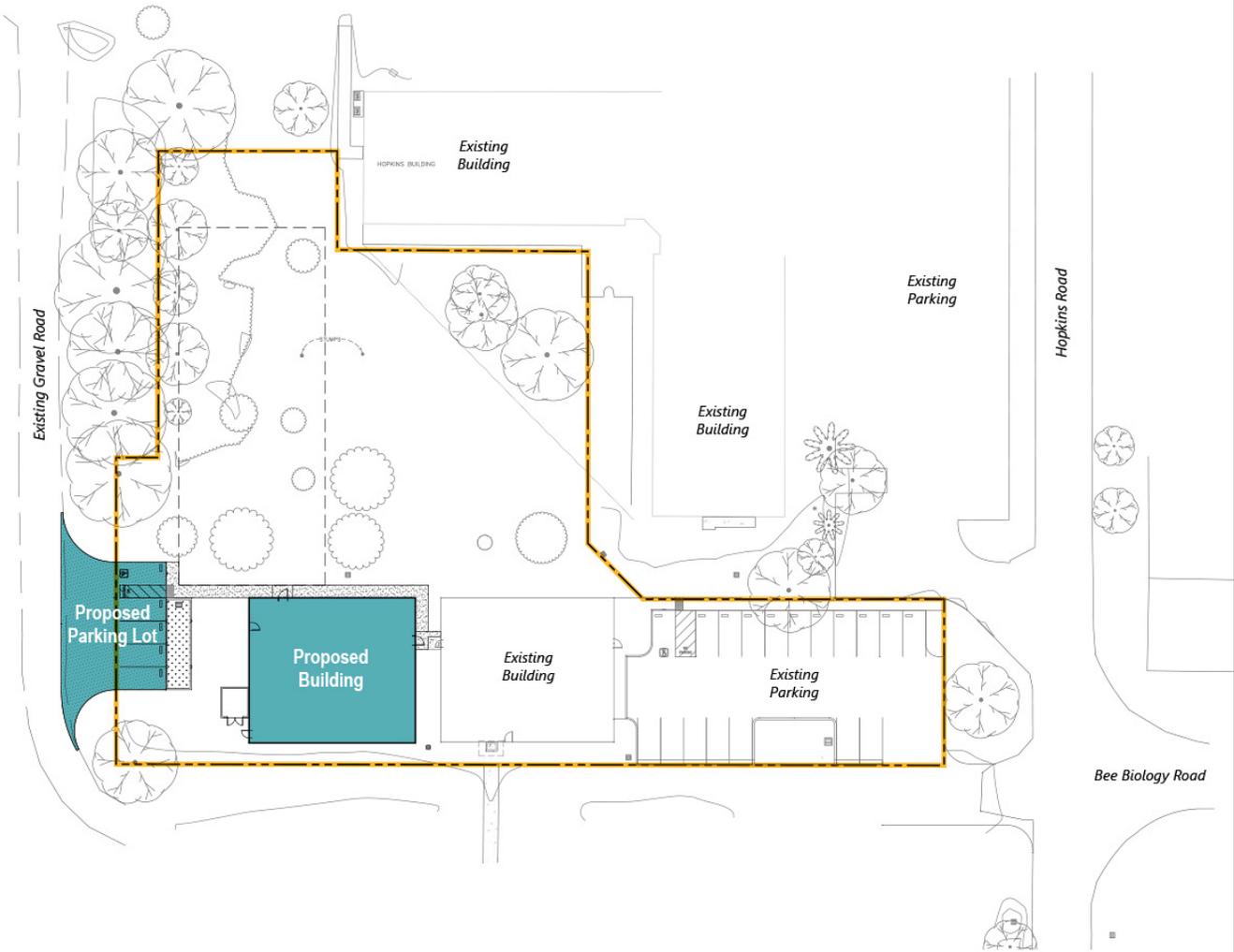
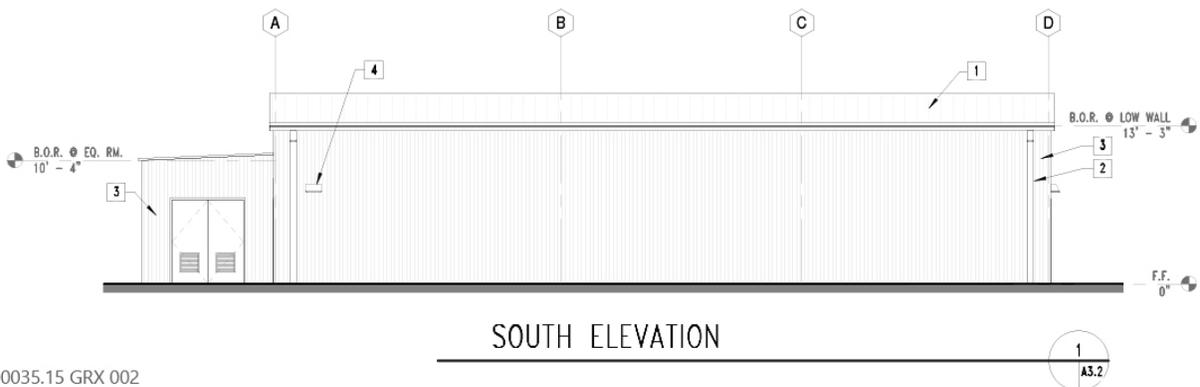
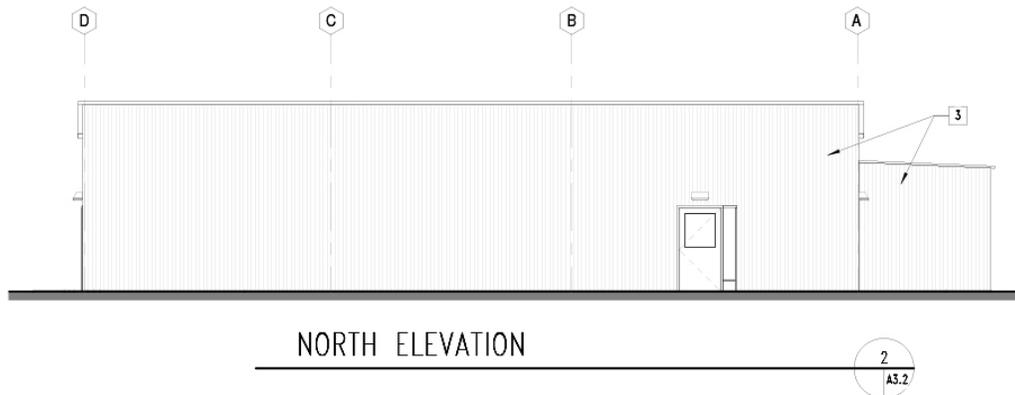
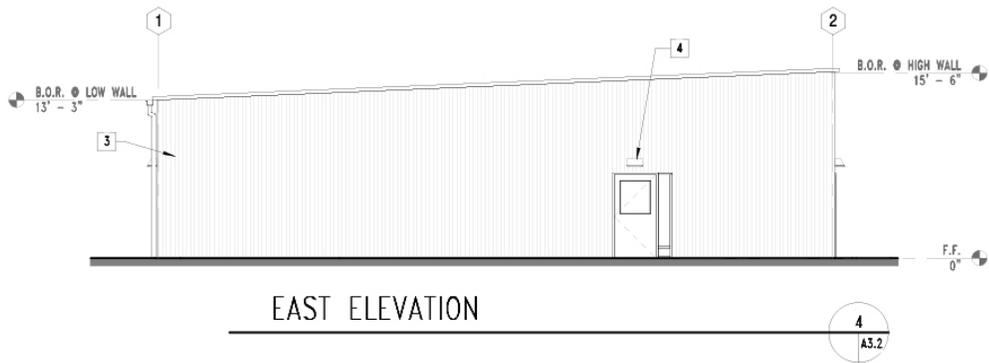
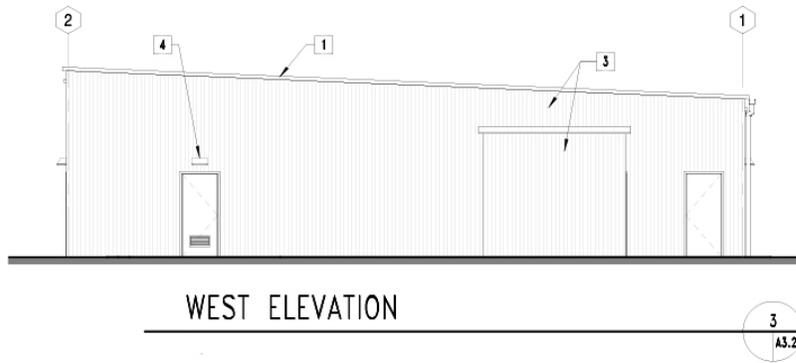


Figure 3-3 Proposed Project Site Plan



20200035.15 GRX 002

Figure 3-4 Project Building Exterior Elevation

3.3.1 Construction

Project construction is anticipated to begin in the spring of 2021 and would take approximately six months to complete. Given the small size of the building and the use of pre-engineered materials, construction crew size would be small. Construction equipment, materials, and vehicle staging would occur on the project site, to be reviewed and approved by the campus landscape architect. Construction personnel would access the project site via Hopkins Road and Hutchison Drive and construction staging would not obstruct local roadways. Construction would occur between 7:00 a.m. and 7:00 p.m. on weekdays. If weekend work is necessary due to excessive noise issues or feasibility of weekday utility shutdowns, it would occur between 8:00 a.m. and 8:00 p.m.

Initial site preparation would consist of site preparation, concrete sidewalk removal, excavation and compaction for the installation of concrete slab foundation, and tree removal. No heritage or specimen trees would be removed and no building demolition would occur. Generally, cut and fill would be balanced onsite. However, it is possible that some excavated soils and vegetative matter will be hauled offsite and replaced with new fill. Haul truck trips may be required to deliver and dispose of materials, but they are anticipated to be minor given that no building demolition or major grading is proposed. The primary types of construction equipment would consist of graders, excavators, dozers, cranes, welders, pavers, rollers, and generators.

3.3.2 Population

No new employees would be required for this second phase of the research unit because the staff needed for the Water Systems Research Unit, up to 13 new employees, were considered in the proposal and associated CEQA addendum for the first building on the USDA leased site. In addition, the Project would not provide capacity for or result in additional students.

3.3.3 Sustainability Goals

The Project would comply with the 2018 UC Policy on Sustainable Practices, the 2019 Campus Design Guide, and 2016 Title 24 energy efficiency measures. In addition, UC Davis implements Green Building practices under the U.S. Green Building Council's LEED program and is targeting to achieve LEED Silver Certification for the proposed building.

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?
- ▲ Have the conditions described in State CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR occurred?

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 USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project is within the scope of the environmental impact analysis in the 2018 LRDP EIR and none of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred.

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 Project would support the University's academic mission by providing additional building space for research, education, and public service. It is anticipated that USDA ARS scientists would collaborate with University staff and students in a variety of ways, including serving on committees, participating in seminars, working on cooperative studies and grants, and fulfilling roles as adjunct professors and graduate advisors. Additionally, USDA ARS typically employs student and post-doctoral positions on a temporary basis and thus contributes to the educational and developmental programs of the University.

Enrich Community Life: The Project would support the enrichment of community life by providing space where staff and students may gather and collaborate with one another.

Create a Sustainable Future: The Project would promote compact and clustered development of academic/administrative facilities on the west campus. The Project would intensify use of the west campus, conserving land, and utilizing existing building corridors and roads. The Project would comply with the UC Sustainable Practices Policy and incorporate LEED and CALGreen requirements such as the use of recycled and regional materials, and low volatile organic compound-emitting adhesives and paints; implementation of storm water conservation features; and installation of

energy-efficient equipment. Lastly, the Project would support a research program to address challenges to agroecosystem productivity and sustainability.

4.2 2018 LRDP CAMPUS POPULATION

The Project would not contribute to an increase in the employee or student population. The Project would not contribute to the total campus population and would not exceed that contemplated in the 2018 LRDP. The Project is within the scope of the 2018 LRDP population projections.

4.3 2018 LRDP LAND USE DESIGNATION

The 2018 LRDP designates the project site as *Academic and Administrative*, defined as land and structures that facilitate teaching, research, and the public service mission. The *Academic and 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. This land use designation also allows for parking lots (up to 100 parking spaces) and temporary parking uses to support campus housing. The Project would provide a new research building and a parking lot 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 construction of up to 4,000 sf of new research building space on the west campus.

The 2018 LRDP EIR projected that during any particular year, the 2018 LRDP EIR activities could include construction of up to 200,000 sf of academic space as shown in 2018 LRDP EIR Table 3.3-4, “2018 LRDP General Construction Schedule.” During the Project’s construction period beginning in spring 2021, construction of academic buildings would include up to 4,000 sf of new research building space associated with the Project. Thus, during 2021, the construction activities would remain below the 200,000-sf per year estimate analyzed in the 2018 LRDP EIR.

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

4.5 ENVIRONMENTAL REVIEW OF PROJECT ACTIVITIES

UC Davis has determined that, in accordance with PRC Section 21166 and Section 15164 of the State CEQA Guidelines, minor technical changes or additions to the EIR are necessary to address the modifications to the approved LRDP. An addendum to a certified EIR is prepared when changes to a project are required, and the changes:

- ▲ will not result in any new significant environmental effects, and/or
- ▲ will not substantially increase the severity of previously identified effects.

The analysis of environmental effects below addresses the same impacts addressed in the 2018 LRDP EIR. The environmental analysis evaluates whether, for each environmental resource topic (e.g., land use, traffic, air quality), there are any changes in the Project or the circumstances under which it would be undertaken that would result in new or substantially more severe environmental impacts than considered in the 2018 LRDP EIR. The University has defined the column headings in the checklist as follows:

Impact Examined in the 2018 LRDP EIR?: “Yes” is stated where the potential impacts of the Project were examined in the 2018 LRDP EIR. This document summarizes and cross references the relevant analysis in the 2018 LRDP EIR.

Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?: This question is answered with a “yes” or “no,” as substantiated by the discussion provided below the table. If the response is “yes,” additional CEQA analysis is required.

Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?: This question is answered with a “yes” or “no,” as substantiated by the discussion provided below the table. If the response is “yes,” additional CEQA analysis is required.

Do Mitigation Measures in the 2018 LRDP EIR Address/Resolve Impacts, Including Impacts that Would Otherwise be New or Substantially More Severe?: This question is answered with a “yes” or “no,” as substantiated by the discussion provided below the table. The 2018 LRDP EIR mitigation measures are summarized and cross referenced, and the mitigation measures applicable to the Project are summarized in Section 6 of this addendum.

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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Have a substantial adverse effect on a scenic vista?	Yes	No	No	N/A
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Yes	No	No	N/A
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	Yes	No	No	N/A
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Yes	No	No	Yes

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- a) Visual resources on the west campus primarily consist of agricultural fields and open space with scattered low-intensity development that allow long-distance views to the west and south from many locations. As discussed in the 2018 LRDP EIR Impact 3.1-1 (significant and unavoidable), development within west campus as part of the 2018 LRDP would occur in areas that are currently undeveloped and could result in alterations of existing views. While all new 2018 LRDP-related development would be consistent with, and adjacent to, existing development which has already altered long-distance views, implementation of the 2018 LRDP could further interrupt long-distance views. No feasible mitigation measures were available to reduce this impact to less than significant within west campus.

The Project would include the construction of a new single-story pre-engineered building and surface parking adjacent to the Hopkins Buildings on the west campus (Figures 3-3 and 3-4). The project area is characterized by teaching and research fields with supporting facilities, and low-density academic and administrative buildings. The Project would be visually consistent with surrounding uses and with the *Academic and Administrative* land use. Furthermore, the Project and would be designed in accordance with the UC Davis Physical Design Framework and Campus Design Guide Manual, which would provide landscaping, fixtures, and other features consistent with existing conditions, which would soften the visual interface between the Project and its surroundings. Nonetheless, the project would contribute to this significant and unavoidable impact on a scenic vista. 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.

- 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- c) As discussed in the 2018 LRDP EIR Impact 3.1-2 (less than significant), implementation of the 2018 LRDP would result in temporary and permanent visual changes throughout the UC Davis campus. However, these changes would not be significant due in large part to the UC Davis design review process that would require consideration of and consistency with adjacent development.

As explained above, the Project would include the construction of a new single-story pre-engineered building and surface parking adjacent to the Hopkins Buildings on the west campus (Figures 3-3 and 3-4). The project area is characterized by teaching and research fields with supporting facilities, and low-density academic and administrative buildings. The Project would be visually consistent with surrounding uses and with the *Academic and Administrative* land use. Furthermore, the Project and would be designed in accordance with the UC Davis Physical Design Framework and Campus Design Guide Manual, which would provide landscaping, fixtures, and other features consistent with existing conditions, which would soften the visual interface between the Project and its surroundings. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- d) The west campus is a rural setting that lacks extensive lighting. Night lighting on the west campus is limited to lighting along roadways, exterior lights on the few scattered agricultural buildings, and concentrated lighting around campus support facilities and academic and administrative buildings. 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; less than significant with mitigation). The Project consists of a new building and parking lot, which would introduce new sources of light and glare. 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, lighting along walkways, and lighting for the parking. 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. Consistent with 2018 LRDP Impact 3.1-3, with implementation of 2018 LRDP Mitigation 3.1-3(a) and (b), which are included in the Project, it would have a less-than-significant light and glare impact. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

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 & Forestry Resources	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Yes	No	No	N/A
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Yes	No	No	N/A
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))?	Yes	No	No	N/A
d) Result in the loss of forest or agricultural land or conversion of forest land to non-forest or non-agricultural use?	Yes	No	No	N/A
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- a) As described in 2018 LRDP EIR Impact 3.2-1 (significant and unavoidable), implementation of the 2018 LRDP could result in the conversion of 166 acres of Important Farmland to non-agricultural uses. However, according to the Farmland Mapping and Monitoring Program, the project site is designated as Urban and Built-Up Land, and no Important Farmland is located within or directly adjacent to the project site. The Project would not convert farmland to non-agricultural use. The Project would not contribute to 2018 LRDP EIR Impact 3.2-1 and would not require any mitigation. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- 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 2018 LRDP or to the Project.

- c) None of the campus lands are zoned or otherwise designated as forest land or timber-production lands. Therefore, this issue is not relevant to the 2018 LRDP or to the Project.
- d) As described in criterion (c) above, there are no forest lands within the UC Davis campus, including the project site. As described in criterion (a) above, implementation of the 2018 LRDP could result in the conversion of 166 acres of Important Farmland to non-agricultural uses (significant and unavoidable impact). No agricultural land uses exist within or immediately adjacent to the project site. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- e) As described in 2018 LRPD EIR Impact 3.2-2 (less than significant), development proposed under the 2018 LRDP could result in the direct loss or conversion of existing agricultural uses; however, it is unlikely that indirect conversion of land outside of campus boundaries would occur. The project site is not immediately adjacent to agricultural, forest land, or timberland. 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Conflict with or obstruct implementation of the applicable air quality plan?	Yes	No	No	Yes
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Yes	No	No	Yes
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)?	Yes	No	No	Yes
d) Expose sensitive receptors to substantial pollutant concentrations?	Yes	No	No	Yes
e) Create objectionable odors affecting a substantial number of people?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a,b,c,d) Emissions of criteria air pollutants and precursors associated with project construction and operational are discussed separately below.

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 reactive organic gases (ROG), oxides of nitrogen (NO_x), and particulate matter with an aerodynamic diameter of 10 microns or smaller (PM₁₀) that would exceed Yolo-Solano Air Quality Management District’s (YSAQMD) thresholds starting in 2019. Project-related construction activities would result in emissions of criteria air pollutants and ozone precursors from site preparation, concrete sidewalk removal, use of heavy-duty off-road equipment, material delivery and removal, worker commute exhaust emissions, and asphalt paving. Fugitive dust emissions, including PM₁₀ and particulate matter with an aerodynamic diameter of 2.5 microns or smaller (PM_{2.5}), would be generated during site preparation and trenching and vary as a function of soil silt content, soil moisture, wind speed, and area of disturbance. Exhaust emissions of PM₁₀ and PM_{2.5} would result from combustion of fuels. Ozone precursor emissions would primarily be associated with exhaust from construction equipment, haul truck trips, and worker 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. The Project would consist of installation of an up to 4,000-sf pre-engineered building for academic space, which when added to the cumulative construction total in 2020 is below the 200,000-sf estimate used in the 2018 LRDP EIR. Project construction would generate temporary air pollutant emissions that contribute to the overall 2018 LRDP construction emissions as evaluated in the 2018 LRDP EIR, but no new or substantially more severe impacts would result.

As required by 2018 LRDP EIR Mitigation Measure 3.3-1, UC Davis would reduce emissions of ROG, NO_x, and PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 National Ambient Air Quality Standards and California Ambient Air Quality Standards for ozone. Because there is uncertainty regarding the effectiveness of 2018 LRDP EIR Mitigation Measure 3.3-2, which includes several strategies to reduce operational emissions to the extent feasible, 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.

The Project-related vehicle trips, operational maintenance activities, and energy consumption would contribute to the overall 2018 LRDP operational emissions of criteria air pollutants and precursor emissions. The project would have no impact on employee or student population and the 4,000-sf academic building is within the amount of development and type of land use planned for the west campus in the 2018 LRDP and evaluated in 2018 LRDP EIR. Mobile-source emissions of criteria air pollutants and precursors associated with maintenance activities were evaluated with the operational emissions analyzed 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 (natural gas use for heating and cooling). 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 implemented 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. 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 electric vehicles, 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-related vehicle miles traveled (VMT) represent only a small portion of the total increase in VMT associated with full buildout under the 2018 LRDP. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

Mobile-Source Carbon Monoxide Concentrations

2018 LRDP EIR Impact 3.3-3 (less than significant) determined that long-term operation-related local mobile-source emissions of carbon monoxide (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 would not result in more than 10,000 vehicles per hour at any affected intersections, even under cumulative-with-project conditions. This means that Sacramento Metropolitan Air Quality Management District's recommended screening criterion of 31,600 vehicles per hour would not be exceeded at any intersection.

The Project is located on the west campus, which is sparsely populated and agricultural and rural in nature. Existing vehicle traffic levels are low and the project would not involve new students or employees and therefore would not increase daily vehicle trips. Daily vehicle trips would not exceed 10,000 vehicles per hour at any affected intersections. As a result, project-generated, long-term operation-related local mobile-source emissions of CO are minor and would not result in any new or substantially more severe impacts, and no mitigation would be required.

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 toxic air contaminants (TACs), particularly diesel particulate matter (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 (less than significant with mitigation). Consistent with 2018 LRDP EIR Impact 3.3-4, Project-related construction activity would result in temporary, intermittent emissions of diesel PM from diesel equipment over a period of six months. 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). There are no sensitive receptors in the vicinity of the project site. The nearest residence is located over 2,200 feet from the project site and the nearest student housing is located over 4,400 feet to the north east of the project site.

Given the short duration of construction approximately six months and distance to the nearest sensitive receptors, 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. Therefore, no new or substantially more severe impacts would occur and no additional mitigation measures would be required.

Operational Emissions of Toxic Air Contaminants

2018 LRDP EIR Impact 3.3-5 (less than significant) 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 Project includes research building space and computer/analytics laboratories, which are not considered a source of TAC emissions and 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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

As addressed in 2018 LRDP EIR Impacts 3.3-5 (less than significant) and 3.3-6 (less than significant with mitigation), the 2018 LRDP would introduce receptors in close proximity to existing sources of TACs and ultrafine particles (UFPs). The level of health risk associated with exposure to TACs from on-site and surrounding off-site sources would not be substantial. However, residential receptors located closest to I-80 could be exposed to relatively high concentrations of UFPs generated by vehicles traveling on I-80 resulting in substantial levels of health risk.

The Project is compatible with surrounding west campus academic and administrative land uses and does not propose any housing. The Project would not introduce any new or permanent receptors to the area, and is located over 1.5 miles from I-80. Therefore, the Project would not introduce receptors to existing sources of TACs and UFPs from I-80. No new or substantially more severe impacts would occur and no mitigation would be required.

- e) As discussed in 2018 LRDP EIR Impact 3.3-7 (less than significant with mitigation), implementation of the 2018 LRDP would result in temporary construction odors over approximately 13 years in different areas of the 5,300-acre campus; as well as new odors sources such as diesel-fueled delivery trucks, a biomass boiler, composting facility, and expansion of the wastewater treatment plant. The Project would result in minimal and temporary odors during the six months of construction. The Project would not produce operational odors, nor would the Project result in the relocation existing odor sources or the development of residences near an existing odor source. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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, & Tribal Cultural Resources	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	Yes	No	No	N/A
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Yes	No	No	Yes
c) Disturb any human remains, including those interred outside of formal cemeteries?	Yes	No	No	N/A
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	Yes	No	No	N/A
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.				

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- a) 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 (significant and unavoidable). Damage to or destruction of a building or structure that is a designated historic resource, eligible for listing as a historic resource, or a potential historic resource that has not yet been evaluated, could result in the change in its historical significance. There are no historic structures on the project site, and the Project would not result in damage or destruction of any

structures. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- b) The 2018 LRDP EIR Impact 3.4-1 (less than significant with mitigation) determined that development under the 2018 LRDP EIR could result in adverse changes to archaeological resources due to existing areas of archaeological sensitivity, as shown on 2018 LRDP EIR Exhibit 3.4-1, and a “moderate” potential for encountering intact buried archaeological resources during excavation activities. The Project is not located within or near any areas of archaeological sensitivity identified in the 2018 LRDP, Exhibit 3.4-1. However, 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 to 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. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.
- c) Consistent with 2018 LRDP EIR Impact 3.4-3 (less than significant), 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, ground-disturbing activities in the area of the remains shall be halted immediately, and UC Davis shall notify the Yolo County coroner and the Native American Heritage Center (NAHC) immediately, according to Section 5097.98 of the State PRC 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 PRC Section 5097.94. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- d) As discussed in 2018 LRDP EIR Impact 3.4-2 (less than significant), 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 Assembly Bill (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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

4.5.5 Biological Resources

Section 3.5 of the 2018 LRDP EIR addresses the effects of campus growth and development 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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Yes	No	No	Yes
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Yes	No	No	Yes
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- a) The 2018 LRDP EIR defines the Project site, which is located within west campus, as urban landscaping /developed habitat (2018 LRDP EIR Exhibit 3.5-1). The Project site contains some developed landscape (e.g., gravel roads, gravel and paved parking lots, cement walkways, buildings), urban landscaping (e.g., ornamental trees, ornamental shrubs), and some

undeveloped areas; particularly in the western portion of the Project site. The undeveloped areas in the Project site contain fruit trees, nut trees (e.g., walnut, pistachio), and ornamental trees and shrubs. Several small (i.e., less than 5 inches in diameter) valley oak (*Quercus lobata*) trees are also present within the project site. The understory is composed of ruderal grassland with mostly nonnative species, including oat (*Avena spp.*), yellow star thistle (*Centaurea solstitialis*), and narrow leaved plantain (*Plantago lanceolata*). The western edge of the Project site contains several large (i.e., greater than 24 inches in diameter) Mt. Atlas pistache (*Pistacia atlantica*) trees. The parcel adjacent to the Project site to the west contains several additional large Mt. Atlas pistache and walnut (*Juglans spp.*) trees.

The 2018 LRDP EIR found that development under the 2018 LRDP could potentially result in the loss of special status wildlife species (2018 LRDP EIR Impact 3.5-2 through 3.5-8). Based on a review of the sensitive plant and wildlife species within the vicinity of the project site (CNDDDB 2021, CNPS 2021), there is potential for Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), burrowing owl (*Athene cunicularia*), and other nesting birds (non-special-status) to occur. While the Project site contains some areas of ruderal grassland, this habitat is not suitable for any of the special-status plants with potential to occur within the LRDP plan area. Thus, the Project would have no impact on sensitive plant species.

Swainson's hawks and white-tailed kites are known to nest within the west campus (CNDDDB 2021). There are several known nesting occurrences of Swainson's hawk within approximately one mile of the project and one known nesting occurrence of white-tailed kite within approximately 3 miles of the project site (CNDDDB 2021). Nesting habitat potentially suitable for both species is present on the project site within and adjacent to the large landscape trees. During a reconnaissance-level surveys for biological resources conducted on July 24, 2019, a Swainson's hawk was observed exhibiting territorial behavior (e.g., alarm calls), as was evidence of recent Swainson's hawk use (e.g., feathers, pellets, ground squirrel skulls) and a potential stick nest within a large walnut or Mt. Atlas pistache tree less than 100 feet west of the project site. Additionally, the trees and some large shrubs within and adjacent to the project site could provide suitable nesting habitat for other nesting birds including raptors (e.g., red-tailed hawk [*Buteo jamaicensis*], Cooper's hawk [*Accipiter cooperi*]), and songbirds.

There are several known occurrences of burrowing owl within approximately 4 miles of the project site (CNDDDB 2021). During the July 24, 2019 survey, many large California ground squirrels (*Otospermophilus beecheyi*) and their burrows were observed. While signs of burrowing owl occupation (e.g., scat, bones, pellets) were not observed within these burrows during the survey, the presence of burrows indicated that the habitat may be suitable for the species and that burrowing owls could be present at any time in the future.

Project construction activities, including vehicle use, ground disturbing activities, construction crews within close proximity of nesting trees, and disturbance to or removal of nesting trees could result in a potentially significant impact to Swainson's hawk and white-tailed kite, if present. Mitigation Measure 3.5-4a (1 through 4) from the 2018 LRDP EIR shall be implemented as part of the Project to prevent disturbance to active Swainson's hawk, white-tailed kite, and other raptor nests. Therefore, no new or substantially more severe impacts would occur.

Disturbance to or removal of nesting trees, or disturbance due to construction crews or equipment within close proximity of the nesting trees could also result in a potentially significant impact to other native nesting birds, if present. Mitigation Measure 3.5-6 (1 and 2) from the 2018 LRDP EIR would be implemented as part of the Project to prevent disturbance to non-special-status bird nests. Therefore, no new or substantially more severe impacts would occur.

Project construction activities, including vehicle use, ground disturbing activities, vegetation removal, and construction crews within close proximity of occupied burrows could result in a potentially significant impact to burrowing owl if present. Mitigation Measure 3.5-5a (1 through 5) from the 2018 LRDP EIR would be implemented as part of the Project to prevent disturbance to active burrowing owl burrows. Therefore, no new or substantially more severe impacts would occur.

- b,c) As described in to 2018 LRDP Impact 3.5-9 (less than significant with mitigation), development under the 2018 LRDP could affect aquatic features by introducing sediments into Putah Creek or removing or damaging riparian vegetation. The Project site is approximately 0.7 mile north of the riparian corridor along Putah Creek. The Project footprint is mostly developed and is surrounded by roads and other facilities within west campus. The project site does not contain riparian habitat or wetlands. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- d) As described in 2018 LRDP EIR Impact 3.5-10 (less than significant), the Putah Creek corridor, which is the southern boundary of the UC Davis west 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 approximately 0.7 mile north 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- e) 2018 LRDP EIR Impact 3.5-11 (less than significant with mitigation) determined that implementation of the 2018 LRDP could result in the removal of trees recognized to meet UC Davis standards for important trees. UC Davis standards identify “heritage” trees as healthy valley oak trees with trunk diameters of 33 inches or greater at a height of 54 inches from the ground, and “specimen” trees as healthy trees or stands of trees that are of high value to the campus because of their size, species, extraordinary educational and research value, and other exceptional local importance. Consistent with 2018 LRDP EIR Mitigation Measures 3.5-11, a tree survey has been conducted for the project site (UC Davis 2019). Several trees are within the Project footprint and may be removed during Project construction. None of the trees within the Project footprint were identified as specimen trees, and no heritage trees are present within the project site (UC Davis 2019). Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.
- f) The Yolo Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) was approved on October 30, 2018. UC Davis is currently not a participant in the HCP/NCCP but is a trustee agency. As discussed in 2018 LRDP EIR Impact 3.5-12 (less than significant), CEQA does not require analysis of consistency with proposed plans, which was the status of the HCP/NCCP at the time. However, the 2018 LRDP EIR provided information on the Yolo County HCP/NCCP and the Solano County Multi-Species Habitat Conservation Plan 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 would not conflict with these proposed plans. The 2018 LRDP EIR mitigation measures would also be implemented for the Project, as discussed in criteria (a) above, to minimize impacts to special status species. Therefore, no new or substantially more severe impacts would occur.

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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Result in unnecessary, inefficient, and wasteful use of energy?	Yes	No	No	N/A
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a,b) Consistent with 2018 LRDP EIR Impact 3.6-1 (less than significant), 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. Use of construction equipment and associated energy consumption would be less than that of typical building construction due to the use of pre-engineered building materials. Idling of onsite equipment during construction would be limited to no more than five minutes in accordance with YSAQMD requirements. Further, onsite construction equipment may include vehicles using alternative fuels (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.

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-related energy use would not be considered inefficient, wasteful, or unnecessary. No new or substantially more severe impacts would occur and no mitigation would be required.

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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Yes	No	No	N/A
ii) Strong seismic ground shaking?	Yes	No	No	N/A
iii) Seismic-related ground failure, including liquefaction?	Yes	No	No	N/A
iv) Landslides?	Yes	No	No	N/A
b) Result in substantial soil erosion or the loss of topsoil?	Yes	No	No	Yes
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a,i) As stated on pages 3.7-8 and 3.7-15 of 2018 LRDP EIR, the UC Davis campus and the surrounding area are not located within an Alquist-Priolo Earthquake Fault Zone, and the campus is not subject to surface fault rupture. The project site is within the UC Davis campus and therefore would also not be subject to surface fault rupture. This issue is not relevant to the Project.

a,ii) As stated on pages 3.7-8 and 3.7-15 of 2018 LRDP EIR, 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 (less than significant), 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.

While the Project would not exacerbate seismic hazards, it would expose employees and structures to risks associated with damage from earthquakes. The campus minimizes these seismically-induced risks through several measures, including adherence to the California Building Code (CBC), University of California Seismic Safety Policy, and through the development of department-level emergency response plans consistent with the campus Emergency Operations Plan. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

a,iii) See the discussion in criterion (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 campus would not be subject to landslides; and this issue was not discussed further in the 2018 LRDP EIR. Because the project site is located within the UC Davis campus, it would also not be subject to landslides. Therefore, this issue is not relevant to the Project.

b) 2018 LRDP EIR Impact 3.7-3 (less than significant) identified the potential for 2018 LRDP construction activities to disturb soils and result in erosion or loss of top soil. However, campus projects 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.

The Project is located on Yolo series soils (2018 LRDP EIR Exhibit 3.7-1), which are generally well-drained, exhibit moderate permeability, slow-to-medium surface water runoff, low soil erosion hazard, and moderate shrink-swell potential. The Project would involve minor ground disturbance for site preparation and concrete sidewalk removal, which increase the risk of erosion. However, the Project would comply with relevant NPDES permits, including the General Construction Permit and the Phase II Small MS4 Permit. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

As described in 2018 LRDP EIR Impact 3.7-4 (less than significant with mitigation), implementation of the 2018 LRDP would involve changes to the existing stormwater infrastructure at sites where there is redevelopment, and new stormwater infrastructure at new development sites. 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 shall conduct 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. The UC Davis MS4 Post-Construction Requirements Checklist was used for projects with impervious surfaces greater than 5,000 sf. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

- c) As discussed in 2018 LRDP EIR Impact 3.7-2 (less than significant), soils on campus exhibit characteristics which could make them susceptible to liquefaction; however, depth to groundwater on campus is relatively deep (30 to 80 feet below ground surface), which provides a mitigating effect because most soils are not continuously saturated. Therefore, many campus soils that are characterized as susceptible in literature may be discovered to be not so during geotechnical investigations. 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. Per the Project's geotechnical investigation conducted by Raney Geotechnical, Inc. and documented in a geotechnical report dated May 8, 2019, the project is designed in compliance with the CBC and the University of California Seismic Safety Policy. Therefore, no new or substantially or more severe impacts would occur and no mitigation would be required.

As disclosed in 2018 LRDP EIR Impact 3.7-6 (less than significant), subsidence on campus related to groundwater withdrawals from the shallow/intermediate aquifers has been observed and documented. While groundwater extraction 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. Per the Project's geotechnical investigation report by Raney Geotechnical, Inc., dated May 8, 2019, the project is designed in compliance with the CBC. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- d) As disclosed in 2018 LRDP EIR Impact 3.7-5 (less than significant), UC Davis is host to several soil units with a high shrink-swell potential. Shrinking and swelling can result in differential ground movement, which can cause damage to building foundations. The project site is located on Yolo series soils (2018 LRDP EIR Exhibit 3.7-1), which have a moderate shrink-swell potential. 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. Per the Project's geotechnical investigation report by Raney Geotechnical, Inc., dated May 8, 2019, the project is designed in compliance with the CBC and the UC Davis Campus Design Guide. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- e) As disclosed in 2018 LRDP EIR Impact 3.7-7 (less than significant) the campus wastewater treatment system serves most of the campus, although a few areas of west campus are served by existing on-site septic disposal systems. Soils in some areas of west campus have slow permeability, which poses constraints on septic tank absorption fields. No septic tanks or alternative wastewater disposal systems are included in the Project. The Project's wastewater pipe would be connected to an existing lift station located across Hopkins Road. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- 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. These alluvial deposits contain vertebrate and invertebrate remains of extant, modern taxa, which are generally not considered paleontologically significant. 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. Because the project site is within the area analyzed within the 2018 LRDP EIR, this issue is not relevant to the 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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Yes	No	No	N/A
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose or reducing the emissions of greenhouse gases?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- a) 2018 LRDP EIR Impact 3.8-1 (less than significant) 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. However, 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. 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, would be consistent with the statewide GHG reduction goals, and would not considerably contribute to climate change.

Construction and operation of the Project would result in GHG emissions from construction vehicle trips, construction equipment, building energy use, and mobile sources. Emissions associated with building energy use would include the consumption of natural gas for space and water heating, and the consumption of electricity, including electricity associated with the treatment and conveyance of water. The Project would include design elements that would reduce construction GHG emissions and overall building energy use and associated GHG emissions. By using pre-engineered building materials, construction would be less time and equipment-intensive than for typical building installation. The Project would comply with the 2018 UC Policy on Sustainable Practices, the 2019 Campus Design Guide, and 2016 Title 24 energy efficiency measures. In addition, UC Davis implements Green Building practices under the U.S. Green Building Council’s LEED program and is targeting to achieve LEED Silver Certification for the proposed building. 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- b) As discussed in 2018 LRDP EIR Impact 3.8-2, implementation of the 2018 LRDP would achieve targets established in the UC Sustainable Practices Policy through anticipated planning and policy actions. Achievement of the Sustainable Practices Policy would meet or exceed statewide targets for 2030 and not impede the ability to achieve statewide 2050 targets, including continued implementation of the Sacramento Area Council of Government's (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

As discussed in Sections 4.1 through 4.4 of this addendum, the Project is consistent with the 2018 LRDP and its land use designation. As discussed in response a) above, the Project would not result in any significant short-term or long-term GHG contributions. Thus, the Project would not conflict with University of California Sustainable Practices Policy, the UC Davis Climate Action Plan, SACOG's 2035 MTP/SCS, or any other plan, policy, or regulation adopted for the purpose or reducing the emissions of GHGs. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Yes	No	No	N/A
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?	Yes	No	No	Yes
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Yes	No	No	N/A
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?	Yes	No	No	Yes
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Yes	No	No	Yes
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- a) LRDP EIR Impact 3.9-1 determined that construction and operation of the development identified in the 2018 LRDP would result in the 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.

Consistent with the LRDP, 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 pavement). However, the construction-related transport, use storage, and disposal of hazardous materials would be temporary, lasting up to six months. Furthermore, the State Water Resources Control Board's 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. Therefore, no significant hazards would be created during construction activities.

While not anticipated, it is possible that during the operational phase the Project would require the transport, use, and disposal of potentially hazardous materials. As discussed in LRDP EIR Impact 3.9-1, facilities constructed under the 2018 LRDP would continue to comply with all hazardous materials standards for UC Davis, Occupational Safety and Health Act requirements, and applicable state and federal regulations. 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- b) As discussed in 2018 LRDP EIR Impact 3.9-3 (less than significant), the 2018 LRDP includes development of academic and administrative land uses, campus infrastructure, and student housing in close proximity to the UPRR line and I-80, which are 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 is located over 1.5 miles from I-80 and the UPRR line and does not include any housing. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

Consistent with 2018 LRDP EIR Impact 3.9-2 (less than significant with mitigation), site preparation activities and concrete sidewalk removal may expose construction workers and the public to hazardous substances present in the soil (such as naturally occurring asbestos [NOA]) or groundwater). Although contaminated groundwater and NOA are not anticipated to be encountered in the Project area, undocumented contamination could be present. 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. Implementation of regulatory requirements and Mitigation Measure 3.9-2b would minimize the risk of an accidental release of hazardous substances that could adversely affect human health or the environment. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

- 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 occur primarily during the six month construction period and would be subject to campus safety programs and procedures. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- 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). As discussed in the 2018 LRDP EIR Impact 3.9-2 (less than significant with mitigation), 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 (WDRs), 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 Measure 3.9-2b, which would 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. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.
- e) As discussed in 2018 LRDP EIR Impact 3.9-5 (less than significant), areas of the campus are within University Airport's horizontal and conical surfaces, which are intended to protect airspace near airfields from buildings and other structures that could inhibit safe approaches and takeoffs to and from the airfield. The horizontal surface is 219 feet at its lowest point over areas of the 2018 LRDP within which development may occur. Under the 2018 LRDP, buildings would not exceed 6 stories or approximately 80 feet in height, which would not conflict with airport building height restrictions. Although the Project is located within the airport's horizontal surface, the USDA ARS building would be a single-story building and would not exceed 80 feet in height. Therefore, the Project would not conflict with airport operations. No new or substantially more severe impacts would occur and no mitigation would be required.
- f) As stated on page 3.9-29 of the 2018 LRDP EIR, 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 the Project.
- g) Consistent with 2018 LRDP Impact 3.9-6 (less than significant with mitigation), Project-related construction could result in short-term, temporary impacts to street traffic due to construction vehicles, haul truck trips, and the potential extension of construction activities into the right-of-way. This could result in temporary traffic slowdowns or road closures; such impacts would be short in duration and would affect only adjacent streets or intersections. Furthermore, to maintain adequate emergency response during construction, which will affect roadways, UC Davis shall prepare and implement a site-specific construction traffic management plan per Mitigation Measure 3.9-6 to further mitigate temporary construction impacts. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.
- h) As stated on page 3.9-29 of the 2018 LRDP EIR, the UC Davis LRDP area is not located in or near a fire hazard severity zone established by the California Department of Forestry and Fire Protection. The potential for wildland fire is low. The Project would not change this and no new or substantially more severe impacts would occur and no mitigation would be required.

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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Violate any water quality standards or waste discharge requirements?	Yes	No	No	Yes
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)?	Yes	No	No	Yes
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?	Yes	No	No	Yes
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?	Yes	No	No	Yes
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?	Yes	No	No	Yes
f) Otherwise substantially degrade water quality?	Yes	No	No	Yes
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?	Yes	No	No	N/A
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	Yes	No	No	N/A
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?	Yes	No	No	N/A
j) Inundation by seiche, tsunami, or mudflow?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a,f) Construction. 2018 LRDP EIR Impact 3.10-1 (less than significant) found 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 must implement stormwater pollution prevention plans (SWPPPs), which specify BMPs to reduce the contribution of sediments, spilled and leaked liquids from construction equipment, and other construction-related pollutants to stormwater runoff. The Project would disturb approximately 11,200 sf or 0.26 acre. Therefore, a SWPPP would not be required. 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 would result in minor ground disturbance during site preparation and concrete sidewalk removal and would require the use of construction lubricants which could enter stormwater runoff. However, with adherence to BMPs, these contributions would not be substantial. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

Operation. As described in 2018 LRDP EIR Impact 3.10-2 (less than significant), 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 shall be designed consistent with a drainage evaluation completed for the stormwater management system (2018 LRDP EIR Mitigation Measure 3.7-4). The UC Davis MS4 Post-Construction Requirements Checklist was used for projects with impervious surfaces greater than 5,000 sf. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

As described in 2018 LRDP EIR Impact 3.10-3 (less than significant), 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 WDRs which would reduce the impact to less than significant. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

b) Deep Aquifer. As described in 2018 LRDP EIR Impact 3.10-4 (less than significant), 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 consistent with the land use designation and density identified in the 2018 LRDP, and it was 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

Shallow/Intermediate Aquifer. As described in 2018 LRDP EIR Impact 3.10-5 (less than significant), 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. Consistent with Mitigation Measure 3.10-6 of the 2018 LRDP EIR (2018 LRDP EIR Mitigation Measure 3.7-4), which requires implementation of project-level storm controls, the USDA-leased site has an approximately 300-sf vegetated flow-thru planter bioswale, which would capture and filter stormwater runoff from paved and roof surfaces. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

c,d,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 drainage, stormwater runoff, and infrastructure (less than significant with mitigation). The Project would contribute to this impact by adding new impervious surfaces including paved parking areas and roof surfaces. Consistent with Mitigation Measure 3.10-6 of the 2018 LRDP EIR (2018 LRDP EIR Mitigation Measure 3.7-4), which requires implementation of project-level storm controls, the USDA-leased site includes an approximately 300-sf vegetated flow-thru planter bioswale, which would capture and stormwater runoff from paved and roof surfaces. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

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

g,h) As described in 2018 LRDP EIR Impact 3.10-7 (less than significant with mitigation), the 2018 LRDP may involve the construction of additional academic and administrative facilities within the far western portion of west campus. Should that occur and in the event of a 100-year flood, there would be increased exposure to the risk of loss and flood damage. 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). Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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 in the event of dam failure. However, the dam structure is carefully managed by state and federal agencies and is capable of withstanding strong seismic shaking. As described in 2018 LRDP EIR Impact 3.10-8 (less than significant), the risk of inundation of any portion of the campus from a failure of the Monticello Dam is low. The Project would not change the risk of flooding nor build new housing within an area subject to flooding. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

j) UC Davis is not subject to inundation by seiche, tsunami, or mudflow. The campus is generally flat and is not located near any large water bodies. This issue is not relevant to the 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 and development 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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Physically divide an established community?	Yes	No	No	N/A
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?	Yes	No	No	N/A
c) Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- 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 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; less than significant). The USDA Sustainable Agricultural Water Systems Research Unit – Phase II involves installation of a new research building and parking consistent with the *Academic and Administrative* designation for the project site, which is currently developed with academic and research buildings and parking. The Project would be built, operated and maintained by the USDA ARS under the terms of a ground lease with the University. The Project would provide additional building space for research, education, and public service; promote compact and clustered development of academic/ administrative facilities on the west campus; enhance student interaction; conserve land; and utilize existing building corridors and roads, 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 UFPs. The Project is similar to, and therefore compatible with, surrounding west campus academic and administrative land uses. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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	Impact Examined in 2018 LRDP EIR?	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Yes	No	No	N/A
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a,b) As described on page 3.7-15 of the 2018 LRDP EIR, the LRDP area, including the project area, 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 area, including the project area, 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. Therefore, this issue is not relevant to the Project.

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	Impact Examined in 2018 LRDP EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
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?	Yes	No	No	Yes
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Yes	No	No	N/A
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Yes	No	No	N/A
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Yes	No	No	Yes
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a,d) Construction Noise. 2018 LRDP EIR Impact 3.12-1 (less than significant with mitigation) 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.

Project-related construction activity would result in temporary noise increases in the project area, which is on the west campus between the Hopkins Building and Pomology Field House C. Construction of the Project is anticipated to begin in spring 2021 and would last up to six months. Construction activity would involve the use of heavy mechanical equipment, which would result in a noise level increase in the project area, 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 and consistent with the assumptions of the 2018 LRDP EIR Impact 3.12-1, the greatest noise levels would occur during site preparation and concrete sidewalk removal activities.

2018 LRDP EIR Mitigation Measure 3.12-1 requires construction noise minimization measures, including limiting 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). Implementation of Mitigation Measure 3.12-1 prevents the exposure of noise-sensitive receptors to construction noise that exceeds the significance criterion of 80 decibels (dB) energy-equivalent noise level. Therefore, no new or substantially more severe impacts would occur and no new mitigation would be required.

- b) As discussed on page 3.12-20 of the 2018 LRDP EIR, 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. Thus construction-related ground vibration and ground-borne noise in exceedance of the significance thresholds would not be generated. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

Also discussed on 2018 LRDP page 3.12-20 of the 2018 LRDP EIR, 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 Project would not be expected to increase existing truck deliveries. As a result, ground vibration levels in exceedance of the significance thresholds are not anticipated as a result of the Project. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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 (less than significant with mitigation). However, the project site is not within 750 feet of existing rail lines and would not involve the construction of housing. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- c) Operational Noise – Stationary Noise Sources. To evaluate increases in Project-generated operational noise sources, the applicable noise limit of 70 A-weighted decibels (dBA) community noise equivalent level (CNEL) (equivalent to 63.3 dBA equivalent noise level [Leq]) for residential land uses was applied. The 2018 LRDP EIR Impact 3.12-2 (less than significant with mitigation) 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 exceed this noise limit. Based on reference noise levels, and applying typical attenuation rates, noise from HVAC units could exceed thresholds within 110 feet from the source. Backup generators associated with

new buildings could exceed hourly standards within 155 feet from the source. Noise from loading and unloading of delivery trucks could exceed hourly standards within 430 feet from the source. There are no sensitive receptors in the vicinity of the project site. The nearest residence is located over 2,200 feet from the project site and the nearest student housing is located over 4,400 feet to the north east of the project site. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

Operational Noise - Traffic Noise. 2018 LRDP EIR Impact 3.12-4 (less than significant) 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 not increase employees or students on campus and would not contribute to increases in traffic and associated vehicle noise 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 is 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 Project would not increase traffic noise levels along area roadways by 5 dB or more and, therefore, not be considered a substantial increase. Further, assuming a typical exterior-to-interior noise reduction of 25 dB (Caltrans 2013:P. 7-17), resultant traffic noise levels would not exceed the interior noise standard of 45 dB at any residential land uses located along affected roadway segments. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- e) 2018 LRDP EIR Impact 3.12-3 discusses 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 (less than significant with mitigation). 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, and does not propose changes to University Airport operations that would result in increases in associated airport noise. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- 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.

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	Impact Examined in 2018 LRDP EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Yes	No	No	N/A
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	Yes	No	No	N/A
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	Yes	No	No	N/A
d) Create a demand for housing that cannot be accommodated by local jurisdictions?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

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 (significant and unavoidable). 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 (West Village and Orchard Park); project level analyses of these projects are included in the 2018 LRDP EIR. However, the Project would not support an increase of employees or student enrollment. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

b,c) No housing units exist on the project footprint. The Project would not displace any existing housing units or people. Therefore, this issue is not relevant to the 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	Impact Examined in 2018 LRDP EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
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?	Yes	No	No	N/A
ii) Police protection?	Yes	No	No	N/A
iii) Schools?	Yes	No	No	N/A
iv) Parks?	Yes	No	No	N/A
v) Other public facilities?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a) 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 proposed building would be located adjacent to other west campus development, and the project would not alter employee or student population. Therefore, the project 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. No new or substantially more severe impacts would occur and no mitigation would be required.

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 modestly contribute to this demand (by providing new employment which could bring new families to the area). However, enrollment for Davis Joint Unified School District 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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	Impact Examined in 2018 LRDP EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

- a) 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 not increase the campus population and would not contribute to demand and use for parks and recreation facilities on or off campus. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- b) The Project does not include the construction or expansion of recreational facilities. No new or substantially more severe impacts would occur and no mitigation would be required.

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 and development 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	Impact Examined in 2018 LRDP EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the Project...				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Yes	No	No	N/A
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?	Yes	No	No	N/A
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?	No	N/A	N/A	N/A
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Yes	No	No	N/A
e) Result in inadequate emergency access?	Yes	No	No	Yes
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?	Yes	No	No	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

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 not increase the campus population and would not contribute to peak traffic volumes.

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 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; no new or substantially more severe impacts would occur and no new mitigation would be required. 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. University 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.
- d) As disclosed in 2018 LRDP EIR Impacts 3.16-3 (less than significant with mitigation), 3.16-4 (less than significant with mitigation), and 3.16-5 (less than significant with mitigation), 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 amongst each mode to meet both operational and safety objectives related to transit. This could increase the risk of collisions. The Project 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. The Project would result in no permanent changes to the external roadway system, nor would it result in any new design features or other incompatible uses that could increase roadway hazards. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- 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. There is sufficient space on the project site for construction staging and vehicle access. Thus, temporary road closures are not anticipated. Furthermore, Project construction would be short in duration, lasting up to six months, and would affect only adjacent streets (i.e., Hopkins Road and Bee Biology Road) or intersections. Furthermore, preparation and implementation of a Construction Traffic Management Plan, as required by 2018 LRDP EIR Mitigation Measure 3.9-6, 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 would not result in permanent modification of any roads or otherwise affect emergency response times and would maintain adequate emergency access. Therefore, no new or substantially more severe impacts would occur and no new mitigation would be required.

- 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 Project would not increase the campus population and would not contribute to use of public transit facilities in the project vicinity (there are no formal pedestrian or bicycle facilities near the project site). The Project would not result in any permanent changes to the roadway, bike, or pedestrian systems. Thus, the Project would not conflict with any with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

4.5.18 Utilities and Service Systems

Section 3.17 of the 2018 LRDP EIR addresses the effects of campus growth and development 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	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?*	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Do Mitigation Measures in the 2018 LRDP EIR Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Yes	No	No	N/A
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?	Yes	No	No	N/A
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?	Yes	No	No	N/A
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Yes	No	No	N/A
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?	Yes	No	No	N/A
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Yes	No	No	N/A
g) Comply with federal, state, and local statutes and regulations related to solid waste?	Yes	No	No	N/A
h) Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts?	Yes	No	No	N/A
i) Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts?	No	N/A	N/A	N/A

*Determination is related to pre-mitigation conditions, including implementation of previously adopted mitigation.

a,b,e) The Project would not increase employee or student population; however, operation of the new building may result in a small increase in domestic water use and associated wastewater production. As the Project is consistent with the land use and population analyzed in 2018 LRDP Impact 3.17-1 (less than significant), the increase would not be significant. The permitted peak monthly average capacity of the campus wastewater treatment plant 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 wastewater treatment plant indicate that the wastewater treatment plant will continue to have design capacity for many years, including with implementation of the Project. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

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 items 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- c) Increased impervious surfaces and the potential need for new stormwater infrastructure to accommodate growth anticipated under the 2018 LRDP was evaluated in 2018 LRDP EIR Impact 3.10-6 (less than significant with mitigation). The analysis acknowledged that changes in impervious surfaces on campus from new development could involve changes to stormwater infrastructure, including drainage patterns, infrastructure connectivity, and the locations of specific features. 2018 LRDP EIR Mitigation Measure 3.10-6 requires implementation of project-level stormwater controls to ensure that impacts would be less than significant. The construction of a building and paved surfaces within the project site could result in a small increase in the amount of impervious surfaces, which would be accommodated by an existing 300-sf vegetated flow-thru planter bioswale. 2018 LRDP EIR Mitigation Measure 3.10-6 requires implementation of Mitigation Measure 3.7-4. 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. Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.
- d) Water used within the UC Davis campus is provided by three major sources: Woodland-Davis Clean Water agency surface water, Solano County Water Agency surface water, and groundwater; the Project would utilize any or all these water sources. The Project would not increase employee or student population; however, operation of the new building may result in a small increase in domestic water use. As the Project is consistent with the land use and population analyzed in 2018 LRDP Impact 3.17-1 (less than significant), the increase would not be significant. Consistent with the LRDP's conservation strategies, the Project would also use low-flow fixtures to reduce domestic water consumption. The 2018 LRDP EIR determined that sufficient water supplies are available to meet projected demand and no new or expanded entitlements are required. The Project demand is within that contemplated by the 2018 LRDP. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- f,g) As described in the 2018 LRDP EIR Impact 3.17-4 (less than significant), the 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). Furthermore, 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 the California Integrated Waste Management Act, AB 341, Senate Bill (SB) 1374, AB 1826, and SB 1383.

Project construction would not generate substantial waste as there would be no demolition of structures and waste from concrete sidewalk removal would be minor. During the operational phase of the new building, the Project would result in a small increase in solid waste. However, the Project does not include additional staff or students, and operational waste generation was contemplated in 2018 LRDP Impact 3.17-4. The waste disposal needs of the Project would be served by the county landfill. The Project would implement campus waste reduction strategies/actions and would comply with all applicable statutes and regulations related to solid waste. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

- h) 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 and steam infrastructure 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 site is not served by the Central Heating and Cooling Plant. As with other campus buildings that are not connected to central systems, the proposed building would use individual heating, ventilation and air conditioning equipment. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.
- 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. Therefore, no new or substantially more severe impacts would occur and no mitigation would be required.

4.5.19 Conclusion

As described in Chapter 3 of this document, “Project Description,” and Chapter 4, “Coverage Under the 2018 LRDP and 2018 LRDP EIR,” none of the conditions described in CEQA Guidelines Section 15162 calling for preparation of a subsequent document have occurred. As documented throughout the environmental checklist and discussion, changes to the approved LRDP in connection with the USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project, and any altered conditions since certification of the LRDP EIR in July 2018 would:

- ▲ not result in any new significant environmental effects, and
- ▲ not substantially increase the severity of previously identified significant effects.

In addition, no new information of substantial importance has arisen that shows that:

- ▲ the Project would have new significant effects,
- ▲ the Project would have substantially more severe effects,

- ▲ mitigation measures or alternatives previously found to be infeasible would in fact be feasible, or
- ▲ mitigation measures or alternatives that are considerably different from those analyzed in the EIR would substantially reduce one or more significant effects on the environment.

Therefore, the differences between the approved LRDP, as described in the certified EIR, and the project modifications now being considered constitute changes consistent with CEQA Guidelines Section 15164. Through this addendum, UC Davis has determined that no subsequent EIR or negative declaration is required for the USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project.

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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 USDA Sustainable Agricultural Water Systems Research Unit – Phase II Project.

5.1 AESTHETICS

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.

5.2 AIR QUALITY

Mitigation Measure 3.3-1: Reduce construction-generated emissions of ROG, NO_x, and PM₁₀.

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 electric vehicles (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 NO_x 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.

5.3 BIOLOGICAL RESOURCES

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 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 the California Department of Fish and Wildlife (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 3.5-5a: Burrowing owl avoidance and compensation.

For any construction projects implemented under the 2018 LRDP, the following measures will be implemented prior to initiation of construction to reduce impacts on burrowing owl:

- 1) UC Davis will retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat (e.g., ruderal grassland, annual grassland, agricultural land, roadsides) on and within 1,500 feet of pending construction activities for a project under the 2018 LRDP. Surveys will be conducted prior to the start of construction activities and in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012).
- 2) If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to CDFW and no further mitigation will be required.
- 3) If an active burrow is found within 1,500 feet of pending construction activities that would occur during the nonbreeding season (September 1 through January 31), UC Davis will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan will be developed, as described in Appendix E of CDFW's 2012 Staff Report. Burrowing owls will not be excluded from occupied burrows until the project's burrowing owl exclusion plan is approved by CDFW. The exclusion plan will include a plan for creation, maintenance, and monitoring of artificial burrows in suitable habitat.
- 4) If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level disturbance as outlined in the CDFW Staff Report (CDFW 2012). The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented so that burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW's 2012 Staff Report.
- 5) If active burrowing owl nests are found on the project site and are destroyed by project implementation, UC Davis will mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW 2012 Staff Report, which states that permanent impacts to nesting, occupied and satellite burrows, and burrowing owl habitat will be mitigated such that habitat acreage and number of burrows are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. UC Davis will retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:
 - a) Mitigation lands will be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species range wide. Mitigation for loss of burrowing owl habitat under the 2003 LRDP included establishment of mitigation lands within Russell Ranch, which is a feasible option for future mitigation under the 2018 LRDP.

Mitigation Measure 3.5-6: Tricolored blackbird avoidance.

With respect to any construction activities undertaken for a particular project under the 2018 LRDP, the following measures will be implemented to avoid or minimize loss of active tricolored blackbird or other bird nests:

- 1) To minimize the potential for loss of tricolored blackbird or other bird nests, vegetation removal activities will commence during the nonbreeding season (September 1 - January 31). If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation would be required.
- 2) Prior to removal of any vegetation, or any ground-disturbing activities between February 1 and August 31, a qualified biologist will conduct preconstruction surveys for nests on any or vegetation slated for removal, as well as for potential tricolored blackbird nesting habitat. The surveys will be conducted no more than 14 days before construction commences. If no active nests or tricolored blackbird colonies are found during focused surveys, no further action under this measure will be required. If active nests are located during the preconstruction surveys, the biologist will notify CDFW. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives will be evaluated and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, construction will be prohibited within a minimum of 100 feet of the outer edge of the nesting colony to avoid disturbance until the nest colony is no longer active.

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).

5.4 GEOLOGY, SOILS, AND SEISMICITY

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.

5.5 HAZARDS AND HAZARDOUS MATERIALS

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 the Yolo County Environmental Health Division (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, the regional water quality control board, and the Department of Toxic Substances Control (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 3.9-6. 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.

5.6 HYDROLOGY AND WATER QUALITY

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

Implement Mitigation Measure 3.7-4.

5.7 NOISE

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.

6 REFERENCES

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