UCMERCED

MEDICAL EDUCATION BUILDING PROJECT

FINAL ENVIRONMENTAL IMPACT REPORT
RESPONSE TO COMMENTS

STATE CLEARINGHOUSE NO. 2021040047

November 2022

This page intentionally left blank

TABLE OF CONTENTS

TABLES

This page intentionally left blank

1.0 INTRODUCTION

1.1 PURPOSE OF THE FINAL ENVIRONMENTAL IMPACT REPORT

Under the California Environmental Quality Act (CEQA) and the University of California's (University or UC) procedures for implementing CEQA, the University is required to consult with and obtain comments from public agencies that have jurisdiction by law or discretionary approval power with respect to the proposed project prior to preparation of a Draft Environmental Impact Report (EIR), and to provide the public agencies and the general public with an opportunity to comment on the Draft EIR following its completion.

On August 26, 2022, the University, acting as the lead agency under CEQA, published the UC Merced Medical Education (UCM-ME) Building Project (proposed Project or Project) Draft EIR, which assessed and disclosed the potentially significant environmental impacts that could result from the implementation of the proposed Project. The Draft EIR was circulated for public review for a 45-day comment period, which ended on October 10, 2022. The University held a public meeting on the Draft EIR on September 19, 2022 to provide the public an opportunity to comment on the adequacy of the information presented in the Draft EIR. Copies of all written and oral comments received on the Draft EIR during the comment period are contained in this document.

The Final EIR is an informational document prepared by the Lead Agency that must be considered by decision makers before approving or denying the proposed project. *State CEQA Guidelines* Section 15132 specifies that the Final EIR shall consist of the following:

1. The Draft EIR or a revision to the draft.

2. Comments and recommendations received on the Draft EIR either verbatim or in summary form.

3. A list of the persons, organizations, and public agencies commenting on the Draft EIR.

4. The response of the Lead Agency to significant environmental points raised in the review and consultation process.

5. Any other information added by the Lead Agency.

The Draft EIR, which is incorporated by reference, and this document (which includes revisions to the Draft EIR, comments, responses to comments, and the Mitigation Monitoring and Reporting Program [MMRP]), constitute the Final EIR. Copies of the Final EIR are available for review during normal business hours at UC Merced at the following addresses and website:

University of California, Merced
UC Merced Downtown Campus Center
655 W 18th Street
Merced, California 95340

University of California, Merced
Kolligian Library
5200 North Lake Road
Merced, California 95343

The Final EIR can be viewed online at: https://planning.ucmerced.edu/ceqa-environmental-documents.

This document has been prepared pursuant to the *State CEQA Guidelines*. This Response to Comments document, together with the Draft EIR, will constitute the Final EIR. The Final EIR will be considered by The Board of the Regents of the University of California (The Regents) in a public meeting in November 2022 and certified if the Final EIR is determined to be in compliance with CEQA. Upon certification of the Final EIR, The Regents will consider the UCM-ME Building Project for approval.

1.2 DOCUMENT ORGANIZATION

This document consists of the following sections:

- **Section 1.0: Introduction.** This section discusses the purpose and organization of this document.
- **Section 2.0: Executive Summary.** This section provides a summary description of the UCM-ME Building Project, including the project purpose, description, need and objectives, and alternatives, as well as the environmental impacts that could result from the implementation of the UCM-ME Building Project, and mitigation measures for impacts that were determined to be significant.
- **Section 3.0: Comments on the Draft EIR and Responses to Comments.** This section contains a list of agencies, organizations, and persons who submitted written comments or offered oral comments on the Draft EIR. This section also contains reproductions of all comment letters received on the Draft EIR, as well as oral comments received on the Draft EIR at the public meeting. A written response for each CEQA-related comment received during the review period is provided. Each response is keyed to its respective comment.
- **Section 4.0: Draft EIR Text Revisions.** Corrections to the Draft EIR necessary in light of comments received and responses provided, or necessary to clarify any minor errors or omissions, are contained in this section.
- **Section 5.0: Mitigation Monitoring and Reporting Program.** This section presents the Mitigation Monitoring and Reporting Program that will be adopted in conjunction with the approval of the proposed UCM-ME Building Project, should The Regents approve the project.
- **Section 6.0: Report Preparers.** This section lists persons involved in report preparation.

2.0 EXECUTIVE SUMMARY

2.1 PURPOSE

This Final Environmental Impact Report (EIR) evaluates and discloses the potentially significant environmental effects of the UC Merced Medical Education (UCM-ME) Building Project proposed by the University of California (UC or the University) at the Merced campus (UC Merced or Campus).

In March 2009, The Regents certified a joint Environmental Impact Statement (EIS)/EIR (2009 UC Merced and University Community Project EIS/EIR; State Clearinghouse No. 2008041009)[1] that analyzed and disclosed the impacts from the implementation of a Long Range Development Plan (LRDP) for the UC Merced campus and a community plan for an adjoining community and approved the UC Merced 2009 LRDP as a guide for physical development of the campus to accommodate growth projected through 2030 and beyond. The 2009 LRDP addressed the development of the campus to support an enrollment level of 25,000 students by the year 2030 on an 815-acre site.

Following the approval of the 2009 LRDP, the University substantially reduced its population projections through 2030 and also acquired more land to the south of the campus as a result of the dissolution of the University Community Land Company (UCLC) in which the University was a 50 percent owner. In light of these changes, UC Merced prepared an updated LRDP for a more compact campus to be developed by 2030. In March 2020, The Regents certified a program-level Subsequent EIR[2] (SEIR) that analyzed and disclosed the environmental impacts from the implementation of the updated LRDP[3] for the UC Merced campus and adopted the UC Merced 2020 LRDP as a guide for physical development to accommodate campus population growth projected through 2030. The 2020 LRDP SEIR addressed the development of the campus to accommodate the full buildout enrollment of 15,000 Full Time Equivalent (FTE) students and a total population of 17,411 persons within a 1,026-acre campus footprint. The SEIR did not fully replace the 2009 LRDP EIS/EIR but supplemented and updated most of the analyses, while retaining some of the analysis in the 2009 LRDP EIS/EIR. The University noted that the 2020 LRDP SEIR, in conjunction with the 2009 LRDP EIS/EIR, will serve as the base or first-tier environmental document for tiering purposes when implementing the 2020 LRDP.

Because the proposed UCM-ME Building Project (proposed Project or Project) would be undertaken by the University, as the lead agency, the University must evaluate the potential environmental impacts of the proposed Project in compliance with CEQA. The University has completed an evaluation of the proposed Project pursuant to Section 15168(c)(2) of the *State CEQA Guidelines* to determine if the proposed Project is within the scope of the growth and development analyzed in UC Merced's 2020 LRDP SEIR and the 2009 LRDP EIS/EIR. *State CEQA Guidelines* provide that if the lead agency can find that, pursuant to Section 15162, no new impacts could occur and no new

---

1 University of California, Merced. 2009. *UC Merced and University Community Project Environmental Impact Statement/Environmental Impact Report*. March 2009.

2 University of California, Merced. 2020. *UC Merced 2020 Long-Range Development Plan Final Subsequent Environmental Impact Report*, March 2020.

3 University of California, Merced. 2020. *UC Merced 2020 Long-Range Development Plan*, March 2020.

mitigation measures are required, then the Project is within the scope of the previous program EIR, and no further evaluation is required. The University determined that while the proposed Project is within the scope of the development that was analyzed in the 2020 LRDP SEIR and the 2009 LRDP EIS/EIR, an EIR is required to address project-level impacts that may not be fully disclosed in the 2020 LRDP SEIR and the 2009 LRDP EIS/EIR. Thus, this Final EIR constitutes a project-level EIR that tiers from the 2020 LRDP SEIR and the 2009 LRDP EIS/EIR under the tiering provisions of CEQA.

Chapter 7.0 of the Draft EIR also included an updated supplemental program-level transportation impact analysis of campus growth through 2030 under the 2020 LRDP based on vehicle miles traveled (VMT) metrics consistent with *State CEQA Guidelines* Section 15064.3, subdivision (b). The updated transportation impact analysis in the Draft EIR replaces in full the prior level of service (LOS)-based transportation impact analysis that was included in the 2020 LRDP SEIR. Mitigation measures previously adopted to reduce or avoid LOS-related impacts associated with the 2020 LRDP have been deleted from this Final EIR and associated Mitigation Monitoring and Reporting Program, because automobile delay, as described solely by LOS or other similar measures of vehicle congestion, is no longer considered a significant impact under CEQA pursuant to Senate Bill (SB) 743 (Public Resources Code, Section 21099, subdivision (b)(3)).

Before The Regents can approve the proposed UCM-ME Building Project, The Regents must evaluate and disclose the environmental impacts of approving and implementing the proposed Project. As required by CEQA, this Final EIR (1) assesses the potentially significant environmental effects of the proposed UCM-ME Building Project, including cumulative impacts of the proposed Project in conjunction with other reasonably foreseeable development; (2) identifies feasible means of avoiding or substantially lessening significant adverse impacts; and (3) evaluates a range of reasonable alternatives to the proposed UCM-ME Building Project, including the No Project Alternative.

State CEQA Guidelines (Section 15123) require that a summary be included in an EIR that identifies all major conclusions, identifies each significant effect, recommended mitigation measure(s), and alternatives that would minimize or avoid potential significant impacts. The summary is also required to identify areas of controversy known to the lead agency, including issues raised by agencies and the public and issues to be resolved. These issues include the choice among alternatives and whether or how to mitigate significant effects. This Executive Summary is intended to address these CEQA requirements and provide the decision makers, responsible agencies, and the public with a clear, simple, and concise description of the proposed Project and its potential significant environmental impacts.

The University of California is the CEQA lead agency for the proposed UCM-ME Building Project. The Board of Regents has the principal responsibility for approving the proposed Project.

2.2 PROJECT LOCATION

The UC Merced campus is located in the San Joaquin Valley (SJV) of California in eastern Merced County, within the sphere of influence (SOI) of the City of Merced. The campus is approximately 2 miles northeast of the Merced City limits and is regionally accessed via State Route 99 (SR-99) and locally via Bellevue and Lake Roads. The 43.5-acre UCM-ME Building Project site is located in the

southeast portion of the UC Merced campus, east-southeast of the Academic Quad, in an area known on the campus as Cottonwood Meadow.

2.3 PROJECT DESCRIPTION

The 2020 LRDP sets forth the development plans for the UC Merced campus to the year 2030. The 2020 LRDP SEIR addressed the development of the campus to the full buildout population of 17,411 faculty, staff, and students by 2030 on a 1,026-acre campus footprint. As described in Section 2.3.1 of the 2020 LRDP SEIR, the campus population is projected to increase by about 5,300 students between 2020 and 2030, and employment at the campus is projected to increase by 1,131 faculty and staff during the same period. As described in Section 2.3.2 of the 2020 LRDP SEIR, about 1.83 million gross square feet (gsf) of building space is projected to be added to the campus between 2020 and 2030 to accommodate the projected enrollment increase and expanded and new academic programs. The proposed Project would include development of an approximately 190,000 outside gross square foot (ogsf)[4] building to provide facilities for the Campus' Medical Education program and health-related departments of Psychological Sciences and Public Health and a population of about 2,999 people (2,811 students and 188 staff/faculty). About 1,681 of the 2,999 persons that would occupy this building are already enrolled as students or employed in the Psychological Sciences and Public Health Departments as of 2020, and therefore the net new population accommodated on the campus due to this Project would be on the order of about 1,318 persons, including 1,269 students and 49 faculty/staff. The building space and population growth associated with the proposed Project are well within the growth assumptions used in the 2020 LRDP SEIR analyses.

The 2020 LRDP identified areas of the campus that would be developed with new facilities under the 2020 LRDP and assigned land use designations to those lands to guide the development of facilities. The proposed building would be located on land within the campus that is designated as Campus Mixed Use (CMU) pursuant to the 2020 LRDP. The CMU designation allows for the development of academic, research, student housing, student and support services, athletic and recreational facilities, university affiliate dining and retail, administrative offices, service facilities, and parking. The proposed building and associated parking lot would be an allowed use under the campus' CMU designation, as it would provide facilities for academic and research uses.

The proposed Project consists of two components: (1) development of the proposed UCM-ME Building, including a site access road and a small surface parking lot; and (2) filling of the existing storm water detention basins within Cottonwood Meadow and the construction of a new stormwater basin in the southern portion of the campus. The salient features of the proposed Project are described below. Refer to Chapter 3.0 of the Draft EIR for the full Project description.

2.3.1 Proposed Building

The proposed building would include approximately 190,000 ogsf of building space. After the space associated with common areas, such as lobbies, hallways, restrooms and mechanical space, is

[4] "Outside gross square feet (ogsf)" includes the interior building area within the enclosed structure as well as the covered, unenclosed corridors, including walkways, porches, balconies, etc.

deducted, there would approximately 118,750 assignable square feet (asf)[5] of instructional, academic office, research, and community facing space in the proposed building. The proposed building would include faculty offices, graduate student, post doc, and undergraduate research space for the Medical Education programs and the Departments of Psychological Sciences and Public Health. Further, it would support the growth of new medical education and allied healthcare worker training programs by providing the capacity for advanced new instructional facilities in anatomy, clinical and simulation skills training and hybrid learning. Existing biology and physiology students as well as students in various partnership programs in the healthcare community would also utilize these new specialized instructional facilities. The proposed building would also house the Health Sciences Research Institute (HSRI) and associated research facilities, thus integrating the new building with a significant cross section of the campus research community.

The proposed Project would comprise a large rectangular-shaped four-story building, approximately 65 feet in height (60 feet plus a 5-foot parapet), consisting of two wings that would wrap around a central courtyard. The first floor would include instructional space, Developmental Psychology labs, space for community participation, and a receiving dock. The second floor would be assigned for the medical education program. The top two stories would include faculty offices, computational labs, wet labs, and conference rooms.

2.3.2 Roadway and Pedestrian Access, On-Site Circulation, Parking, and Electrical Upgrades

The site planning and other aspects of the proposed UCM-ME Building would ensure the integration of the new building within the existing campus fabric. The site selection criteria that were used to identify the preferred site included the following: site suitability to ensure compatibility with the physical context of the campus; location and proximity to the academic core; community access; pedestrian access; future site considerations, and infrastructure connections.

Automobile access to the site would be via the Bellevue Road extension and Cottonwood Loop Road. The research vision for the proposed UCM-ME Building requires design that is sensitive to access by the general community, including children and disabled individuals. To facilitate community participation in research studies in developmental psychology and community-based public health initiatives, a small parking lot with 60 spaces would be provided adjacent to the proposed building with direct access to Cottonwood Loop Road. The parking lot would also include electrical vehicle stalls/charging stations.

The proposed Project would include a pedestrian link from the UCM-ME Building to the Academic Quad and Academic Walk, a main pedestrian path along the eastern side of the campus. This connection would allow the building functions to be fully integrated into the academic core of the UC Merced campus. The proposed Project would also include bicycle spaces, showers, and locker rooms in order to encourage the use of bicycles for travel to the site. Bicycle spaces would be provided consistent with LEED v4.1 requirements.

---

[5] "Assignable square feet (asf)" comprises the portion of building area assigned to or available for an occupant or specific use. Common areas such as restrooms, hallways, or mechanical space are excluded.

Public transportation would be available through the UC Merced shuttle system. The shuttle provides service to downtown Merced. The transit hub at the campus Health and Athletic Center north of the Bellevue Road extension would be the shuttle stop that is nearest to the proposed UCM-ME Building.

While there is sufficient electrical capacity in the switchgear at UC Merced's Central Plant to serve the UCM-ME Building, the proposed Project also includes minor upgrades to the Central Plant involving the installation of two new electrical feeds that would be installed within the existing facilities and vaults. No new ground disturbance would occur as a result of the upgrades to Central Plant and the new electrical feed installation.

2.3.3 Storm Water Detention Improvements

Development of the proposed building, parking lot, walkways and access road would increase the area of impervious surfaces at the Project site. The Project site is located in Cottonwood Meadow, which is currently used to manage storm water runoff from a substantial portion of the developed campus. Cottonwood Meadow was engineered and constructed as a storm water management area with basins that detain storm water to allow for evaporation and groundwater recharge. The proposed Project would involve the filling and grading of the storm water detention basins in Cottonwood Meadow and the construction of a new storm water detention basin in the southern portion of the campus to replace the basins that would be filled and to also handle the increased storm water flows that would result from project development. New storm drains would be installed in Cottonwood Loop Road and other roadways to convey storm water flows from the proposed building area to the new storm water detention basin. The new detention basin would be located west of Fairfield Canal and to the southeast of Parking Lot 4. It would have a surface area of about 8.06 acres, and an average depth of about 6 feet. The basin would have a storage capacity of 42.7 acre-feet, which is the estimated volume of storm water resulting from a 100-year, 24-hour storm from about 170 acres of developed campus land, including the site of the proposed Project. Outflows from the basin would maintain existing pre-development flows that currently discharge downstream into Cottonwood Creek.

2.4 PROJECT NEED AND OBJECTIVES

The proposed Project is intended to address the following conditions:

- **Medical Education and Allied Healthcare Programs.** UC Merced currently does not have the appropriate facilities to support the UC San Francisco (UCSF)-Fresno and UCSF San Joaquin Valley Program in Medical Education (SJV PRIME) partnership nor other partnerships with community colleges or other SJV healthcare worker training programs. For example, the Campus currently does not have anatomy training facilities, adequate hybrid learning classrooms, or clinical or simulation skills training areas.

- **Obstacles to Faculty Hiring/Program Growth.** Additional office, research lab, graduate student and post doc space is needed to facilitate future growth in the Departments of Psychological Sciences, Public Health, and the emerging School of Management. Without additional space, these four existing programs will not be able to continue to support campus population growth at the undergraduate and graduate level nor hire the additional faculty required to develop the

anticipated new programs necessary to deliver a flourishing medical education pipeline program and affect the clinical research and healthcare in the region.

- **Obstacles to Creation of New Community-Based Programs.** The Campus has no capacity to create and house new programs (i.e., Institute for Child and Family Sciences) without the creation of more and new types of space. Partnerships with community colleges, secondary schools, the Accreditation Council for Graduate Medical Education (ACGME) programs in the SJV and the other Health Center Program Look-Alikes in the SJV require facilities that promote community access and interaction.

- **General Assignment Classrooms.** Recent classroom utilization studies have shown that capacity in all classrooms will be reached by the time student enrollment reaches 12,500 students (approximately 2025) and capacity has already been reached in certain types of classrooms. The recent experience of COVID-19 also emphasizes the need for the Campus to make hybrid learning capable classrooms a priority in any future buildings.

Based on the above conditions, the key objectives of the proposed Project are to:

- Provide space for the development of a new Medical Education program, initially in partnership with the UCSF-Fresno and SJV/PRIME program.

- Provide space for growth in the Department of Public Health.

- Provide space for growth in the Department of Psychological Sciences and creation of an Institute for Child and Family Sciences.

- Consolidate and collocate these existing and new programs in one facility so as to optimally draw upon the intellectual, technological, and material resources of the UC Merced programs and facilities, and enhance intellectual exchange and collaboration between related programs.

- Provide classroom space to support campus population growth.

- Maximize energy efficiency, sustainability, and cost-effectiveness of these programs by housing them in a consolidated, state-of-the-art building designed to balance energy use and cost efficiencies.

2.5 TOPICS OF KNOWN CONCERN

To determine which environmental topics should be addressed in the Draft EIR, UC Merced circulated a Notice of Preparation (NOP) between April 2 and May 3, 2021 in order to receive input from interested public agencies and the public. A copy of the NOP is presented in Appendix 1.0 of the Draft EIR. Based on the scoping comments and the analysis in the Initial Study that accompanied the NOP, the Draft EIR addressed the following environmental topics in depth:

- Air Quality
- Hydrology and Water Quality
- Public Services (fire protection)
- Transportation
- Tribal Cultural Resources
- Utilities (wastewater system capacity)

2.6 ISSUES TO BE RESOLVED/AREAS OF CONTROVERSY

Specific issues that were raised in scoping comments include the following:

- Project potential for impacts to a historical resource or tribal cultural resources;
- Consideration of drainage and sewer capacity for future buildings as part of previous analyses conducted for the 2020 LRDP;
- Project details including the anticipated construction schedule for the UCM-ME Building and whether a medical school will be developed on the campus;
- Recommendations from the California Department of Fish and Wildlife (CDFW) regarding potential impacts to nesting birds and burrowing owls;
- Recommendation to consult with the United States Fish and Wildlife Service (USFWS) on potential impacts to federally-listed species, including, but not limited to, California tiger salamander;
- Consideration of mitigation measures put forth by Merced Irrigation District (MID) for potential effects on MID facilities on the campus; and,
- Recommendation by the Native American Heritage Commission (NAHC) that UC Merced conduct consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the proposed Project to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.

All applicable scoping comments were addressed in the impact analysis. Section 4.5 of the Draft EIR includes an evaluation of Project impacts on tribal cultural resources, and Section 4.2 and Section 4.6 of the Draft EIR include analyses of potential Project-related impacts on storm water drainage and sewer capacity, respectively. CDFW recommended preconstruction surveys for burrowing owls consistent with the Staff Report on Burrowing Owl Mitigation (CDFG 2012), as well as nesting bird surveys in advance of ground disturbing activities associated with the Project. As specified in the biological resources impact analysis in the Initial Study (Section 5.6 of Appendix 1.0 of the Draft EIR), the 2020 LRDP SEIR provides a mitigation measure that was adopted pertaining to preconstruction surveys for nesting birds and burrowing owls consistent with the 2012 Staff Report; as such, this mitigation would be implemented as part of the proposed Project. CDFW also recommended that UC Merced consult with the USFWS for federally-listed species. UC Merced will adhere to the terms of the existing Biological Opinion issued by USFWS to the University in 2002 and updated in 2009 for campus development. Further evaluation in the Draft EIR was not required.

2.7 ALTERNATIVES

Consistent with CEQA requirements, a range of reasonable alternatives to the proposed Project were considered and evaluated in the Draft EIR. Two alternatives that were considered to be

potentially feasible were evaluated in detail along with the mandated No Project Alternative. The alternatives evaluated in detail in Chapter 5.0 of the Draft EIR are summarized below.

2.7.1 Alternative 1: No Project

State CEQA Guidelines require the analysis of a No Project Alternative (Section 15126.6(e)). The analysis must discuss existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the proposed project were not to be approved, based on current plans, site zoning, and consistent with available infrastructure and community services. If a project is a development project on an identifiable site, *State CEQA Guidelines* Section 15126.6(e)(3)(B) provides that the discussion of the No Project Alternative should compare the environmental effects of the site remaining in its existing state against environmental effects which would occur if the project were approved.

Under the No Project alternative, the UCM-ME Building would not be constructed and there would be no modifications to the existing Cottonwood Meadow detention basins, site access, or infrastructure and the Project site would continue to remain undeveloped. The Departments of Psychological Sciences and Public Health would remain in the Social Sciences and Management (SSM) Building. Without the vacated space within the SSM Building, the Department of Economics would remain in the School of Social Sciences, Humanities and Arts (SSHA) Building. The medical education program would be developed by accommodating it in existing buildings. With respect to enrollment and employment increase, the No Project alternative would involve the same population increase as the proposed Project if the Campus is able to accommodate the new and expanded programs in existing buildings or the alternative would involve a smaller population increase due to lack of space.

2.7.2 Alternative 2: Reduced Program Alternative

The Reduced Program Alternative was developed in order to reduce the size of the proposed building. Under this alternative, only the medical education program would be accommodated in the new building. Other existing campus departments would remain in their current locations, i.e., the Departments of Psychological Sciences and Public Health would remain in the SSM Building and the Department of Economics would remain in the SSHA Building.

Under this alternative, the proposed building would be reduced in size from approximately 190,000 ogsf to approximately 145,300 ogsf, a reduction in size of about 24 percent. With a smaller amount of building space and still maintaining a four-story building, the building footprint would be reduced by about 20 to 24 percent, and the associated parking would be reduced by approximately 50 percent. As with the proposed Project, the new building under this alternative would also be located in Cottonwood Meadow and filling of the storm water basins on the Project site would be required. The access roadway, new storm water detention basin, and other infrastructure improvements would be the same as under the proposed Project.

The anticipated net new population accommodated in the building would be 845 persons (i.e., 784 new students, and 61 new faculty and staff), compared to 1,318 net new persons under the proposed Project (1,269 students and 49 faculty/staff). However, the rest of the project-related new

population would be accommodated in existing buildings, and the total increase in campus population would be comparable to that under the proposed Project.

2.7.3 Alternative 3: Reduced Building Footprint Alternative

The Reduced Building Footprint Alternative was developed in order to decrease the development footprint of the UCM-ME Building while maintaining the building program planned under the proposed Project. Under this alternative, the new building would accommodate the co-location of the medical education program and the health and behavioral sciences programs as planned for the proposed Project, but the building footprint would be reduced by increasing the height of the building. Thus, the building would be a five-story (approximately 75 feet in height [70 feet plus a 5-foot parapet]) structure, compared to a four-story/65-foot-tall structure under the proposed Project. The Reduced Building Footprint Alternative would result in a decrease in the building footprint by approximately 20 percent, or from 2.05 acres under the proposed Project to approximately 1.64 acres for the taller building.

The same amount of parking would be provided as under the proposed Project. As with the proposed Project, the new building under this alternative would also be located in Cottonwood Meadow and filling of the storm water basins on the Project site would be required. The access roadway, new storm water detention basin, and other infrastructure improvements would be the same as under the proposed Project.

The new building under this alternative would accommodate the same number of net new persons (1,318 net new persons, including 1,269 students and 49 faculty/staff) as the proposed Project, and the total increase in campus population would be comparable to that under the proposed Project.

2.8 IMPACT SUMMARY

A detailed discussion regarding potential environmental impacts of the proposed Project is provided in Section 4.0 Environmental Setting, Impacts and Mitigation Measures of the Draft EIR**.** A summary of the environmental impacts of the proposed UCM-ME Building Project is provided in **Table 2.1, Summary of UCM-ME Building Project Impacts and Mitigation Measures** of this document. Also provided in **Table 2.1** are applicable LRDP mitigation measures that will be included as part of the project. No project specific mitigation measures are required to avoid or reduce significant project impacts.

As noted above, Chapter 7.0 of the Draft EIR included an updated supplemental program-level transportation impact analysis of campus growth through 2030 under the 2020 LRDP based on VMT metrics consistent with the updated *State CEQA Guidelines*. The updated transportation impact analysis in the Draft EIR replaces in full the prior level of service (LOS)-based transportation impact analysis that was included in the 2020 LRDP SEIR, and mitigation measures previously adopted to reduce or avoid LOS-related impacts associated with the 2020 LRDP have been deleted from this Final EIR and associated Mitigation Monitoring and Reporting Program. A summary of the program-level 2020 LRDP transportation impacts is provided in **Table 2.2, Summary of 2020 LRDP Program-Level Transportation Impacts and Mitigation Measures.** Based on the program-level transportation analysis, implementation of the 2020 LRDP would not exceed an applicable VMT threshold of significance or result in other significant transportation impacts, and no mitigation is required.

Table 2.3, Summary Comparison of UCM-ME Building Project Alternatives, presents the environmental impacts of each alternative to allow the decision makers, agencies, and the public to compare and contrast these alternatives and weigh their relative merits and demerits.

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Aesthetics (*Initial Study, Appendix 1.0 of the Draft EIR*)			
Would the Project have a substantial adverse effect on a scenic vista?	*Less Than Significant*	**2020 LRDP MM AES-1b:** Where possible, major vehicular and pedestrian transportation corridors on the Campus shall be located and designed to provide views of the Sierra Nevada. **2020 LRDP MM AES-3a:** The University shall design all new aboveground infrastructure on the Campus to the following standards: (a) Screen aboveground infrastructure from view from public rights-of-way or scenic vistas, via landscaping, fencing or other architectural screening; (b) Require creative design measures to camouflage structures by integrating them with existing buildings and among other existing uses; (c) Locate aboveground infrastructure on sites that are not visible from visually sensitive areas, such as residential communities and open space areas; (d) Require providers to co-locate their structure on a single site, where technically feasible and visually desirable; and (e) Locate antennae and equipment on other existing community facility sites, such as water tanks or utility poles.	*N/A*
Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	*No Impact*	No mitigation is required.	*N/A*
In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	*Less Than Significant*	Implement **2020 LRDP MM AES-3a.**	*N/A*
Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	*Less Than Significant*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Agriculture and Forestry Resources (*Initial Study, Appendix 1.0*)			
There are no significant agriculture and forestry resources impacts.			
Air Quality (Impacts AQ-1 through 4 and C-AQ-1 in *Section 4.1* of the *Draft EIR*. Remaining Impacts in *Initial Study, Appendix 1.0* of the *Draft EIR*)			
UCM-ME Impact AQ-1: The proposed Project would not result in construction emissions that would result in a cumulatively considerable net increase of criteria pollutants for which the air basin is in non-attainment.	*Less than Significant*	**2020 LRDP MM AQ-1a:** The construction contractors shall be required via contract specifications to use construction equipment rated by the U.S. EPA as meeting Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower. **2020 LRDP MM AQ-1b:** UC Merced shall include in all construction contracts the measures specified in SJVAPCD Regulation VIII (as it may be amended for application to all construction projects generally) to reduce fugitive dust impacts, including but not limited to the following: • All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover. • All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. • All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions using application of water or by presoaking. • When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit visible dust emissions. Use of blower devices is expressly forbidden.) • Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, storage piles shall be effectively stabilized of fugitive dust emissions by using sufficient water or chemical stabilizer/ suppressant.	
UCM-ME Impact AQ-2: The proposed Project would not result in operational emissions that would involve a cumulatively considerable net increase of criteria pollutants for which the air basin is in non-attainment.	*Less than Significant*	**2020 LRDP MM AQ-2a**: UC Merced shall implement the following measures to reduce emissions from vehicles: • Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use. • Provide bicycle facilities to encourage bicycle use instead of driving, such as bicycle parking, bicycle lanes, bicycle lockers; and showers and changing facilities for employees. • Provide preferential carpool and vanpool parking for non-residential uses. • Provide transit-enhancing infrastructure to promote the use of public transportation, such as covered bus stops and information kiosks. • Provide facilities, such as electric car charging stations and a CNG refueling station, to encourage the use of alternative-fuel vehicles. • Improve traffic flows and congestion by timing of traffic signals at intersections adjacent to the campus to facilitate uninterrupted travel. • Work with campus transit provider to replace CatTracks buses with either electric buses or buses operated on alternative fuels.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Work with the City of Merced to establish park and ride lots and provide enhanced transit service between the park and ride lots and the campus. • Replace campus fleet vehicles with electric vehicles or vehicles that operate on alternative fuels. • Reduce the number of daily vehicle trips by providing more housing on campus. **2020 LRDP MM AQ-2b:** UC Merced shall implement the following measures to reduce emissions from area and energy sources, as feasible: • Utilize low-VOC cleaning supplies and low-VOC paints (100 grams/liter or less) in building maintenance. • Utilize electric equipment for landscape maintenance. • Plant low maintenance landscaping. • Implement a public information program for resident students to minimize the use of personal consumer products that result in ROG emissions, including information on alternate products. • Instead of natural gas water heaters, install solar water heating systems.	
UCM-ME Impact AQ-3: Implementation of the proposed Project would not expose sensitive receptors to substantial pollutant concentrations of carbon monoxide.	*Less than Significant*	No mitigation is required.	*N/A*
UCM-ME Impact AQ-4: Implementation of the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	*Less than Significant*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Cumulative Impact C-AQ-1: The construction and operation of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would not hinder air quality attainment and maintenance efforts for criteria pollutants.	*Less than Significant*	**Cumulative MM C-AQ-1:** Implement **2020 LRDP MM AQ-2a and AQ-2b**.	*N/A*
Biological Resources (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	*Less than Significant*	**2020 LRDP MM BIO-9a:** Avoid and minimize impacts on native birds protected under the MBTA, including listed species, fully protected species, special-status species of concern, and raptors and passerines. (a) Limit ground disturbance activities to the non-breeding season and remove potential unoccupied breeding habitat during the non-breeding season if possible. If breeding season work is required, conduct take avoidance (tree, shrub, and ground) nest surveys to identify and avoid active nests. • If feasible, UC Merced shall conduct all project-related activities including (but not limited to) tree and shrub removal, other vegetation clearing, grading, or other ground disturbing activities during the non-breeding season (typically between September 16 and February 14). • If activities are scheduled to occur during the breeding season (typically between February 15 through September 15), applicable CDFW and/or USFWS permit conditions in the permits issued to the University related to bird surveys must be followed. In addition, a UC Merced-approved qualified avian biologist, with knowledge of the species to be surveyed, shall conduct focused nesting surveys within 15 days prior to the start of project or ground-disturbing activities and within the appropriate habitat. The qualified avian biologist shall determine the exact survey duration and location	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		(typically 500 feet around the work area) based on the work conditions and shall take into account existing applicable CDFW or USFWS permit conditions. • If an unoccupied nest (without birds or eggs) of a non-listed or fully protected species (as determined by the qualified avian biologist) is found, the nest shall be removed under the direction of the qualified avian biologist. • If an active nest is located, a qualified avian biologist shall establish an appropriate no-disturbance buffer around the nest making sure that any buffer width required by the University's permit obligations is followed. A 500-foot buffer is recommended for listed or fully protected nesting birds (or another buffer determined in consultation with CDFW and/or USFWS), a 250-foot buffer around raptors, and a 75-foot buffer around passerines. If work activities cause or contribute to a bird being flushed from a nest, the buffer width shall be adjusted to avoid and minimize impacts to nesting birds. • A qualified avian biologist shall monitor the nest site regularly during work activities to ensure that the nest site is not disturbed, the buffer is maintained and the success or failure of the nest is documented. • If UC Merced elects to remove a nest tree, nest trees may only be removed after the qualified avian biologist has determined that the nests are unoccupied. • If an active nest is causing a safety hazard, CDFW shall be contacted to determine if the nest can be removed. (b) Minimize impacts to burrowing owl and compensate for habitat loss. CDFW (2012) recommends that take-avoidance (preconstruction) surveys be conducted to locate active burrowing owl burrows in the construction work area and within an approximately 500-foot buffer zone around the construction area. A qualified avian biologist shall conduct	

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		take avoidance surveys for active burrows according to the CDFW's Staff Report on Burrowing Owl Mitigation (2012 Staff Report). Surveys shall be conducted no less than 14 days prior to initiating ground disturbance activities and surveillance surveys should be conducted as frequently as recommended in the 2012 Staff Report. If ground-disturbing activities are delayed or suspended for than 30 days after the take avoidance survey, the area shall be resurveyed. If no burrowing owls are detected, no further mitigation is required. If active burrowing owls are detected, the following additional measures are required: • Project implementation shall seasonally and spatially avoid negative impacts and disturbances that could result in the take of burrowing owls, nest or eggs. • If burrowing owls and their habitat can be protected in place or adjacent to a construction site, buffer zones, visual screens or other measures shall be used to minimize disturbance impacts while project activities are occurring. To use these minimization measures, a qualified avian biologist shall determine the exact measures following the guidance described in the 2012 Staff Report. • If owls must be moved away from the project site during the nonbreeding season, passive relocation techniques (e.g., installing one- way doors at burrow entrances) shall be used instead of trapping, as described in CDFW guidelines. At least 1 week will be necessary to complete passive relocation and allow owls to acclimate to alternate burrows. • When destruction of occupied burrows is unavoidable during the nonbreeding season (September 1 to January 31), unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on protected lands approved by the CDFW. Newly created burrows shall follow guidelines established by the CDFW.	

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		2020 LRDP MM BIO-9b: New buildings and structures proposed under the 2020 LRDP shall incorporate bird-safe design practices (for example, American Bird Conservancy's *Bird-Friendly Building Design* [2015] or San Francisco Planning Department's *Standards for Bird-Safe Buildings* [2011]). The UC Merced Physical and Environmental Planning Department shall review the final designs of the buildings and structures to determine that appropriate bird safety designs have been effectively incorporated to reduce potential impacts to birds. The following design strategies shall be considered in the design of buildings and structures: • Create building facades with "visual noise" via cladding or other design features that make it easier for birds to identify buildings and not mistake windows for open sky or trees. • Incorporate windows that are not clear or reflective into the building or structure designs. • Use windows that incorporate glass types such as UV-A or fritted glass and windows that incorporate UV-absorbing and UV-reflecting stripe. • Use grid patterns on windows in locations with the highest potential for bird-window collisions (e.g., windows at the anticipated height of adjacent vegetation at maturity). • Reduce the proportion of glass to other building materials in new construction. • Avoid placement of bird-friendly attractants (i.e., vegetated roofs, water features, tall trees) near glass whenever possible. • Install motion-sensitive lighting in any area visible from the exterior that automatically turn lights off during after-work hours. • **2020 LRDP MM BIO-4:** Prior to any new development on previously undisturbed land, and as long as the species is considered a candidate endangered species or in the event that it becomes listed under the California Endangered Species Act, a qualified wildlife biologist shall conduct visual	

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		surveys of the development area during the flight season for the Crotch bumble bee (late February through late October). The following methodology shall apply unless the California Department of Fish and Wildlife (CDFW) releases species-specific survey protocol; in this case, CDFW's survey protocol shall apply. • Between two and four evenly space presence/absence surveys shall be conducted for the highest detection probability, which, at present time, is the greatest between early spring (late March/early April) and early summer (late June/July). Surveys shall take place when temperatures are above 60°F, preferably on sunny days with low wind speeds (e.g., less than 8 miles per hour) and at least 2 hours after sunrise and 3 hours before sunset. On warm days (e.g., over 85°F), bumble bees will be more active in the mornings and evenings. Surveyors shall conduct transect surveys focusing on detection of foraging bumble bees and underground nests using visual aids such as butterfly binoculars. Even if no Crotch bumble bees are observed, a pre-construction survey shall be conducted within 30 days prior to start of construction. If no Crotch bumble bees or potential Crotch bumble bees are detected during the presence/absence surveys and the pre-construction survey, no further mitigation is required. • If Crotch bumble bees or potential Crotch bumble bees are observed within the development area, a plan to protect Crotch bumble bee nests and individuals shall be developed and implemented in consultation with CDFW. The plan shall include, but not be limited to, the following measures: • Specifications for construction timing and sequencing requirements (e.g., avoidance of raking, mowing, tilling, or other ground disturbance until late March to protect overwintering queens); • Preconstruction surveys conducted within 30 days and consistent with any current available CDFW standards prior to	

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		the state of ground disturbing activities to identify active nests; • Establishment of appropriate no-disturbance buffers for nest sites and construction monitoring by a qualified biologist to ensure compliance; • Restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., avoidance of pesticides/herbicides, BMPs to minimize the spread of invasive plant species); • Provisions to avoid Crotch bumble bees or potential Crotch bumble bees if observed away from a nest during project activity (e.g., ceasing of project activities until the animal has left the work area on its own volition); and • Prescription of an appropriate restoration seed mix targeted for the Crotch bumble bee, including native plant species known to be visited by native bumble bee species and containing a mix of flowering plant species with continual floral availability through the entire active season of the Crotch bumble bee (March to October).	
Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	*No Impact*	No mitigation is required.	*N/A*
Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	*No Impact*	No mitigation is required.	*N/A*
Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	*No Impact*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	*No Impact*	No mitigation is required.	*N/A*
Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	*No Impact*	No mitigation is required.	*N/A*
Cultural Resources (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	*Less than Significant*	**2020 LRDP MM CUL-2:** If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or non-human bone are inadvertently discovered during ground disturbing activities on the campus, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies or mitigation of impacts through data recovery programs such as excavation or detailed documentation. If cultural resources are discovered during construction activities, the construction contractor and lead contractor compliance inspector will verify that work is halted until appropriate treatment measures are implemented in coordination with the USACE and UC Merced.	*N/A*
Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	*Less than Significant*	Implement **2020 LRDP MM CUL-2**.	*N/A*
Would the Project disturb any humans remains, including those interred outside of formal cemeteries?	*Less than Significant*	**2020 LRDP MM CUL-3:** If human remains of Native American origin are discovered during ground disturbing activities, the Campus and/or developer will comply with state laws relating to the disposition of Native American burials, which falls within the jurisdiction of the California Native American Heritage Commission (Public Resources Code Section 5097). If human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of Merced County has been informed and has determined that no investigation of the cause of death is required; and if the remains are of Native American origin; the descendants from the deceased Native American have made a recommendation to the land owner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and associated grave goods as provided in Public Resources Code Section 5097.98; or the California Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission.	
Energy (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	*Less than Significant*	No mitigation is required.	*N/A*
Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	*Less than Significant*	No mitigation is required.	*N/A*
Geology and Soils (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i). Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (ii) Strong seismic ground shaking? (iii) Seismic-related ground failure, including liquefaction? (iv) Landslides?	*Less than Significant*	**2020 LRDP MM GEO-2:** During project-specific building design, a site-specific geotechnical investigation shall be performed by a Certified Engineering Geologist or Licensed Geotechnical Engineer to assess detailed seismic, geologic, and soil conditions at each construction site. The study shall include an evaluation of liquefaction potential, slope stability, landslide potential, expansive and compressible soils, and other structural characteristics and shall identify specific geotechnical recommendations designed to mitigate for the site hazards. The geotechnical recommendations will be followed.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Would the Project result in substantial soil erosion or the loss of topsoil?	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	*Less than Significant*	Implement **2020 LRDP MM GEO-2**.	*N/A*
Would the Project be located on expansive soil, as defined in Table 18 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	*Less than Significant*	Implement **2020 LRDP MM GEO-2**.	*N/A*
Would the Project 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?	*No Impact*	No mitigation is required.	*N/A*
Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	*Less than Significant*	**2020 LRDP MM CUL-4a:** Prior to project construction, construction personnel will be informed of the potential for encountering significant paleontological resources. All construction personnel will be informed of the need to stop work in the vicinity of a potential discovery until a qualified paleontologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Construction personnel will also be informed of the requirements that unauthorized collection resources are prohibited. **2020 LRDP MM CUL-4b**: A qualified paleontologist will be intermittently present to inspect exposures of Merhten Formation, North Merced Gravels, and Riverbank Formation during construction operations to ensure that paleontological resources are not destroyed by project construction.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Greenhouse Gas Emissions (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	*Less than Significant*	**2020 LRDP MM GHG-1a:** UC Merced shall set a goal to reduce or control the increase in its GHG emissions such that the total emissions do not exceed 3,300 $MTCO_2e$/year by the end of the year 2030. UC Merced shall monitor GHG emissions each year, monitor upcoming projects for their potential to increase the campus' GHG emissions, and implement project-specific and campus-wide GHG reduction measures to reduce the campus' GHG emissions in accordance with the 3,300 $MTCO_2e$/year goal for 2030. In the event that adequate reduction is not achieved by these measures, UC Merced shall purchase renewable energy credits, or other verifiable GHG offsets to keep the net emissions at or below 3,300 $MTCO_2e$/year. **2020 LRDP MM GHG-1b**: UC Merced shall implement LRDP Mitigation Measures AQ-2a and -2b. **2020 LRDP MM GHG-1c:** UC Merced shall periodically review new technologies that can be implemented to further reduce the campus' GHG emissions.	*N/A*
Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	*Less than Significant*	Implement **2020 LRDP MM GHG-1a, GHG-1b, and GHG-1c**	*N/A*
Hazards and Hazardous Materials (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	*Less than Significant*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	*No Impact*	No mitigation is required.	*N/A*
Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	*Less than Significant*	**2020 LRDP MM HAZ-4:** In the event that non-permitted disposal sites, trash burn pits, wells, underground storage devices, or unknown hazardous materials are encountered during construction on the campus site, construction activities would cease until all contaminated areas are identified, and remediated or removed. This process of identification and remediation or removal would be coordinated with the Merced County Division of Environmental Health.	*N/A*
Would the Project be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?	*No Impact*	No mitigation is required.	*N/A*
Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	*Less than Significant*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Hydrology and Water Quality (*UCM-ME Impacts HYD-1 and C-HYD-1 in Section 4.2* of the *Draft EIR.* Remaining Impacts in *Initial Study, Appendix 1.0* of the *Draft EIR*)			
UCM-ME Impact HYD-1: Implementation of the proposed Project would not substantially alter the existing drainage pattern of the campus site through alteration of a water course or through the addition of impervious surfaces such that it would result in substantial erosion or siltation on or off site, result in flooding on or off site, contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or impede or redirect flood flows.	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project: a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	*No Impact*	No mitigation is required.	*N/A*
Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	*Less than Significant*	No mitigation is required.	*N/A*
Cumulative Impact C-HYD-1: Implementation of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, could cumulatively increase surface runoff but would not increase local and regional flooding.	*Less than Significant*	No mitigation is required.	*N/A*
Land Use and Planning (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project physically divide an established community?	*No Impact*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	*Less than Significant*	No mitigation is required.	*N/A*
Mineral Resources (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
There are no significant mineral resources impacts.			
Noise (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	*Less than Significant*	**2020 LRDP MM NOI-3:** Prior to initiation of construction on a project that is within 500 feet of off-site residential receptors, UC Merced shall develop and implement a construction noise mitigation program for that project that includes but is not limited to the following: • Construction activities within 500 feet of any residences shall be restricted to the hours of 7:00 AM and 6:00 PM on weekdays and Saturdays with no construction on Sundays and holidays. • All noise-producing project equipment and vehicles using internal combustion engines shall be equipped where appropriate with exhaust mufflers and air-inlet silencers in good operating condition that meet or exceed original factory specifications. • Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. • All mobile or fixed noise-producing equipment used on the project that is regulated for noise output by local, state or federal agency shall comply with such regulation while engaged in project-related activities.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where practicable. • Material stockpiles, mobile equipment staging, construction vehicle parking, and maintenance areas shall be located as far as practicable from noise-sensitive land uses. • Stationary noise sources such as generators or pumps shall be located away from noise-sensitive land uses as feasible. • The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. No project-related public address loudspeaker, two-way radio, or music systems shall be audible at any adjacent noise-sensitive receptor except for emergency use. • The erection of temporary noise barriers shall be considered where project activity is unavoidably close to noise-sensitive receptors. • The noisiest construction operations shall be scheduled to occur together to avoid continuing periods of the greatest annoyance, wherever possible. • Construction vehicle trips shall be routed as far as practical from existing residential uses. • The loudest campus construction activities, such as demolition, blasting, and pile driving, shall be scheduled during summer, Thanksgiving, winter, and spring breaks when fewer people would be disturbed by construction noise. • Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project.	

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?	*Less than Significant*	**2020 LRDP MM NOI-4a:** UC Merced shall avoid impact pile driving where possible in vibration-sensitive areas. Drilled piles or the use of vibratory pile driving will be used where geological conditions permit their use. For impact pile driving activities occurring within 50 feet of typical structures, limit groundborne vibration due to construction activities to 0.50 inch/second, ppv (limit of potential for damage to typical structures) in the vertical direction at sensitive receptors. Since in many cases the information available during the preliminary engineering phase would not be sufficient to define specific vibration mitigation measures, UC Merced shall describe and commit to a mitigation plan to minimize construction vibration damage using all feasible means available. **2020 LRDP MM NOI-4b:** For construction adjacent to highly sensitive uses such as laboratories, UC Merced shall apply additional measures as feasible, including advance notice to occupants of sensitive facilities to ensure that precautions are taken in those facilities to protect ongoing activities from vibration effects.	*N/A*
For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?	*No Impact*	No mitigation is required.	*N/A*
Population and Housing (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	*No Impact*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Public Services *(UCM-ME Impact PUB-1 in Section 4.3* of the *Draft EIR*. Remaining Impacts in *Initial Study, Appendix 1.0* of the *Draft EIR*)			
UCM-ME Impact PUB-1: Implementation of the proposed Project would increase demand for fire protection services and would require the construction of new facilities, but the impacts from construction would be less than significant with mitigation.	*Less than Significant*	No mitigation is required.	*N/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 police protection services?	*Less than Significant*	No mitigation is required.	*N/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 school services?	*Less than Significant*	No mitigation is required.	*N/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 park services?	*Less than Significant*	**2020 LRDP MM PUB-6a:** UC Merced shall work with the County to avoid physical deterioration of existing facilities at Lake Yosemite Regional Park, and/or improve park facilities within the existing park site as necessitated by the increased uses associated with development of the campus. **2020 LRDP MM PUB-6b:** UC Merced will pay its fair share of the cost of necessary improvements to the regional park. UC Merced's share of funding will be based on the percentage that on-campus residential population represents of the total population in eastern Merced County at the time that an improvement is implemented. **2020 LRDP MM PUB-6c:** In recognition of the sensitive resources present on lands immediately adjacent to the regional park, all	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		regional park improvement projects that are implemented by the County within 250 feet of the park's eastern boundary pursuant to **2020 LRDP Mitigation Measures PUB-6a** and **PUB-6b** above, will implement mitigation measures to avoid and minimize indirect effects on biological resources.	
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 other public facilities?	*Less than Significant*	No mitigation is required.	*N/A*
Cumulative Impact C-PUB-1: Development of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would generate an increased demand for fire protection services, the provision of which would not result in a significant cumulative environmental impact.	*Less than Significant*	No mitigation is required.	*N/A*
Recreation (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
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?	*Less than Significant*	**2020 LRDP MM PUB-6a:** UC Merced shall work with the County to avoid physical deterioration of existing facilities at Lake Yosemite Regional Park, and/or improve park facilities within the existing park site as necessitated by the increased uses associated with development of the campus. **2020 LRDP MM PUB-6b:** UC Merced will pay its fair share of the cost of necessary improvements to the regional park. UC Merced's share of funding will be based on the percentage that on-campus residential population represents of the total population in eastern Merced County at the time that an improvement is implemented.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
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?	*Less than Significant*	No mitigation is required.	*N/A*
Transportation (*UCM-ME Impact TRANS-1, TRANS-2 and C-TRANS-1 in Section 4.4* of the *Draft EIR*. Remaining Impacts in *Initial Study, Appendix 1.0* of the *Draft EIR*)			
UCM-ME Impact TRANS-1: Implementation of the proposed Project would not conflict with a program, plan, ordinance, or policy addressing roadway facilities.	*Less than Significant*	No mitigation is required.	*N/A*
UCM-ME Impact TRANS-2: Implementation of the proposed Project would not exceed an applicable VMT threshold of significance under 2030 with Project conditions and therefore would not conflict with State CEQA Guidelines Section 15064.3, subdivision (b).	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	*No Impact*	No mitigation is required.	*N/A*
Would the Project result in inadequate emergency access?	*Less than Significant*	No mitigation is required.	*N/A*
Cumulative Impact C-TRANS-1: Implementation of the proposed Project would not exceed an applicable VMT threshold of significance under cumulative conditions.	*Less than Significant*	No mitigation is required.	*N/A*
Tribal Cultural Resources (*UCM-ME Impacts TCR-1 and C-TCR-1 in Section 4.5* of the *Draft EIR*)			
UCM-ME Impact TCR-1: The proposed Project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Section 21074.	*Less than Significant*	No mitigation is required.	*N/A*
Cumulative Impact C-TCR-1: Implementation of the proposed Project would not result in a significant cumulative impact on Tribal Cultural Resources.	*Less than Significant*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Utilities and Service Systems (*UCM-ME Impacts UTL-1 and C-UTL-1 in Section 4.6* of the *Draft EIR*. Remaining Impacts in *Initial Study, Appendix 1.0* of the *Draft EIR*)			
UCM-ME Impact UTL-1: Implementation of the proposed Project would not require construction of new or expanded wastewater conveyance or treatment facilities; nor would the proposed Project result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand in addition to existing commitments.	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project: a. Require or result in the relocation or construction of new or expanded water, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? b. Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years? d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	*Less than Significant*	No mitigation is required.	*N/A*
Cumulative Impact C-UTL-1: Development of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would not result in a significant cumulative impact on wastewater collection and treatment facilities, such that construction of new or expanded facilities would be required.	*Less than Significant*	No mitigation is required.	*N/A*
Wildfire (*Initial Study, Appendix 1.0* of the *Draft EIR*)			
Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?	*Less than Significant*	No mitigation is required.	*N/A*

Table 2.1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	*Less than Significant*	No mitigation is required.	*N/A*
Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	*Less than Significant*	No mitigation is required.	*N/A*

Table 2.2: Summary of 2020 LRDP Program-Level Transportation Impacts and Mitigation Measures

Thresholds/Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Transportation (*Draft EIR Section 7.0*)			
LRDP Impact TRANS-1: Implementation of the 2020 LRDP would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	*Less than Significant*	No mitigation is required.	*N/A*
LRDP Impact TRANS-2: Implementation of the 2020 LRDP would not exceed an applicable VMT threshold of significance under 2030 with LRDP conditions and therefore would not conflict with State CEQA Guidelines Section 15064.3, subdivision (b).	*Less than Significant*	No mitigation is required.	*N/A*
LRDP Impact TRANS-3: Implementation of the 2020 LRDP would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	*Less than Significant*	No mitigation is required.	*N/A*
LRDP Impact TRANS-4: The campus road network system would be adequately sized and designed to facilitate emergency access vehicles.	*Less than Significant*	No mitigation is required.	*N/A*
Cumulative Impact C-TRANS-1: Implementation of the 2020 LRDP would not exceed an applicable VMT threshold of significance under 2030 plus LRDP conditions.	*Less than Significant*	No mitigation is required.	*N/A*

Table 2.3: Summary Comparison of UCM-ME Building Project Alternatives

Project Impact	Proposed Project	Alternative 1	Alternative 2	Alternative 3
		No Project	Reduced Program	Reduced Building Footprint
UCM-ME Impact AQ-1: The proposed Project would not result in construction emissions that would result in a cumulatively considerable net increase of criteria pollutants for which the air basin is in non-attainment.	*LTS*	Avoided	Reduced	Similar
UCM-ME Impact AQ-2: The proposed Project would result in operational emissions that would not involve a cumulatively considerable net increase of criteria pollutants for which the air basin is in non-attainment.	*LTS*	Reduced	Similar	Similar
UCM-ME Impact AQ-3: Implementation of the proposed Project would not expose sensitive receptors to substantial pollutant concentrations of carbon monoxide.	*LTS*	Reduced	Similar	Similar
UCM-ME Impact AQ-4: Implementation of the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.	*LTS*	Reduced	Similar	Similar
Cumulative Impact C-AQ-1: The construction and operation of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would not hinder air quality attainment and maintenance efforts for criteria pollutants.	*LTS*	Reduced	Similar	Similar
UCM-ME Impact HYD-1: Implementation of the proposed Project would not substantially alter the existing drainage pattern of the campus site through alteration of a water course or through the addition of impervious surfaces such that it would result in substantial erosion or siltation on or off site, result in flooding on or off site, contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems, or impede or redirect flood flows.	*LTS*	Avoided	Similar	Similar

Table 2.3: Summary Comparison of UCM-ME Building Project Alternatives

Project Impact	Proposed Project	Alternative 1 No Project	Alternative 2 Reduced Program	Alternative 3 Reduced Building Footprint
Cumulative Impact C-HYD-1: Implementation of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the Project area, could cumulatively increase surface runoff but would not increase local and regional flooding.	*LTS*	Avoided	Similar	Similar
UCM-ME Impact PUB-1: Implementation of the proposed UCM-ME Building would increase demand for fire protection services and could require an expansion of an existing fire station or the construction of a new facility, but the impacts from construction would be less than significant.	*LTS*	Avoided	Similar/Reduced	Similar/Greater
Cumulative Impact C-PUB-1: Development of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would generate an increased demand for fire protection services, the provision of which would not result in a significant cumulative environmental impact.	*LTS*	Avoided	Similar/Reduced	Similar
UCM-ME Impact TCR-1: The proposed Project would not cause a substantial adverse change in the significance of a tribal cultural resource as defined in Section 21074.	*LTS*	Avoided	Reduced	Reduced
Cumulative Impact C-TCR-1: Implementation of the proposed Project would not result in a significant cumulative impact on tribal cultural resources.	*LTS*	Avoided	Reduced	Reduced
UCM-ME Impact TRANS-1: Implementation of the proposed Project would not conflict with a program, plan, ordinance or policy addressing roadway facilities.	*LTS*	Avoided	Similar	Similar

Table 2.3: Summary Comparison of UCM-ME Building Project Alternatives

Project Impact	Proposed Project	Alternative 1	Alternative 2	Alternative 3
		No Project	Reduced Program	Reduced Building Footprint
UCM-ME Impact TRANS-2: Implementation of the proposed Project would not exceed an applicable VMT threshold of significance under 2030 with Project conditions and therefore would not conflict with State CEQA Guidelines Section 15064.3, subdivision (b).	*LTS*	Reduced	Similar	Similar
Cumulative Impact C-TRANS-1: Implementation of the proposed Project would not exceed an applicable VMT threshold of significance under 2030 with Project conditions.	*LTS*	Reduced	Similar	Similar
UCM-ME Impact UTL-1: Implementation of the proposed Project would not require construction of new or expanded wastewater conveyance or treatment facilities; nor would the proposed Project result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to existing commitments.	*LTS*	Reduced	Similar	Similar
Cumulative Impact C-UTL-1: Development of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would not result in a significant cumulative impact on wastewater collection and treatment facilities, such that construction of new or expanded facilities would be required.	*LTS*	Reduced	Similar	Similar

LTS = Less than significant impact
Greater = Impact greater than proposed Project
Reduced = Impact less than proposed Project
Similar = Impact similar to proposed Project

3.0 COMMENTS ON THE DRAFT EIR AND RESPONSES TO COMMENTS

3.1 INTRODUCTION

UC Merced received comments on the Draft EIR during the public review period from two agencies and one individual. Comments on the Draft EIR are presented in **Section 3.2** below along with the University's responses to those comments.

3.2 COMMENTS ON THE DRAFT EIR

3.2.1 Index to Comments

Comments on the Draft EIR were submitted to UC Merced during the public review period by the agencies and individual listed below in **Table 3.1, Index to Comments on the Draft EIR**. The commenters are grouped by the affiliation of the commenting entity as follows: federal agencies (FA), local agencies (LA), and public meeting participants (PM).

Table 3.1: Index to Comments on the Draft EIR

Commenter Code	Agency/Organization/Individual
Federal Agencies	
FA-1	U.S. Army Corps of Engineers, Sacramento District Kathy Norton, dated October 7, 2022
Local Agencies	
LA-1	Merced Irrigation District Mike Morris, dated October 5, 2022
Public Meeting (September 19, 2022)	
PM-1	Paul Cook, Community Member

3.2.2 Draft EIR Comments and Responses

This section includes a reproduction of each letter that provided comments on the Draft EIR. The comments are numbered consecutively following the acronym identifying the commenter. Individual comments within the letters are numbered consecutively and are annotated in the margin of each letter.

Written letters received during the public comment period on the Draft EIR are provided in their entirety (including attachments) in the following pages. A summary of the public meeting is included, and the relevant oral comments provided at the public meeting are bracketed. Each letter and the public meeting summary are immediately followed by responses keyed to the specific comments.

This page intentionally left blank

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

October 7, 2022

Regulatory Division (SPK-1999-00203)

Mr. Philip Woods
University of California, Merced
5200 North Lake Road
Merced, California 95343
PWoods3@ucmerced.edu

Dear Mr. Woods:

We are responding to your August 26, 2022, request for comments on the UC Merced Medical Education Building Project, Draft Environmental Impact Report. The State Clearinghouse Number for this project is 2021010047. The approximately 46.5-acre project site is located at Latitude 37.3622°, Longitude -120.4228°, near the City of Merced, Merced County, California.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States may include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, some canals, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work.

1

To ascertain the extent of waters on the project site, the applicant should prepare an aquatic resources delineation, in accordance with the "Minimum Standards for Acceptance of Aquatic Resource Delineation Reports" and "Updated Map and Drawing Standards for the South Pacific Division Regulatory Program" under "Jurisdiction" on our website at the address below and submit it to this office for verification. A list of consultants that prepare aquatic resources delineations and permit application documents is also available on our website at the same location.

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be

developed to compensate for the unavoidable losses resulting from project implementation.

If waters of the United States are going to be impacted, cultural resource sites within the defined federal permit area, will need to be evaluated according to the standards of the National Environmental Policy Act. All eligible or potentially eligible cultural resource sites in the permit area will be subject to Section 106 of the National Historic Preservation Act, 1966, as amended. The Corps of Engineers must also comply with the terms and conditions of the Federal Endangered Species Act with regards to our permitting process. The applicant may be required to create reports on these subjects for our office to review in order for us to process a permit application request. 1

Please refer to identification number SPK-1999-00203 in any correspondence concerning this project. If you have any questions, please contact me at the letterhead address, Room 1350, by email at *Kathy.Norton@usace.army.mil*, or telephone at (916) 557-5260. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx.*

Sincerely,

Kathy Norton

Digitally signed by NORTON.KATHLEEN.MARY.1231693072
Date: 2022.10.07 16:32:29 -07'00'

Kathy Norton
Sr. Project Manager
California South Section

cc:
Mr. Philip Woods, University of California, Merced, 5200 North Lake Road, Merced, California 95343 aarias40@ucmerced.edu
Ms. Francesca Cannizzo, University of California, Merced, 5200 North Lake Road, Merced, California 95343 fcannizzo2@ucmerced.edu

COMMENTOR FA-1: U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT

Response to Comment FA-1-1

The potential impacts to waters of the United States resulting from the UCM-ME Building Project were fully evaluated in the Initial Study, Appendix 1.0 of the Draft EIR. As stated in Section 5.6.1(c) of the Initial Study that was circulated with the NOP, there are no State or federally protected wetlands or other waters of the State or U.S. located within the Project site.

As described in Section 5.6(c) of the Initial Study, the impacts of campus development on State and federally protected wetlands were fully evaluated in the 2009 UC Merced and University Community Project Environmental Impact Statement/Environmental Impact Report (hereinafter 2009 LRDP EIS/EIR), with the U.S. Army Corps of Engineers (USACE) serving as the federal lead agency under the National Environmental Policy Act (NEPA) for the preparation of the EIS. As documented in the 2009 LRDP EIS/EIR, aquatic resources delineation surveys were conducted for the 2009 LRDP study area, which includes the UCM-ME Building Project site, on various dates between 1999 and 2001 and between 2007 and 2008 and were verified by the USACE. A Section 404(b)(1) Alternatives Analysis was prepared by UC Merced as part of the Section 404 permit application and submitted to the USACE. Consultation in compliance with Section 106 of the National Historic Preservation Act was completed by the USACE and a Biological Assessment was prepared by UC Merced and submitted by the USACE to the U.S. Fish and Wildlife Service (USFWS) for consultation under Section 7 of the Federal Endangered Species Act.

Following the certification of the 2009 LRDP EIS/EIR, the USACE issued a Section 404 permit (SPK-1999-00203) to the campus that authorized the filling of on-site waters of the U.S. in conjunction with the development of the campus. The permit also set forth the mitigation requirements applicable to the campus. Following the issuance of the permit, UC Merced commenced the development of additional facilities on the campus, concurrently completed two wetland mitigation projects, and paid in-lieu fees that provided compensatory wetlands mitigation for the acres of wetlands anticipated to be filled pursuant to the Section 404 permit.

The Project area was previously graded as part of previous campus development activities, including the 2020 Project, and filling of wetlands and other waters of the U.S. was conducted under the terms of UC Merced's existing Section 404 and 401 permits. There are no wetlands or other waters of the U.S. currently remaining on site. Furthermore, all previously graded wetlands have been fully mitigated consistent with UC Merced's existing permit requirements. As described in Section 5.7 of the Initial Study, there are no known cultural resources sites within the Project site based on the previous Section 106 evaluation and a cultural resources study prepared for the Project.

As the proposed Project would not require the filling of any State or federally protected wetlands, an aquatic resources delineation is not required for the proposed Project. Because no wetlands or waters of the U.S. would be filled, an analysis of alternatives that avoid wetlands is not required. Likewise, the proposed Project would not be subject to further evaluation under Section 106 of the National Historic Preservation Act, 1966, as amended, or consultation under Section 7 of the Federal Endangered Species Act, as these consultations were previously conducted for the entire campus, including the Project site, during the preparation of the 2009 LRDP EIS/EIR and as part of the Section

404 permit process. The Project will comply with the terms of the Biological Opinion issued to UC Merced by the USFWS.

MERCED IRRIGATION DISTRICT
WATER & POWER

October 5, 2022

University of California, Merced
Physical & Environmental Planning
Attn: Phillip Woods
5200 North Lake Road
Merced, California 95343
CEQA@ucmerced.edu

Subject: Comments to Draft EIR, UC Merced Medical Education Building Project

Dear Mr. Woods:

The Merced Irrigation District (MID) has reviewed the Draft Environmental Impact Report for the UC Merced Medical Education Building Project. The proposed project impacts the following MID facilities:

1. MID operates and maintains a major distribution canal, the Fairfield Canal located within a 150-foot wide permanent easement, recorded in Volume 2299, Page 963, Official Records of Merced County, being within Section 34, T. 6 S., R. 14 E., M.D.B. & M.

2. MID operates and maintains a major distribution canal, the Le Grand Canal, within a 150-foot wide permanent easement, recorded in Volume 2299, Page 963, Official Records of Merced County, being within Section 34 and 35, T. 6 S., R. 14 E., M.D.B. & M.

3. MID operates and maintains the Fairfield Power Plant within a 110-foot wide permanent easement, recorded in Volume 2299, Page 963, Official Records of Merced County, being within Section 34, T. 6 S., R. 14 E., M.D.B. & M.

1

4. MID operates and maintains Lake Yosemite, a surface water regulating reservoir that is a vital part of MID's distribution system. The lake covers approximately 486 acres, which MID owns in fee. The property was conveyed from Crocker Huffman Land and Water Company to Merced Irrigation District by deed recorded January 18, 1922 in Volume 12, Page 1, Official Records of Merced County. An additional approximately 42 acre parcel, conveyed from Crocker Huffman Land and Water Company to Merced Irrigation District by deed recorded May 31, 1922 in Volume 15, Page 401, Official Records of Merced County, consists of the area that is owned by MID but leased to Merced County for a

(209) 722-5761 744 West 20th Street Merced, California 95344-0288
Administration / FAX (209) 722-6421 • Finance / FAX (209) 722-1457 • Water Resources / FAX (209) 726-4176
Energy Resources / FAX (209) 726-7010 • Customer Service (209) 722-3041 / FAX (209) 722-1457

park under an agreement recorded March 18, 1976 in Volume 2024, Page 764 of Official Records of Merced County.

5. Lake Yosemite has an un-gated overflow/spillway located at the east end of Lake Yosemite Dam, immediately north of the Fairfield Canal, in the vicinity of the boat ramp in the park area, which will impact areas of the proposed Project.

6. Cottonwood Creek, a natural drainage channel through the existing campus area, is not maintained by any single agency. The channel as it exists today begins at the south edge of the Le Grand Canal with the storm drainage collected from the area between the Le Grand Canal and Fairfield Canals being intercepted by the Fairfield Canal. The channel continues on the south side of the Fairfield Canal and flows through the existing campus to the southwest crossing Lake Road near Cardella Road then meandering west through both County and City residential areas to its confluence with Fahrens Creek just west of Merced College. 1

MID would like to readdress safety and operational issues relating to the UC Campus' location adjacent to existing MID facilities, particularly the Le Grand and Fairfield Canals. Said safety and operational issues were communicated through MID's response to the UC Campus' EIR, correspondence, and various meetings with UC staff and consultants as early as 2000, as well as various follow-up correspondence. MID believes the following mitigation measures are still necessary and required to reduce the risk to life and property resulting from the UC locating its campus directly on top of these major irrigation facilities.

MID respectfully proposes that the following conditions be considered as mitigation for the proposed campus expansion:

Fairfield Canal

1. Install a bypass from the Le Grand Canal to the Fairfield Canal to eliminate power plant bypass flows in the Fairfield Canal from Lake Yosemite to the Power Plant when the plant goes off-line. When this happens, water that normally flows down the Le Grand Canal is diverted to the Fairfield Canal which can then fluctuate from 5 CFS to 500 CFS in a short period of time, thereby increasing the dangers to students who may be in or around the Fairfield Canal. This option may also mitigate the ensuing conditions proposed for the Fairfield Canal. 2
2. Install a concrete liner in the canal or fortify the raised banks of the earthen canal.
3. Make improvement to grade change chute and energy dissipater. An acceptable in-place safety measure at the head and along the chute is still needed to prevent access to the chute.
4. The Fairfield Canal is the only facility that MID will accept storm drainage water from the campus site. If utilized, this will also require UC Merced to amend their existing "Storm Drainage Contract" with the Merced Irrigation District Drainage Improvement District (MIDDID No. 1).
5. Design appropriate sub-drain drainage systems to protect proposed campus development in areas where the Fairfield Canal seeps through the banks of the canal or concrete line these sections of the canal to reduce seepage.

General Comments

1. An MID signature block on any Improvement Plans for U.C. Merced Campus that affect MID facilities will be required.
2. An Encroachment Agreement with MID will be required for work associated with improvements to MID and for any roadways, walkways, bike paths, utilities and pipelines crossing MID facilities.
3. Be advised that the MID does not accept landscape tail water or runoff into its canal system.
4. Although the EIR states that outflows from the storm water basin would maintain existing pre-development flows discharging into Cottonwood Creek, there are capacity restrictions downstream of the development under current conditions.
5. Issues of health and safety around its facilities shall be coordinated with MID.
6. MID reserves the right for further comment as unforeseen circumstances may arise.

3

Thank you for the opportunity to comment on the above referenced document. If you have any questions, please contact me at 722-5761.

Sincerely,

Mike Morris

Mike Morris LS
Survey Project Manager
Merced Irrigation District

This page intentionally left blank

LA-1: MERCED IRRIGATION DISTRICT

Response to Comment LA-1-1

The commenter lists a number of Merced Irrigation District (MID) facilities, including Fairfield Canal, Le Grand Canal, Lake Yosemite, Fairfield Power Plant, un-gated overflow/spillway on Lake Yosemite Dam, and Cottonwood Creek, and states that the proposed UCM-ME Building Project affects these facilities. MID does not explain how the proposed Project affects these facilities. Some of the listed facilities are nearby but not on the project site and it is unclear how these facilities would be affected by the proposed Project. Regarding the MID facilities that are within the campus, they are located within clearly defined easements, and campus facilities and operations do not interfere with these facilities.

Although the Project area is adjacent to a section of Fairfield Canal, none of the Project facilities would be located in and no incidental activities would occur within the 150-foot permanent easement of Fairfield Canal, and therefore there would be no impact on that canal. As shown in Figures 3-2 and 3-3 of the Draft EIR (pages 3-5 and 3-13, respectively), the proposed building is located at a distance from the Fairfield Canal. To the north of the proposed building, there are existing campus buildings, including the Arts and Computational Science Building, Biomedical Sciences and Physics Building, and Campus Greenhouse, between the project and the canal. The eastern boundary of the Project site is formed by Cottonwood Loop Road, and the Fairfield Canal is located east of this road by approximately 200 feet. The only potential activity in the area between Cottonwood Loop Road and Fairfield Canal would be staging, which would take place outside of the MID easement, as shown in Figure 3-2 in the Draft EIR. Thus, the proposed Project would not result in the placement of any buildings or other uses closer to Fairfield Canal than under existing conditions.

With respect to Cottonwood Creek, that creek is located to the south of the Project area and the potential for the proposed Project to increase or decrease flows into Cottonwood Creek is analyzed in Section 4.2, Hydrology and Water Quality, in the Draft EIR. Due to the sizing and design of the proposed storm water basin that is included in the proposed Project, there would be no change in the outflows into Cottonwood Creek. The impact on the creek would be less than significant.

Response to Comment LA-1-2

MID lists a series of improvements to Le Grand and Fairfield Canals, Fairfield Power Plant, and the Lake Yosemite ungated spillway, and requests that those be made as part of the campus's development under the proposed UCM-ME Building Project. These improvements have no relationship to any environmental impacts set forth in the Draft EIR or identified by the commenter. The comment is noted for the record.

Response to Comment LA-1-3

The commenter correctly acknowledges that the EIR analysis reflects that outflows discharging into Cottonwood Creek from the proposed storm water basin would maintain existing pre-development flows. As stated in the Draft EIR, the basin would be designed and operated so that flows under normal rainfall conditions would be detained and released at pre-development rates, and, under

larger storm conditions, including the 100-year, 24-hour storm, the flows would be detained and released at rates that would not exceed the existing peak and total flows. Regarding the downstream capacity restrictions, those are known to UC Merced and are noted on page 4.2-5 of the Draft EIR. As the proposed Project would not increase downstream flows under normal rainfall conditions and larger storms, it would not contribute flows that would exacerbate localized flooding that occurs due to the limited capacity of the culvert at Lake Road.

The remainder of the general comments listed by MID do not relate to any environmental impacts of the UCM-ME Building Project. Therefore, no responses are required.

UNIVERSITY OF CALIFORNIA MERCED

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

SANTA BARBARA • SANTA CRUZ

UNIVERSITY OF CALIFORNIA MERCED
5200 N. LAKE ROAD | MERCED, CA 95343
TEL: 209.228.4400

UC MERCED MEDICAL EDUCATION BUILDING PROJECT ENVIRONMENTAL IMPACT REPORT

PUBLIC COMMENT MEETING SUMMARY

September 19, 2022 / 4:00 p.m. – 6:00 p.m. (in person and virtual via Zoom)

Presenters

UC Merced

Phillip Woods
Alvaro Arias

Consultants

Shabnam Barati, Barati Consulting
Kristin Nurmela, LSA

Agenda

- Welcome and Purpose of the Meeting
  - Meeting will be Recorded
- UCM-ME Building Project Overview
- CEQA Process Overview
- Draft EIR Overview
- Public Comment
- Adjourn Meeting

The Public Comment Meeting presentation is available on UC Merced's website: https://planning.ucmerced.edu/ceqa-environmental-documents

Public Comment

Paul Cook:

1) What is going to happen with traffic to the University? Are there any roadway improvement plans besides Lake Road and Bellevue Road?
2) Are there any other planned buildings related to the medical school?

1

Meeting was adjourned at 6:00 p.m.

This page intentionally left blank

PUBLIC MEETING (SEPTEMBER 19, 2022)

Response to Comment PM-1-1

The commenter asks about traffic to the campus and any planned roadway improvements. The impacts of the traffic associated with the proposed Project are analyzed in Section 4.4 of the Draft EIR and show that the Project's impacts would be less than significant. Regarding off-campus roadways, UC Merced does not plan to make any improvements to off-campus roadways in conjunction with the proposed Project or any other current or foreseeable project.

The commenter asks whether there are any other planned buildings related to the medical school. At this point in time, there are no other buildings that have been planned related to the future medical school at UC Merced. If and when additional buildings are proposed, they will be subject to environmental review under CEQA.

This page intentionally left blank

4.0 DRAFT EIR TEXT REVISIONS

This section presents specific changes to the text of the Draft EIR that are being made to clarify any errors or omissions of materials in the Draft EIR based on the University's own review of the Draft EIR. In no case do these revisions result in a change in the conclusions set forth in the Draft EIR nor result in new or substantially more severe impacts than those presented in the Draft EIR. Where revisions to the main text are called for, the page and paragraph are set forth, followed by the appropriate revision. Added text is indicated by underlined text. Text deleted from the Draft EIR is shown in ~~strikeout.~~ Page numbers correspond to the page numbers in the Draft EIR.

Text on page 2-15 of the Draft EIR is revised as shown below to correct an inadvertent textual error in the description of Cumulative Impact C-AQ-1 as shown in Table 2-1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures. The impact text in this summary table was incorrect and inconsistent with the C-AQ-1 impact text throughout the rest of the Draft EIR, specifically as described in Section 4.1.6 on page 4.1-31 of the Draft EIR.

Table 2-1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Cumulative Impact C-AQ-1: The construction and operation of the proposed Project, in conjunction with other past, present, and reasonably foreseeable future development in the project area, ~~could~~ would not hinder air quality attainment and maintenance efforts for criteria pollutants.	*Less than Significant*	**Cumulative MM C-AQ-1:** Implement **2020 LRDP MM AQ-2a and AQ-2b**.	*N/A*

Text on page 2-22 of the Draft EIR is revised as shown below to correct the inadvertent omission of 2020 LRDP Mitigation Measure CUL-4b from Table 2-1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures. This mitigation requirement was included in Section 5.9 of the Initial Study analysis (Appendix 1.0) and Section 6.5.7 of the Draft EIR.

Table 2-1: Summary of UCM-ME Building Project Environmental Impacts and Mitigation Measures

Project Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	*Less than Significant*	**2020 LRDP MM CUL-4a:** Prior to project construction, construction personnel will be informed of the potential for encountering significant paleontological resources. All construction personnel will be informed of the need to stop work in the vicinity of a potential discovery until a qualified paleontologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Construction personnel will also be informed of the requirements that unauthorized collection resources are prohibited. **LRDP MM CUL-4b**: A qualified paleontologist will be intermittently present to inspect exposures of Merhten Formation, North Merced Gravels, and Riverbank Formation during construction operations to ensure that paleontological resources are not destroyed by project construction.	*N/A*

5.0 MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires that a Lead Agency establish a program to monitor and report on mitigation measures adopted as part of the environmental review process to avoid or reduce the severity and magnitude of potentially significant environmental impacts associated with project implementation. CEQA (Public Resources Code Section 21081.6 (a)(1)) requires that a Mitigation Monitoring and Reporting Program (MMRP) be adopted at the time that the agency determines to carry out a project for which an Environmental Impact Report (EIR) has been prepared, to ensure that mitigation measures identified in the EIR are fully implemented.

Because the proposed Project is an element of the growth and development projected under the 2020 LRDP, mitigation measures adopted by The Regents in conjunction with the approval of the 2020 LRDP that are relevant to the proposed Project have been included in and are a part of the UCM-ME Building Project. The analysis presented in Appendix 1.0 (Initial Study) and Chapter 4.0 of the Draft EIR evaluates environmental impacts that would result from the proposed Project following the implementation of applicable 2020 LRDP mitigation measures as standard project features. Based on the analysis in the Draft EIR, no new mitigation measures beyond those already adopted in conjunction with the adoption of 2020 LRDP would be required for the UCM-ME Building Project. However, consistent with Public Resources Code Section 21081.6, an MMRP with the relevant 2020 LRDP mitigation measures is included in this Final EIR to track Project compliance.

The MMRP for the UCM-ME Building Project is presented in **Table 5.1, UCM-ME Building Project Mitigation Monitoring and Reporting Program**. **Table 5.1** includes the full text of 2020 LRDP mitigation measures relevant for the UCM-ME Building Project. The MMRP describes implementation and monitoring procedures, responsibilities, and timing for each mitigation measure identified in the Final EIR, including:

Mitigation Measure: Provides the mitigation name, or ID, and the full text of the mitigation measure.

Implementation Procedure: Summarizes the steps to be taken to implement the measure.

Mitigation Timing: Identifies the stage of the project during which the mitigation action will be taken.

Mitigation Responsibility: Designates entity responsible for implementation of the mitigation measure.

Monitoring and Reporting Procedure: Specifies procedures for documenting and reporting mitigation implementation.

UC Merced may modify the means by which a mitigation measure will be implemented, as long as the alternative means ensure compliance during project implementation. The responsibilities of mitigation implementation, monitoring and reporting extend to several UC Merced departments and offices and may be contractually delegated to the project development team. The manager or

.

department lead of the identified unit or department will be directly responsible for ensuring the responsible party complies with the mitigation. UC Merced Physical & Environmental Planning (UCMPEP) is responsible for the overall administration of the program and for assisting relevant departments and project managers in their oversight and reporting responsibilities. This department is also responsible for ensuring the relevant parties understand their charge and complete the required procedures accurately and on schedule.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
Aesthetics (*Initial Study, Appendix 1.0 of the Draft EIR*)				
LRDP MM AES-1b: Where possible, major vehicular and pedestrian transportation corridors on the Campus shall be located and designed to provide views of the Sierra Nevada.	Review final circulation plans. Revise design, if necessary, to provide the scenic view to the extent feasible.	Project design and construction.	UCMPEP	Prior to construction. Document in project file.
2020 LRDP MM AES-3a: The University shall design all new aboveground infrastructure on the Campus to the following standards: (a) Screen aboveground infrastructure from view from public rights-of-way or scenic vistas, via landscaping, fencing, or other architectural screening; (b) Require creative design measures to camouflage structures by integrating them with existing buildings and among other existing uses; (c) Locate aboveground infrastructure on sites that are not visible from visually sensitive areas, such as residential communities and open space areas; (d) Require providers to co-locate their structure on a single site, where technically feasible and visually desirable; and (e) Locate antennae and equipment on other existing community facility sites, such as water tanks or utility poles.	Review engineering plan for aboveground utility lines and structure. Review project design for compatibility. Revise design, if necessary, to ensure compatibility.	Project design and construction.	UCMPEP	Prior to construction. Document in project file.
Air Quality *(Draft EIR)*				
2020 LRDP MM AQ-1a: The construction contractors shall be required via contract specifications to use construction equipment rated by the U.S. EPA as meeting Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower.	Include this requirement in the construction contract for the proposed Project.	Prior to and throughout project construction.	UCMPEP / Construction Contractors	Implementation will be monitored through the contract submittal process and confirmed and documented at regular intervals in project mitigation monitoring report.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
2020 LRDP MM AQ-1b: UC Merced shall include in all construction contracts the measures specified in SJVAPCD Regulation VIII (as it may be amended for application to all construction projects generally) to reduce fugitive dust impacts, including but not limited to the following:	Include this requirement in the construction contract for the proposed Project.	Prior to construction.	UCMPEP / Construction Contractors	Implementation will be monitored through the construction contract submittal process.
• All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover. • All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. • All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions using application of water or by presoaking. • When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained. • All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit visible dust emissions. Use of blower devices is expressly forbidden.)	Inspect construction site at regular intervals during construction to verify compliance with specified measures.	During construction.	UCMPEP	Confirm and document at regular intervals throughout construction period in project mitigation monitoring report.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, storage piles shall be effectively stabilized of fugitive dust emissions by using sufficient water or chemical stabilizer/ suppressant.				
2020 LRDP MM AQ-2a: UC Merced shall implement the following measures to reduce emissions from vehicles: • Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use. • Provide bicycle facilities to encourage bicycle use instead of driving, such as bicycle parking, bicycle lanes, bicycle lockers; and showers and changing facilities for employees. • Provide preferential carpool and vanpool parking for non-residential uses. • Provide transit-enhancing infrastructure to promote the use of public transportation, such as covered bus stops and information kiosks. • Provide facilities, such as electric car charging stations and a CNG refueling station, to encourage the use of alternative-fuel vehicles.	Ensure that facilities listed are included in project design as applicable. Verify construction of pedestrian-enhancing infrastructure, bicycle facilities, carpool and transit-enhancing infrastructure, facilities to accommodate alternative-fuel vehicles.	Project design and construction	UCMPEP	Document in project mitigation monitoring report.
• Improve traffic flows and congestion by timing of traffic signals at intersections adjacent to the campus to facilitate uninterrupted travel.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
• Work with campus transit provider to replace CatTracks buses with either electric buses or buses operated on alternative fuels.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
• Work with the City of Merced to establish park and ride lots and provide enhanced transit service between the park and ride lots and the campus.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
• Replace campus fleet vehicles with electric vehicles or vehicles that operate on alternative fuels.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
• Reduce the number of daily vehicle trips by providing more housing on campus.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
2020 LRDP MM AQ-2b: UC Merced shall implement the following measures to reduce emissions from area and energy sources, as feasible: • Utilize low-VOC cleaning supplies and low-VOC paints (100 grams/liter or less) in building maintenance.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
• Utilize electric equipment for landscape maintenance.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
• Plant low maintenance landscaping.	UCMPEP will review project design and construction drawings to ensure that low maintenance landscaping is included in the proposed Project.	During detailed project planning or project design prior to project.	UCMPEP	Prior to approval of final design of applicable projects.
• Implement a public information program for resident students to minimize the use of personal consumer products that result in ROG emissions, including information on alternate products.	*This part of the measure is implemented at a campus-wide level and is also not relevant to the proposed Project.*	N/A	N/A	N/A
• Instead of natural gas water heaters, install solar water heating systems.	*This part of the measure is not relevant to the proposed Project which is an all-electric building.*	N/A	N/A	N/A

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
2020 Cumulative MM C-AQ-1: Implement LRDP MM AQ-2a and AQ-2b. No additional mitigation is available.	See monitoring and reporting for LRDP Mitigation Measures AQ-2a and AQ-2b above.	See monitoring and reporting for LRDP Mitigation Measures AQ-2a and AQ-2b above.	See monitoring and reporting for LRDP Mitigation Measures AQ-2a and AQ-2b above.	See monitoring and reporting for LRDP Mitigation Measures AQ-2a and AQ-2b above.
Biological Resources (*Initial Study, Appendix 1.0 of the Draft EIR*)				
2020 LRDP MM BIO-4: Prior to any new development on previously undisturbed land, and as long as the species is considered a candidate endangered species or in the event that it becomes listed under the California Endangered Species Act, a qualified wildlife biologist shall conduct visual surveys of the development area during the flight season for the Crotch bumble bee (late February through late October). The following methodology shall apply unless the California Department of Fish and Wildlife (CDFW) releases species-specific survey protocol; in this case, CDFW's survey protocol shall apply. Between two and four evenly spaced presence/ absence surveys shall be conducted for the highest detection probability, which, at present time, is the greatest between early spring (late March/early April) and early summer (late June/July). Surveys shall take place when temperatures are above 60°F, preferably on sunny days with low wind speeds (e.g., less than 8 miles per hour) and at least 2 hours after sunrise and 3 hours before sunset. On warm days (e.g., over 85°F), bumble bees will be more active in the mornings and evenings. Surveyors shall conduct transect surveys focusing on detection of foraging bumble bees and underground nests using visual aids such as butterfly binoculars. Even if no Crotch bumble bees are observed, a pre-construction survey shall be	Retain a qualified biologist to conduct surveys for Crotch bumble bee and to develop a plan to protect active nest sites and individuals during construction. Include mitigation specifications in construction contract as necessary (i.e., if Construction Contractor will be required to retain the qualified biologist).	Develop plan prior to construction Monitor prior to and during construction activities.	UCMPEP / Construction Contractor	Prior to, during, and at completion of construction activities Construction Contractor will submit reports to UCMPEP for project files.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
conducted within 30 days prior to start of construction. If no Crotch bumble bees or potential Crotch bumble bees are detected during the presence/absence surveys and the pre-construction survey, no further mitigation is required. If Crotch bumble bees or potential Crotch bumble bees are observed within the development area, a plan to protect Crotch bumble bee nests and individuals shall be developed and implemented in consultation with CDFW. The plan shall include, but not be limited to, the following measures: • Specifications for construction timing and sequencing requirements (e.g., avoidance of raking, mowing, tilling, or other ground disturbance until late March to protect overwintering queens); • Preconstruction surveys conducted within 30 days and consistent with any current available CDFW standards prior to the start of ground disturbing activities to identify active nests; • Establishment of appropriate no-disturbance buffers for nest sites and construction monitoring by a qualified biologist to ensure compliance; • Restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., avoidance of pesticides/herbicides, BMPs to minimize the spread of invasive plant species); • Provisions to avoid Crotch bumble bees or potential Crotch bumble bees if observed away from a nest during project activity (e.g., ceasing of project activities until the animal has left the work area on its own volition); and				

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
• Prescription of an appropriate restoration seed mix targeted for the Crotch bumble bee, including native plant species known to be visited by native bumble bee species and containing a mix of flowering plant species with continual floral availability through the entire active season of the Crotch bumble bee (March to October).				
2020 LRDP MM BIO-9a: Avoid and minimize impacts on native birds protected under the MBTA, including listed species, fully protected species, special-status species of concern, and raptors and passerines. (a) Limit ground disturbance activities to the non-breeding season and remove potential unoccupied breeding habitat during the non-breeding season if possible. If breeding season work is required, conduct take avoidance (tree, shrub, and ground) nest surveys to identify and avoid active nests. • If feasible, UC Merced shall conduct all project-related activities including (but not limited to) tree and shrub removal, other vegetation clearing, grading, or other ground disturbing activities during the non-breeding season (typically between September 16 and February 14).	Retain a qualified biologist to conduct surveys and to develop a plan to avoid active nest sites during construction, or as an option, remove potential breeding habitat during non-breeding season. Include mitigation specifications in construction contract as necessary (i.e., if Construction Contractor will be required to retain the qualified biologist).	Develop plan prior to construction Monitor prior to and during construction activities.	UCMPEP / Construction Contractor	Prior to and during construction activities Construction Contractor will submit reports to UCMPEP for project files.
• If activities are scheduled to occur during the breeding season (typically between February 15 through September 15), applicable CDFW and/or USFWS permit conditions in the permits issued to the University related to bird surveys must be followed. In addition, a UC Merced-approved qualified avian biologist, with knowledge of the species to be surveyed,	Qualified biologist will develop and implement a plan to avoid active nest sites during construction, establish buffer zone, and monitor active nests.	Develop plan prior to construction Monitor prior to and during construction activities.	UCMPEP / Construction Contractor	Prior to and during construction activities Construction Contractor will submit monitoring reports to UCMPEP for project files.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
shall conduct focused nesting surveys within 15 days prior to the start of project or ground-disturbing activities and within the appropriate habitat. The qualified avian biologist shall determine the exact survey duration and location (typically 500 feet around the work area) based on the work conditions and shall take into account existing applicable CDFW or USFWS permit conditions. • If an unoccupied nest (without birds or eggs) of a non-listed or fully protected species (as determined by the qualified avian biologist) is found, the nest shall be removed under the direction of the qualified avian biologist. • If an active nest is located, a qualified avian biologist shall establish an appropriate no-disturbance buffer around the nest making sure that any buffer width required by the University's permit obligations is followed. A 500-foot buffer is recommended for listed or fully protected nesting birds (or another buffer determined in consultation with CDFW and/or USFWS), a 250-foot buffer around raptors, and a 75-foot buffer around passerines. If work activities cause or contribute to a bird being flushed from a nest, the buffer width shall be adjusted to avoid and minimize impacts to nesting birds. • A qualified avian biologist shall monitor the nest site regularly during work activities to ensure that the nest site is not disturbed, the buffer is maintained and the success or failure of the nest is documented. • If UC Merced elects to remove a nest tree,				

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
nest trees may only be removed after the qualified avian biologist has determined that the nests are unoccupied. • If an active nest is causing a safety hazard, CDFW shall be contacted to determine if the nest can be removed.				
(b) Minimize impacts to burrowing owl and compensate for habitat loss. CDFW (2012) recommends that take-avoidance (preconstruction) surveys be conducted to locate active burrowing owl burrows in the construction work area and within an approximately 500-foot buffer zone around the construction area. A qualified avian biologist shall conduct take avoidance surveys for active burrows according to the CDFW's Staff Report on Burrowing Owl Mitigation (2012 Staff Report). Surveys shall be conducted no less than 14 days prior to initiating ground disturbance activities and surveillance surveys should be conducted as frequently as recommended in the 2012 Staff Report. If ground-disturbing activities are delayed or suspended for than 30 days after the take avoidance survey, the area shall be resurveyed. If no burrowing owls are detected, no further mitigation is required. If active burrowing owls are detected, the following additional measures are required: • Project implementation shall seasonally and spatially avoid negative impacts and disturbances that could result in the take of burrowing owls, nest or eggs. • If burrowing owls and their habitat can be protected in place or adjacent to a	Retain a qualified biologist to conduct preconstruction surveys for active burrows according to the CDFW's Staff Report on Burrowing Owl Mitigation. If burrowing owls detected, verify that mitigation measures are followed. Document in a memo.	Develop plan prior to construction Monitor prior to and during construction activities.	UCMPEP / Construction Contractor	Prior to and during construction activities Construction Contractor will submit reports to UCMPEP for project files.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
construction site, buffer zones, visual screens or other measures shall be used to minimize disturbance impacts while project activities are occurring. To use these minimization measures, a qualified avian biologist shall determine the exact measures following the guidance described in the 2012 Staff Report. • If owls must be moved away from the project site during the nonbreeding season, passive relocation techniques (e.g., installing one- way doors at burrow entrances) shall be used instead of trapping, as described in CDFW guidelines. At least 1 week will be necessary to complete passive relocation and allow owls to acclimate to alternate burrows. • When destruction of occupied burrows is unavoidable during the nonbreeding season (September 1 to January 31), unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on protected lands approved by the CDFW. Newly created burrows shall follow guidelines established by the CDFW.				
2020 LRDP MM BIO-9b: Structures proposed under the 2020 LRDP shall incorporate bird-safe design practices (e.g., American Bird Conservancy's Bird-Friendly Building Design [2015] or San Francisco Planning Department's Standards for Bird-Safe Buildings [2011]) to minimize the potential for bird-window collisions. Design elements, including but not limited to the following, shall be considered:	Review final building and structure design plans for appropriate bird safety designs. Revise design, if necessary, to ensure compatibility with bird-safe design practices.	Prior to finalizing project design	UCMPEP	Prior to construction. Document in project file.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
• Create building facades with "visual noise" via cladding or other design features that make it easier for birds to identify buildings and not mistake windows for open sky or trees. • Incorporate windows that are not clear or reflective into the building or structure designs. • Use windows that incorporate glass types such as UV-A or fritted glass and windows that incorporate UV-absorbing and UV-reflecting stripe. • Use grid patterns on windows in locations with the highest potential for bird-window collisions (e.g., windows at the anticipated height of adjacent vegetation at maturity). • Reduce the proportion of glass to other building materials in new construction. • Avoid placement of bird-friendly attractants (i.e., vegetated roofs, water features, tall trees) near glass whenever possible. • Install motion-sensitive lighting in any area visible from the exterior that automatically turn lights off during after-work hours. Prior to all individual project approvals, the UC Merced Physical and Environmental Planning Department shall review the final designs of the buildings and structures to ensure that appropriate bird safety designs have been effectively incorporated to reduce potential impacts to birds.				
Cultural Resources (*Initial Study, Appendix 1.0 of the Draft EIR*)				
2020 LRDP MM CUL-2: If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or non-human bone are inadvertently discovered during ground-disturbing activities on the campus, work will stop in that area and within 100 feet of the find until a qualified	Include this requirement in the construction contract for the proposed Project.	During preparation of construction contract.	UCMPEP	Document in project file at the start of construction.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies or mitigation of impacts through data recovery programs such as excavation or detailed documentation.				
If cultural resources are discovered during construction activities, the construction contractor and lead contractor compliance inspector will verify that work is halted until appropriate treatment measures are implemented in coordination with the USACE and UC Merced.	If resources are discovered, halt work and implement appropriate treatment measures.	During construction, in the event of a discovery.	UCMPEP	Document in project file upon implementation of required measures.
2020 LRDP MM CUL-3: If human remains of Native American origin are discovered during ground-disturbing activities, the Campus and/or developer will comply with state laws relating to the disposition of Native American burials, which falls within the jurisdiction of the California Native American Heritage Commission (Public Resources Code Section 5097). If human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until	Document measures taken to avoid disturbance to human remains discovered on the project site.	During construction.	UCMPEP	Confirm and document in project file during planning and construction.
• the coroner of Merced County has been informed and has determined that no investigation of the cause of death is required; and • if the remains are of Native American origin; • the descendants from the deceased Native Americans have made a recommendation to the land owner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section	Retain Native American representative to monitor archaeological excavation.	During planning, and upon discovery of human remains in an archaeological context.	UCMPEP	Confirm and document in project file.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
5097.98; or				
• the California Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission.	Contact archaeologist and County Coroner in the event of discovery of suspected human bone.	Upon discovery of suspected human bone.	UCMPEP	Confirm and document in project file.
Geology and Soils (*Initial Study, Appendix 1.0 of the Draft EIR*)				
2020 LRDP MM GEO-2: During project-specific building design, a site-specific geotechnical investigation shall be performed by a Certified Engineering Geologist or Licensed Geotechnical Engineer to assess detailed seismic, geologic, and soil conditions at each construction site. The study shall include an evaluation of liquefaction potential, slope stability, landslide potential, expansive and compressible soils, and other structural characteristics and shall identify specific geotechnical recommendations designed to mitigate for the site hazards. The geotechnical recommendations will be followed.	Retain Certified Engineering Geologist or Licensed Geotechnical Engineer to conduct site-specific geotechnical investigation. Implement geotechnical recommendations.	During project design, prior to start of excavation, and during construction.	UCMPEP	Document in project file that the geotechnical recommendations were incorporated into project design and construction. Complete upon construction in compliance with geotechnical report.
2020 LRDP MM CUL-4a: Prior to project construction, construction personnel will be informed of the potential for encountering significant paleontological resources. All construction personnel will be informed of the need to stop work in the vicinity of a potential discovery until a qualified paleontologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Construction personnel will also be informed of the requirements that unauthorized collection resources are prohibited.	Include this requirement in the construction contract for the proposed Project.	During preparation of construction contract.	UCMPEP	Document in project file at the start of construction.
2020 LRDP MM CUL-4b: A qualified paleontologist will be intermittently present to inspect exposures of Merhten Formation, North Merced Gravels, and Riverbank Formation during construction	Retain qualified paleontologist to perform work as specified.	Prior to start of excavation and during construction.	UCMPEP	Complete upon documentation of compliance with appropriate

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
operations to ensure that paleontological resources are not destroyed by project construction.				measures.
Greenhouse Gas Emissions (*Initial Study, Appendix 1.0 of the Draft EIR*)				
2020 LRDP MM GHG-1a: UC Merced shall set a goal to reduce or control the increase in its GHG emissions such that the total emissions do not exceed 3,300 $MTCO_2e$/year by the end of the year 2030. UC Merced shall monitor GHG emissions each year, monitor upcoming projects for their potential to increase the campus' GHG emissions, and implement project-specific and campus-wide GHG reduction measures to reduce the campus' GHG emissions in accordance with the 3,300 $MTCO_2e$/year goal for 2030.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
In the event that adequate reduction is not achieved by these measures, UC Merced shall purchase renewable energy credits, or other verifiable GHG offsets to keep the net emissions at or below 3,300 $MTCO_2e$/year.	*This part of the measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
2020 LRDP MM GHG-1b: UC Merced shall implement LRDP Mitigation Measures AQ-2a and -2b.	See monitoring and reporting for 2020 LRDP Mitigation Measures AQ-2a and AQ-2b above.	See monitoring and reporting for 2020 LRDP Mitigation Measures AQ-2a and AQ-2b above.	See monitoring and reporting for 2020 LRDP Mitigation Measures AQ-2a and AQ-2b above.	See monitoring and reporting for 2020 LRDP Mitigation Measures AQ-2a and AQ-2b above.
2020 LRDP MM GHG-1c: UC Merced shall periodically review new technologies that can be implemented to further reduce the campus' GHG emissions.	*This measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
Cumulative MM C-GHG-1: Implement **2020** LRDP Mitigation Measures GHG-1a, 1b, and 1c.	*This measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
Hazards and Hazardous Materials (*Initial Study, Appendix 1.0 of the Draft EIR*)				
2020 LRDP MM HAZ-4: In the event that non-permitted disposal sites, trash burn pits, wells, underground storage devices, or unknown hazardous materials are encountered during construction on the campus site, construction activities would cease until all contaminated areas are identified, and remediated or removed. This process of identification and remediation or removal would be coordinated with the Merced County Division of Environmental Health.	Include this requirement in the construction contract for the proposed Project. Coordinate with Merced County Division of Environmental Health as required.	During preparation of construction contract. During construction, in the event of an encounter.	UCMPEP UCMPEP	Document in project file at the start of construction. Document in project file upon completion of remediation or removal.
Noise (*Initial Study, Appendix 1.0 of the Draft EIR*)				
2020 LRDP MM NOI-3: Prior to initiation of construction on a project that is within 500 feet of off-site residential receptors, UC Merced shall develop and implement a construction noise mitigation program for that project that includes but is not limited to the following: • Construction activities within 500 feet of any residences shall be restricted to the hours of 7:00 AM and 6:00 PM on weekdays and Saturdays with no construction on Sundays and holidays. • All noise-producing project equipment and vehicles using internal combustion engines shall be equipped where appropriate with exhaust mufflers and air-inlet silencers in good operating condition that meet or exceed original factory specifications. • Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. • All mobile or fixed noise-producing equipment used on the project that is regulated for noise output by local, state or federal agency shall	Develop construction noise mitigation program and include in construction contract specifications. Inspect construction site to verify that measures are being implemented.	Prior to and during construction.	UCMPEP / Construction Contractor	Confirm and document during construction. Document compliance in project file upon completion of construction.

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
comply with such regulation while engaged in project-related activities. • Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where practicable. • Material stockpiles, mobile equipment staging, construction vehicle parking, and maintenance areas shall be located as far as practicable from noise-sensitive land uses. • Stationary noise sources such as generators or pumps shall be located away from noise-sensitive land uses as feasible. • The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. No project-related public address loudspeaker, two-way radio, or music systems shall be audible at any adjacent noise-sensitive receptor except for emergency use. • The erection of temporary noise barriers shall be considered where project activity is unavoidably close to noise-sensitive receptors. • The noisiest construction operations shall be scheduled to occur together to avoid continuing periods of the greatest annoyance, wherever possible. • Construction vehicle trips shall be routed as far as practical from existing residential uses. • The loudest campus construction activities, such as demolition, blasting, and pile driving, shall be scheduled during summer, Thanksgiving, winter, and spring breaks when fewer people would be disturbed by construction noise. • Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week				

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
before the start of each construction project.				
2020 LRDP MM NOI-4a: UC Merced shall avoid impact pile driving where possible in vibration-sensitive areas. Drilled piles or the use of vibratory pile driving will be used where geological conditions permit their use. For impact pile driving activities occurring within 50 feet of typical structures, limit groundborne vibration due to construction activities to 0.50 inch/second, ppv (limit of potential for damage to typical structures) in the vertical direction at sensitive receptors. Since in many cases the information available during the preliminary engineering phase would not be sufficient to define specific vibration mitigation measures, UC Merced shall describe and commit to a mitigation plan to minimize construction vibration damage using all feasible means available.	Develop construction vibration mitigation program and include in construction contract specifications. Inspect construction site to verify that measures are being implemented.	Prior to and during construction.	UCMPEP / Construction Contractor	Confirm and document during construction. Document compliance in project file upon completion of construction.
2020 LRDP MM NOI-4b: For construction adjacent to highly sensitive uses such as laboratories, UC Merced shall apply additional measures as feasible, including advance notice to occupants of sensitive facilities to ensure that precautions are taken in those facilities to protect ongoing activities from vibration effects.	Ensure that construction vibration mitigation program includes precautions for highly sensitive uses as described. Inspect construction site to verify that precautions are being implemented.	Prior to and during construction.	UCMPEP	Confirm and document during construction. Document compliance in project file upon completion of construction.
Public Services and Recreation (*Initial Study, Appendix 1.0 of the Draft EIR*)				
2020 LRDP MM PUB-6a: UC Merced shall work with the County to avoid physical deterioration of existing facilities at Lake Yosemite Regional Park, and/or improve park facilities within the existing park site as necessitated by the increased uses associated with development of the campus.	*This measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A
2020 LRDP MM PUB-6b: UC Merced will pay its fair share of the cost of necessary improvements to the regional park. UC Merced's share of funding will be based on the percentage that on-campus	*This measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A

Table 5.1: UCM-ME Building Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Procedures	Mitigation Timing	Mitigation Responsibility	Monitoring and Reporting Procedure
residential population represents of the total population in eastern Merced County at the time that an improvement is implemented.				
2020 LRDP MM PUB-6c: In recognition of the sensitive resources present on lands immediately adjacent to the regional park, all regional park improvement projects that are implemented by the County within 250 feet of the park's eastern boundary pursuant to **2020 LRDP Mitigation Measures PUB-6a** and **PUB-6b** above, will implement mitigation measures to avoid and minimize indirect effects on biological resources.	*This measure is implemented at a campus-wide level and not in conjunction with individual projects.*	N/A	N/A	N/A

6.0 REPORT PREPARERS

6.1 REPORT PREPARERS

6.1.1 Lead Agency

University of California, Merced

Phillip Woods, Director of Physical & Environmental Planning
Alvaro Arias, Principal Environmental Planner
Fran Telechea, Executive Director of Planning, Design, & Construction Management
Allison Costa, Project Director
Maggie Saunders, Executive Director of Capital and Space Strategies and Real Estate

University of California, Office of the President

Brian Harrington, Director, Physical and Environmental Planning
Ha Ly, Associate Director, Physical and Environmental Planning

University of California, Office of the General Counsel

Alison Krumbein, Principal Counsel

6.1.2 Consultants

Barati Consulting, LLC
35688 Barnard Drive
Fremont, California 94536

Shabnam Barati, Ph.D., Principal in Charge/Project Manager

LSA
1504 Eureka Road, Suite 310
Roseville, California 95661

Theresa Wallace, Principal in Charge
Kristin Nurmela, Project Manager
Kat Hughes, Senior Environmental Planner

Fehr & Peers
100 Pringle Avenue, Suite 600
Walnut Creek, California 94596

Ellen Poling, P.E., Transportation Project Manager, Fehr & Peers

This page intentionally left blank