Finding of Consistency

Taylor Science Building Project

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AFY	acre-feet per year
AMBAG	Association of Monterey Bay Area Governments
ASF	assignable square feet
BSA	biological study area
CEQA	California Environmental Quality Act
CSC	California Species of Concern
CSU	California State University
CSUMB	California State University, Monterey Bay
EIR	Environmental Impact Report
FTES	full-time equivalent students
GSF	gross square feet
GSP	Groundwater Sustainability Plan
HMP	Habitat Management Plan
MBARD	Monterey Bay Air Resources District
MBNMS	Monterey Bay National Marine Sanctuary
MCWD	Marina Coast Water District
MGD	million gallons per day
MMRP	mitigation monitoring and reporting program
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NSF	non-assignable square feet
PDF	project design feature
Project	Edward ‘Ted’ Taylor Science and Engineering Building Project
RGF	Regional Growth Forecast
SWPPP	Stormwater Pollution Prevention Plan
Taylor Science Building	Edward ‘Ted’ Taylor Science and Engineering Building Project
the sanctuary	Monterey Bay National Marine Sanctuary
VMT	vehicle miles traveled

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1 Introduction

1.1 Project Overview

California State University, Monterey Bay (CSUMB) is proposing the Edward 'Ted' Taylor Science and Engineering Building Project (Taylor Science Building or Project). The Project would consist of the construction and maintenance of a new, approximately 16,000-gross-square-foot (GSF), two-story science and engineering academic building (Building 52). The new building would support existing programs in CSUMB's College of Science, such as Marine Science and the new Mechatronics (Engineering) academic program, that are currently scattered throughout multiple facilities across campus. The new building would provide teaching lab spaces for CSUMB programs and offices to house the National Ocean and Atmospheric Administration's (NOAA's) Monterey Bay National Marine Sanctuary (MBNMS or the sanctuary) headquarters. The proposed Project includes federal funding from NOAA; therefore, NOAA is conducting separate environmental review of the Project pursuant to the National Environmental Policy Act.

The Project is consistent with the current CSUMB Master Plan, originally approved by the California State University (CSU) Board of Trustees in May 1998 and most recently updated in May 2022. The CSUMB Master Plan Environmental Impact Report (EIR) (State Clearinghouse No. 2017051042) evaluated an increase in enrollment to up to 12,700 full-time-equivalent students (FTES) and related building and facility development to serve such enrollment growth. The Master Plan EIR included analysis of the Taylor Science Building (referred to as Academic IV in the EIR) as a near-term development project expected to be constructed in the next 10 years (CSUMB 2022). The Board of Trustees certified the Master Plan EIR and approved the Master Plan in May 2022. As described in the EIR and in a 2020 Feasibility Study for the project, the Taylor Science Building was anticipated to provide an approximately 95,000-GSF building devoted to science laboratory, lecture, and office space, up to four stories tall, and located on an approximately 4-acre site that contains the existing Building 13 (Science Research Lab Annex) and Parking Lots 13 and 19. NOAA was identified as a partner and building occupant from the initial concept of the Project. Construction and staging were anticipated to use Parking Lot 13 and Parking Lot 19, located adjacent to the Project site's southwestern boundary, and/or to close A Street between Fifth Avenue and Sixth Avenue. Future construction was anticipated to require demolition of existing Building 13 and portions of Parking Lots 13 and 19.

In the time that has elapsed since the completion of the Master Plan EIR, the proposed Taylor Science Building has been refined. The Project site has been reduced in size to approximately 2.5 acres and is now proposed to be located on existing Parking Lot 19 (originally proposed as a construction staging area for the Project), adjacent to the existing Chapman Academic Science Center (Building 53) and across the street from the Tanimura and Antle Family Memorial Library (Building 508). Building 13 and Parking Lot 13 would no longer be demolished as part of the project. The building size has been reduced substantially to approximately 16,000 GSF, but NOAA has remained a constant program component, occupying approximately 4,800 assignable square feet (ASF) of space in the proposed building.

1.2 California Environmental Quality Act Compliance

A Finding of Consistency has been prepared to satisfy the California Environmental Quality Act (CEQA) requirements for the Project and CSU policy for projects that are consistent with prior, or first-tier, environmental documents. Section 15168(c) of the CEQA Guidelines allows a project to be found "within the scope" of a program EIR when

the project is identified in the EIR project description (in this case, the Master Plan EIR). If no new or substantially greater impacts would occur due to changes in the project, project circumstances, or substantial new information, as described in Section 15162, then the project may rely upon that prior EIR. None of the conditions described in CEQA Guidelines Section 15162(a) apply, nor is an Addendum necessary. This Finding of Consistency describes the proposed Project and compares the potential impacts to those identified in the Master Plan EIR. The analysis demonstrates that the proposed Project is consistent with the CSUMB Master Plan and the certified Master Plan EIR.

The Project is within the scope of the adopted CSUMB Master Plan, which was the subject of environmental evaluation in the certified Master Plan EIR. The certified Master Plan EIR was completed in accordance with CEQA and the CEQA Guidelines. Further, the certified Master Plan EIR remains pertinent and continues to have strong informational value.

This Finding of Consistency document describes why the Project is within the scope of the CSUMB Master Plan EIR. This includes the following conclusions about the Project:

- It is within the site covered by the CSUMB Master Plan and the related EIR.
- It is consistent with the CSUMB Master Plan, including land use and density and intensity of development.
- It will utilize infrastructure described in the CSUMB Master Plan EIR.
- It is reflected in the CSUMB Master Plan EIR's analysis of impacts.

As demonstrated in this Finding of Consistency, the Project is within the scope of the CSUMB Master Plan evaluated in the Master Plan EIR, and none of the conditions described in CEQA Guidelines Section 15162(a) apply, nor is an addendum necessary.

2 Project Description

2.1 Project Location

The location of the Project is within the main campus of CSUMB in Seaside, CA. The CSUMB campus is located approximately 100 miles south of San Francisco and is situated north of the Monterey Peninsula and west of the Salinas Valley, as shown on Figure 2-1. The campus occupies approximately 1,400 acres in the northwestern portion of the former Fort Ord U.S. Army post and lies within three separate governmental jurisdictional boundaries: the City of Marina, the City of Seaside, and unincorporated Monterey County, as shown on Figure 2-2. As an entity of the State of California, the California State University (CSU), including CSUMB, is not subject to local governmental planning and zoning regulations.

The campus slopes gently towards Monterey Bay and includes both developed and paved areas and undeveloped land. As shown on Figure 2-2, the campus consists of three distinct areas: main campus, East Campus Housing, and East Campus Open Space. All campus facilities, with the exception of the East Campus Housing, are located within the main campus west of Eighth Avenue, south of Eighth Street and north of Lightfighter Drive and Colonel Durham Street. The main campus consists of new and renovated buildings, paved parking lots and other paved areas remaining from when the property served as a former Army post, and open space areas including the Cypress Grove, the Northern Oak Woodland, the Southern Oak Woodland, and the Crescent.

Primary access to CSUMB is provided from Highway 1 via the main entrance at Lightfighter Drive to the south and from Imjin Parkway to the north. Access is also provided via Second Avenue from the north, General Jim Moore Boulevard from the south, and Inter-Garrison Road from the east. Inter-Garrison Road connects the East Campus Housing area to the main campus.

2.2 Environmental Setting

The Project site encompasses approximately 2.5 acres, including approximately 1 acre for construction staging and laydown use, and is proposed to be located on the main campus just outside of the campus core, northwest of the Sixth Avenue/A Street intersection, on existing Parking Lot 19. The project site is south of the existing Chapman Academic Science Center (Building 53), east of the Tanimura and Antle Family Memorial Library (Building 508) across A Street, and west of the Science Research Lab Annex (Building 13). The location of the Project site is shown on Figure 2-3, and consists of previously disturbed and impervious surfaces, including an asphalt parking lot that covers most of the site.

Figure 2-1. Regional Location

Figure 2-2. California State University, Monterey Bay Campus Location

Figure 2-3. Project Site

2.3 Project Characteristics

As indicated above, the Project consists of the construction and maintenance of a new, approximately 16,000-gross-square-foot (GSF), two-story science and engineering academic building (Building 52) (referred to as the Taylor Science Building), and relocation of the MBNMS main office from Monterey to the new building. The new building would also support existing programs in CSUMB's College of Science, such as Marine Science and the new Mechatronics (Engineering) academic program, that are currently scattered throughout multiple facilities across campus. The new building would provide teaching lab spaces for CSUMB programs and offices to house MBNMS headquarters.

Key features of the Project include:

- Dedicated laboratories and graduate student study space for Marine Science and Mechatronics Engineering.
- Shared teaching labs to facilitate cross-disciplinary interaction, and equipped for cutting-edge exploration.
- Specialized laboratory construction and equipment to make ready-for-saltwater research tanks and mechanical shop functions.
- Flexible meeting spaces and study areas designed to promote spontaneous dialogue and knowledge exchange.
- NOAA office space to enhance collaboration with a key partner in environmental research and stewardship.
- Coordination with architectural themes of the main campus core to maintain aesthetic compatibility.
- Emphasis on pedestrian interaction within and adjacent to the site, promoting accessibility and engagement with the surrounding environment.
- Climate-resilient, sustainable, and energy-efficient design, including meeting or exceeding the requirements equivalent to Leadership in Energy and Environmental Design (LEED) Silver, with the intention to strive for reaching Gold or better, and locating the building near the campus core to facilitate 10-minute walking distance from transportation hubs and between classroom buildings.

The building orientation and footprint would fit within the existing configurations for access to the existing roundabout, Parking Lot 13, all roads, Building 53, and Building 13.

A total of six labs and three lab support spaces are planned for the building, as well as academic office space and NOAA office space, for a total of 12,578 ASF. In addition, approximately 3,049 non-assignable square feet (NSF), consisting of common areas, kitchens, restrooms, and stairwells, would also be included in the building. Table 2-1 provides a conceptual overview of the program space proposed.

Table 2-1. Summary of Program

Program Space[1]	Approximate Area (square feet)
Engineering Labs/Lab Support	
Machine Shop/Senior Design Lab	1,360
General Mechatronics Lab	942
Specialty Instrument Lab Service	223
Subtotal (ASF)	*2,525*

Table 2-1. Summary of Program

Program Space[1]	Approximate Area (square feet)
Marine Biology Labs/Lab Support	
Wet Teaching Lab	940
Wet Capstone Tank Lab	1,330
Wet Lab Service	277
Subtotal (ASF)	*2,547*
Shared Lab and Office/Collaboration	
Shared Lab	928
Collaborative Office Space	1,785
Subtotal (ASF)	*2,713*
NOAA Offices and Administration	
Private Offices (9 total)	1,143
Huddle Room	529
Reception	74
Open Office/Workstations	1,008
Single-Occupancy ADA Restroom	68
Single-Occupancy Restroom	63
Break Room/Kitchenette	148
Conference Room	463
Locker Room/Shower	80
Multipurpose Room	0
Document Storage	126
Mailroom and Lockers	142
General Storage	381
IT Secure Room	97
Lounge	412
NOAA Prefunction	59
Subtotal (ASF)	*4793*
Total (ASF)	**12,578**
Building Support	
General Storage	213
Hazmat Storage	69
Custodial Closets	109
Lactation Room	88
MPOE Room	180
IDF Room	151
Main Mechanical Room	285
Electrical Room (Closet)	45
Elevator	60
Elevator Control Room	61
Pump Room (Plumbing/Mechanical Pumps)	365
Fire Service Room	N/A

Table 2-1. Summary of Program

Program Space[1]	Approximate Area (square feet)
Plumbing Room	N/A
(Sea Water) Pump Room	374
Multi-Occupancy Gender-Neutral Restroom	438
Single-Occupancy Restroom	55
Stairs	556
Subtotal (NSF)	*3,049*
Total (NSF)	**3,049**
Total (GSF)	**15,627**

Notes: Assignable square footage refers to the interior areas of a building that are available for assignment to occupants or specific uses, such as classrooms, offices, laboratories, and other areas that directly support the building's primary functions. Non-assignable square footage consists of areas that are essential for the operation of the building but are not assigned to specific occupants or uses, such as common areas like hallways, stairways, mechanical rooms, restrooms, and custodial spaces.

As shown in Table 2-1, the Taylor Science Building would include approximately 4,800 ASF for NOAA use. The NOAA space would accommodate up to 32 NOAA employees. NOAA offices would have a separate entrance for federal security purposes to manage visitor access. NOAA facilities within the building would include a reception area for visitor management, individual private office spaces for focused work and shared workstations for collaborative tasks, huddle spaces with virtual conferencing capabilities, small (5 to 8 participants) and large (12 to 20 participants) conference rooms, a field locker and storage room with loading area access for field equipment, a kitchen for refreshments and breaks, designated dry storage for document protection, and a dedicated telecommunications area for digital infrastructure and separate printer space. The large conference room and bathroom facilities with a shower would be shared with the CSUMB faculty. Entrances to these shared spaces would be limited by key card access to comply with federal security safety standards and would not provide access to the NOAA office space.

2.3.1 Support Spaces

In addition to academic spaces and offices for MBNMS, support spaces to be provided in the Taylor Science Building would include a lactation room with a sink; gender-inclusive restrooms and a separate "family restroom" with sensors for all toilets, lavatories, soap, and paper towel dispensers; a small storage room for maintenance and custodial services; walk-in access within all plumbing chases for maintenance personnel; and hazardous chemical and hazardous waste storage and processing. The building would also include saltwater tanks in a wet lab to support marine science initiatives. A pump room adjacent to the wet lab would support the processing of saltwater to prepare it for use in the tanks and receive it after use. The saltwater would be trucked on-and off-site by a hired service or partnership and no direct seawater intake is proposed.

2.3.2 Outdoor Spaces

The building design would emphasize creation of outdoor spaces that encourage social interaction and collaboration. With a focus on wind shelter and ample seating, the design would seek to foster a sense of community. The landscape planting would consist of native, non-invasive, drought-tolerant species that enhance ecological biodiversity. Plantings would be selected from the plant list that has been provided in the campus standards presented in PDF-OS-6 planting specifications provided in the Master Plan EIR (CSUMB 2022), or

alternatives would be considered if appropriate performance criteria can be demonstrated. All irrigation would be plumbed with purple pipe for future use of recycled water, but would use potable water until the campus owns recycled water. A living roof, living wall, fog catchers, or other natural features may be incorporated if determined to be feasible. All hardscape would be specified to meet (or exceed) a solar reflectance index (SRI)[1] of 0.28 and comply with the aging requirements of LEED. Permeable paving for minor secondary access would be used wherever possible within landscaping areas.

One parking space for MBNMS headquarters visitors would be provided on the site. No other general on-site parking would be provided. The building would be served by existing general campus parking lots (e.g., the directly adjacent Lot 13, and Lots 28, 59, and 71) and parking meters. Not providing on-site parking enhances the facility's climate resilience by promoting other sustainable modes of transport and reducing the area of impermeable paved surfaces that can absorb and retain heat and result in increased stormwater runoff. Bicycle parking storage would be provided to meet California Green Building Standards (CALGreen). A loading zone would also be constructed as part of the new building to allow for field and delivery vehicle access to the building.

Pathways on the site would be equipped with security lighting. Lighting would be directed downwards and be shielded to meet CSU lighting standards presented in PDF-D-7 in the Master Plan EIR (CSUMB 2022), including requirements for meeting LEED for Neighborhood Development (LEED ND) light pollution reduction requirements in all new building and pathway development. The LEED ND requirements reference the Illuminating Engineering Society and International Dark Sky Association model light ordinance user guide. Exterior lighting would be limited to security lighting near doorways and pathways.

No new trash and recycling facilities would be provided. Trash enclosures for the Taylor Science Building would be consolidated with the existing trash enclosures that serve Building 53. If capacity exceeds existing capacity, a compactor in the same location would be considered.

2.3.3 Technology Equipment, Infrastructure, and Service Systems

As part of the building infrastructure, the design and construction would adhere to all Campus and CSU Telecommunications Infrastructure Planning (TIP) Standards including all wiring, conduit, pathways, and equipment.

Security cameras would be provided outdoors and on indoor main entrances.

The building would be served by existing potable water and wastewater infrastructure near the project site with new service connections provided for the new building.

[1] Solar reflectance index is a measure used to evaluate how well a material can reflect solar energy and release absorbed heat. It combines solar reflectance and thermal emittance and is measured on a scale from 0 to 1, where 1 indicates total reflection or emission.

2.4 Project Construction and Phasing

Construction of the project is anticipated to commence in December 2025 and conclude in June 2027. The limits of construction disturbance, including from construction staging and laydown areas, are depicted by the project site boundary on Figure 2-3 above.

Construction would be performed by qualified contractors. Plans, specifications, and construction contracts would incorporate stipulations regarding standard CSU requirements and acceptable construction practices, including grading, safety measures, vehicle operation and maintenance, excavation stability, erosion control, drainage alteration, traffic circulation, public safety, dust control, and noise generation.

2.5 Project Approvals

The actions and/or approvals that CSUMB needs to consider for the proposed Project include, but are not limited to, those listed in Table 2-2.

Table 2-2. Proposed Project Approvals

Applicable Jurisdiction or Agency	Compliance, Approval or Permit
Board of Trustees of the California State University	Minor Master Plan Amendment Schematic Design Approval Amendment to the Capital Outlay Program, as necessary
Division of the State Architect	Accessibility Compliance
State Fire Marshal	Facility Fire and Life Safety Compliance
California Department of Fish and Wildlife	California Endangered Species Act Incidental Take Permit – Required if state-listed species would be taken
Regional Water Quality Control Board	National Pollutant Discharge Elimination System (NPDES) Permit – Stormwater Pollution Prevention Plan (SWPPP) and Notice of Intent to Comply with NPDES Construction Permit
Marina Coast Water District	New water and sewer connections/services/encroachment to serve the new building

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3 Environmental Impact Report Consistency Analysis

The Master Plan EIR described existing environmental conditions on the CSUMB campus and provided a comprehensive environmental impact analysis of the proposed Master Plan across the full range of environmental factors in the CEQA Guidelines Appendix G checklist. Mitigation measures were identified in the Master Plan EIR to address potentially significant impacts. The adopted mitigation monitoring and reporting program (MMRP) for the Master Plan EIR, prepared pursuant to CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations, Chapter 3, Sections 15074 and 15097), applies to the Project and is included as Appendix A to this Finding of Consistency. The MMRP is intended to be used by CSUMB staff, its contractors and consultants, and mitigation monitoring personnel to ensure compliance with mitigation measures and project design features (PDFs) that apply to the Project.

The Master Plan EIR included analysis of the Taylor Science Building (referred to as Academic IV in the EIR) as a near-term development project expected to be constructed in the next 10 years (CSUMB 2022). The information in this section presents a summary of the impact analysis and conclusions from the Master Plan EIR for each of the topics analyzed. Overall impact conclusions for the Academic IV building presented in the Master Plan EIR are presented. The Taylor Science Building Project as currently proposed is then analyzed to determine whether its impacts are reflected in the Master Plan EIR's impact analysis .

3.1 Aesthetics

The Master Plan EIR determined that the impact of the proposed Academic IV building on scenic vistas would be less than significant because the site is located within the campus core, is not visible from Highway 1, and does not provide or include scenic views. Furthermore, like the rest of the development allowed by the Master Plan, the Academic IV project would maintain the existing campus development pattern, restrict building heights, maintain and enhance open space, maintain tree cover, and be required to adhere to the same design standards and PDFs that would ensure that impacts related to degradation of visual character and quality would be less than significant. The Master Plan EIR acknowledged that development allowed by the Master Plan, including the Academic IV project, would create additional sources of light and glare from new buildings and exterior lighting, but determined that impacts would be less than significant because new development would be located in proximity to other on- and off-campus development with numerous existing sources of lighting and glare and would adhere to PDFs and lighting requirements.

The Taylor Science Building Project as currently proposed would still be infill development within the campus core and on the same Project site analyzed in the Master Plan EIR. The Project would still be required to adhere to the same PDFs, design standards, and lighting standards described above. The building would be smaller in size than originally anticipated in the Master Plan EIR, resulting in marginally lesser visual impacts overall. Therefore, the Project is within the site covered by the CSUMB Master Plan and the related Master Plan EIR, is consistent with the CSUMB Master Plan, including land use and density and intensity of development, and is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to aesthetics beyond those identified in the Master Plan EIR.

3.2 Air Quality

The Master Plan EIR found that the CSUMB Master Plan would increase enrollment to up to 12,700 FTES—growth that was accounted for in the then-current Association of Monterey Bay Area Governments (AMBAG) 2014 Regional Growth Forecast (RGF). The Master Plan would therefore would be consistent with the Monterey Bay Air Resources District's (MBARD's) 2012-2015 Air Quality Management Plan, which forecasted emissions based on the RGF. Development of the Academic IV project would provide for an incremental increase in student enrollment as identified in the Master Plan EIR. The Master Plan EIR included modeling of estimated construction and operational criteria air pollutant emissions based on a conservative assumption that up to approximately 300,000 GSF of buildings could be constructed concurrently, and found that estimated maximum daily construction emissions and estimated maximum daily operational emissions would be below MBARD significance thresholds, therefore the impact related to criteria pollutant emissions would be less than significant. The Master Plan EIR concluded that the near-term development components, each of which would be a subset of the overall CSUMB Master Plan development and well under 300,000 GSF, would thus also not exceed the MBARD significance thresholds for ROG, NO_x, CO, PM_{10}, or $PM_{2.5}$. The Master Plan EIR also found that the impact of the Master Plan including the Academic IV project associated with exposure of sensitive receptors to significant criteria air pollutant concentrations would be less than significant because it would not result in exceedances of the MBARD significance thresholds, ensuring compliance with the California Ambient Air Quality Standards that protect public health. Lastly, the Master Plan EIR found that the Academic IV project would not result in uses or activities that would cause the generation of substantial unpleasant odors, and the impact would be less than significant.

The Taylor Science Building Project as currently proposed is consistent with the above analyses from the Master Plan EIR, as the proposed size of the building has been reduced from approximately 95,000 GSF to approximately 16,000 GSF. Therefore, the Project remains within the assumptions used for modeling of air quality impacts in the Master Plan EIR and would generate fewer emissions than described in the Master Plan EIR due to the smaller Project size. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to air quality beyond those identified in the Master Plan EIR.

3.3 Biological Resources

The Master Plan EIR evaluated impacts to biological resources using literature reviews and surveys. No special-status plant species were identified or expected to occur on the Academic IV site. No sensitive communities, riparian habitat, or wildlife corridors were found to occur within the Academic IV site; therefore, no related impacts were identified. The CSUMB Master Plan, including the Academic IV project, were found not to conflict with biological resource policies and ordinances or adopted habitat conservation plans.

The Master Plan EIR found that the Academic IV site had a moderate potential for presence of the following special-status wildlife species: California Species of Concern (CSC) Townsend's big-eared bat (*Corynorhinus townsendii*), CSC Northern California legless lizard (*Anniella pulchra*), federally endangered Smith's blue butterfly (*Euphilotes enoptes smithi*), and protected avian species including nesting raptors and other migratory birds. Additionally, Blainville's horned lizard (formerly coast horned lizard) (*Phrynosoma blainvillii*) was identified as having a high potential to occur within the campus overall. All other special-status wildlife species were determined either not present, unlikely to occur, or to have a low potential to occur. Four dune buckwheat specimens, which provide habitat for Smith's blue butterfly, were identified within the Academic IV site.

The campus is located within the Installation-Wide Multispecies Habitat Management Plan (HMP) for Former Fort Ord, which was developed to manage and conserve wildlife, plant species, and habitats on the former military base. Through implementation of the HMP, impacts to HMP species and habitats occurring within the designated development parcels were anticipated and mitigated off campus through the establishment of habitat reserves and corridors and the implementation of habitat management requirements within habitat reserve parcels on former Fort Ord. Of the special-status species potentially occurring on the Academic IV site, two are HMP species: Northern California legless lizard and Smith's blue butterfly. Because of the HMP, the EIR determined that impacts to HMP species would be less than significant, but nonetheless included MM-BIO-1a requiring project-specific biological assessments for HMP species to further reduce the impact. Impacts on the remaining non-HMP species were determined to be potentially significant, and the EIR included MM-BIO-1b requiring project-specific biological assessments for non-HMP species to reduce the impact to less than significant. The EIR also included MM-BIO-1c requiring pre-construction surveys for protected avian species to reduce impacts on such species to less than significant. The EIR identified MM-BIO-1d to implement open space protection requirements. MM-BIO-1e was identified to conduct pre-construction bat assessment and surveys. MM-BIO-1g was identified to avoid Smith's blue butterfly habitat. With incorporation of these mitigation measures, the impact of the Academic IV project on special-status species was found to be less than significant.

Dudek conducted a biological resources existing conditions assessment for the currently proposed Taylor Science Building Project (Appendix B) consisting of a literature review, field assessment, and focused botanical survey to identify and analyze current biological resource conditions present on the Project site, plus an approximately 500-foot buffer (biological study area [BSA], totaling approximately 29.8 acres). No sensitive vegetation communities were found to be present within the BSA, which is comprised primarily of developed land (13.8 acres), followed by ornamental plantings (5.9 acres), non-native grassland and coast live oak and grass association (each 4.6 acres), ice plant association (0.7 acres), and barren land (0.2 acres). While Monterey cypress (*Hesperocyparis macrocarpa*) was recorded on the Project site, these trees were intentionally planted for ornamental purposes and are thus not considered part of the California coastal cypress woodland vegetation community, which would be classified as a sensitive natural community. The analysis found that four special-status wildlife species—state candidate Crotch's bumble bee (*Bombus crotchii*), federally endangered Smith's blue butterfly, CSC Northern California legless lizard, and CSC Blainville's horned lizard—have moderate to high potential to occur on or in the vicinity of the BSA. Townsend's big-eared bat was determined not likely to occur.

As indicated above, the EIR determined that impacts to HMP species, including the Northern California legless lizard, would be less than significant, but nonetheless included MM-BIO-1a requiring project-specific biological assessments for HMP species to further reduce the impact. Impacts on previously identified non-HMP special-status species would remain less than significant with implementation of EIR MM-BIO-1b (Blainville's horned lizard), MM-BIO-1c (nesting and migratory birds), and MM-BIO-1g (Smith's blue butterfly). Crotch's bumble bee was not identified in the Master Plan EIR as having the potential to occur on the Project site or campus, as it recently became a candidate species for listing under the California Endangered Species Act in 2022. However, MM-BIO-1b requires project-specific surveys prior to any ground-disturbing activities to identify the potential for special-status species to occur, understanding that projects could be developed over a lengthy buildout period. Specifically, EIR MM-BIO-1b requires project-specific biological assessments for non-HMP species to include (1) surveys and reporting on the biological conditions at the site; (2) identification of the potential for special-status species to occur or special-status species observed, if any; (3) maps of the locations of special-status species or potential habitat, if observed; and (4) recommended mitigation measures, if applicable. The survey and biological resources existing conditions assessment for the currently proposed Taylor Science Building Project (Appendix B) constitute the implementation of the survey and reporting requirements under MM-BIO-1b.

For Crotch's bumble bee, the following measures, developed per MM-BIO-1b, would ensure consistency with this measure:

- Conduct pre-construction nesting surveys prior to any vegetation removal or ground disturbance activities scheduled during the colony active period (April 1 through August 31). Surveys should be conducted by a qualified biologist in accordance with CDFW's 2023 Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023b).
- The pre-construction survey shall be conducted within 30 calendar days prior to the start of project construction activities and shall include a minimum of three visits, a minimum of 1 week apart. The qualified biologist shall submit the results of the pre-construction survey to CDFW for review and written approval prior to initiating any construction activities.
- If Crotch's bumble bees are determined to be present, then a photographic survey following CDFW's 2023 survey guidance shall be required. If additional activities (e.g., capture or handling) are deemed necessary based on photographic surveys, then the qualified biologist shall obtain required authorization via a Memorandum of Understanding or Scientific Collecting Permit pursuant to CDFW's 2023 survey guidance (CDFW 2023b). Survey methods that involve lethal take of species are not acceptable.
- If pre-construction surveys identify active Crotch's bumble bee nest colonies, the qualified biologist shall notify CDFW in writing and establish, monitor, and maintain no-work buffers around the nest(s) and any associated floral resources. The size and configuration of the no-work buffer shall be based on best professional judgement of the biologist. At a minimum, the buffer shall provide at least 50 feet of clearance from construction activities around any nest entrances and maintain disturbance-free airspace between the nest and nearby floral resources. Construction activities shall not occur within the no-work buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for 3 consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony).

For Blainville's horned lizard, the following measures, also developed in accordance with MM-BIO-1b, would ensure consistency with this measure:

- Conduct a focused survey no more than 1 week prior to initial ground disturbance activities within all areas of suitable habitat that will be directly affected by ground disturbance activities and within 50 feet of such areas. Suitable habitat for this species in the BSA consists of sandy, loose soils, especially at the base of shrubs or other vegetation. Suitable habitat areas should be flagged for complete avoidance.
- If avoidance of suitable habitat is not feasible and suitable habitat is within the active work area, then a qualified biologist or biological monitor should be present during all ground disturbance activities. Relocation of individual Blainville's horned lizard may be necessary, in consultation with CDFW as appropriate and with all applicable permits. Species-appropriate exclusion fencing may be necessary to prevent individuals from returning to the active work area if determined to be present.

Based on the foregoing analysis, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to biological resources beyond those identified in the Master Plan EIR.

3.4 Cultural Resources and Tribal Cultural Resources

The Master Plan EIR did not identify any archaeological resources or historic built environment resources within the open areas that could be surveyed on the Academic IV site. The Master Plan EIR found that there are no historic built environment resources on the campus that could be affected by the CSUMB Master Plan and therefore no impact on historic built environment resources was identified. Regarding archaeological resources, the Master Plan EIR acknowledged that ground-disturbing activities during construction on the Academic IV site could result in the discovery of previously unknown subsurface archaeological resources and included MM-CUL-1a requiring cultural resource sensitivity training prior to ground disturbance near any documented cultural-resource-sensitive areas, MM-CUL-1b requiring inadvertent discovery clauses to be included in construction contracts, and MM-CUL-1c requiring a Native American and archaeological construction monitor for ground-disturbing activities in native soils within 750 feet of a documented archaeological or tribal cultural resource. Likewise, the Master Plan EIR acknowledged that ground-disturbing activities could potentially unearth unknown human remains, if present, and included MM-CUL-2 for proper handling of human remains in accordance with California Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5. With incorporation of each of these aforementioned measures, the Master Plan EIR determined that impacts to cultural resources and tribal cultural resources would be less than significant.

Dudek conducted an archaeological resources analysis for the currently proposed Taylor Science Building Project (Appendix C) to update the California Historical Resources Information System (CHRIS) records search that was originally conducted for the CSUMB Master Plan in 2017 and complete an intensive survey of the entire Project site, which was not able to be completed at the time of the original report due to restricted site access. No new resources were identified within the Project site. The mitigation measures identified in the Master Plan EIR remain applicable to the Project. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to cultural resources or tribal cultural resources beyond those identified in the Master Plan EIR.

3.5 Geology, Soils, and Paleontology

The Master Plan EIR found that no active faults traverse the campus, the campus is not underlain by expansive soils, and the CSUMB Master Plan development would not use septic tanks or alternative wastewater disposal systems; therefore, no impacts related to these topics were identified. As described in the Master Plan EIR, while located in a seismically active region, development allowed by the CSUMB Master Plan including the Academic IV project would be required to comply with the California Building Code and CSU Seismic Requirements. including the preparation and implementation of a geotechnical investigation, which would help to offset potential risks associated with a major earthquake event. In addition, campus development would not exacerbate the potential for seismic activity to occur and therefore would not directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and seismic-related ground failure. Therefore, seismic-related impacts were found to be less than significant. In addition, the Master Plan EIR found that impacts related to landslides, erosion, and unstable soils would be less than significant due to the Academic IV site's flat to gently sloping topography, implementation of PDFs requiring construction best management practices, compliance with regulatory requirements to prepare a SWPPP since the site is greater than 1 acre, and compliance with the California Building Code, California Safety and Health Administration and Occupational Safety and Health Administration requirements for construction of structures proposed in areas with unstable soils. The Master Plan EIR found that impacts on paleontological resources would be potentially significant because the site

is underlain by older dune sands that are Pleistocene age and have high paleontological sensitivity, and included MM-GEO-1 requiring a qualified paleontologist to determine requirements for monitoring, discovery, and treatment of paleontological resources to reduce impacts to less than significant.

The currently proposed Taylor Science Building Project remains within the same site boundaries as the Academic IV project, though is limited to a smaller area and would involve construction of a smaller building than envisioned in the Master Plan EIR. However, geologic, soils, and paleontological impacts are largely site-specific. As the Project remains within the same location and over 1 acre in size, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to geology, soils, and paleontology beyond those identified in the Master Plan EIR.

3.6 Greenhouse Gas Emissions

The Master Plan EIR estimated construction and operational emissions from the CSUMB Master Plan based on the conservative assumptions that up to approximately 300,000 GSF could be developed concurrently and that new buildings would consume natural gas, and found that the CSUMB Master Plan would result in a net increase of approximately 4,798 metric tons of carbon dioxide equivalent per year (MT CO_2e per year) which would exceed the campus-specific mass emissions threshold of 2,747 MT CO_2e per year. This was also found to conflict with applicable GHG reduction plans. Consistent with the CSU Sustainability Policy and CSUMB sustainability goals, the Master Plan EIR included MM-GHG-1 requiring building decarbonization via reductions in natural gas consumption in order to reduce the Master Plan's net increase in GHG emissions to 2,730 MT CO_2e per year after implementation of MM-GHG-1, which would be less than the mass emission threshold and therefore less than significant.

The Taylor Science Building Project as currently proposed is consistent with the above analyses from the Master Plan EIR, as the proposed size of the building has been reduced from approximately 95,000 GSF to approximately 16,000 GSF. Therefore, the Project remains within the assumptions used for modeling of GHG emissions impacts in the Master Plan EIR and would generate fewer emissions than described in the Master Plan EIR due to the smaller Project size. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to GHG emissions beyond those identified in the Master Plan EIR.

3.7 Hazards, Hazardous Materials, and Wildfire

As discussed in the Master Plan EIR, development allowed by the CSUMB Master Plan would neither result in exposure of people to aircraft safety hazards nor wildfire-related hazards, as the CSUMB campus is located outside of the Marina Municipal Airport safety zones and is not within or near a designated Very High Fire Hazard Severity Zone or state responsibility area. The Master Plan EIR found that, while development allowed by the CSUMB Master Plan would result in an incremental increase in the routine transport, use, or disposal of hazardous materials, handling of hazardous materials near schools, or potential for upset or accidental release of hazardous materials, all hazardous materials would be managed in accordance with all applicable state and federal regulations, including standard CSU construction specifications, as indicated in the State University Administrative Manual (CSU 2004). Additionally, CSUMB would be required to implement spill prevention and containment measures stipulated in SWPPPs for the project, given that the site is greater than 1 acre. The CSUMB campus subject to development under the Master Plan is located on land that is either uncontaminated or for which all necessary remediation to the appropriate level has been completed. The Academic IV project would be designed, constructed, and

maintained to comply with applicable local, regional, state, and/or federal requirements related to emergency access and evacuation plans and would be subject to review by the Division of the State Architect and the State Fire Marshal for access compliance and a fire and life safety, respectively, prior to approval of individual project drawings and specification documents for the project. Therefore, impacts related hazardous materials were determined to be less than significant.

The Taylor Science Building Project as currently proposed remains within the same site that was analyzed in the Master Plan EIR, but is proposed to be a smaller building occupying a smaller site. The Project site is still greater than 1 acre and remains subject to the requirement to prepare a SWPPP. The above discussion remains applicable to the Project and, therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to hazards, hazardous materials, and wildfire beyond those identified in the Master Plan EIR.

3.8 Hydrology and Water Quality

The Master Plan EIR found that impacts related to surface water quality and waste discharge requirements would be less than significant due to implementation of the required SWPPP during construction, as well as PDFs to minimize the release of hazardous substances and use low-impact development (LID) features such as green roofs and streets, swales, and porous paving. In addition, the Master Plan EIR found that, due to the project location primarily in existing paved/developed areas and the fact that the Academic IV project would not result in a substantial increase in impervious surface area, along with the implementation of LID features and project-specific drainage analyses required by PDFs, the impact of the Academic IV project on groundwater recharge and stormwater drainage patterns would be less than significant.

As described in the Master Plan EIR, water service to the CSUMB campus is provided by the Marina Coast Water District (MCWD), which uses groundwater from the Salinas Valley Groundwater Basin, Monterey Subbasin. While the Master Plan EIR acknowledged that the Academic IV project would result in an incremental increase in demand for potable water sourced from MCWD groundwater wells, the analysis determined that the impact of this increase on groundwater supplies would be less than significant as: (1) total campus potable water demand with Master Plan buildout would be well below the University's groundwater allocation of 1,035 acre-feet per year (AFY) for potable water; (2) implementation of PDFs and Title 24 compliance could reduce the project's demand for MCWD potable water from groundwater; (3) the ultimate use of a portion of CSUMB's recycled water allocation associated with the Academic IV project would reduce overall demand for potable water sourced from MCWD groundwater wells; (4) the projected sustainable yield for the Monterey Subbasin considered in the Groundwater Sustainability Plan (GSP) for that subbasin accounts for projected demands from MCWD's 2020 Urban Water Management Plan through 2040, including demand from CSUMB under the Master Plan, which includes the Academic IV project; and (5) the implementation of the 180/400-Foot Aquifer Subbasin and the Monterey Subbasin GSPs will provide for sustainable groundwater management of these subbasins and Academic IV project would not impede the implementation of these GSPs.

The Taylor Science Building Project as currently proposed remains within the same location that was analyzed in the Master Plan EIR, but is proposed to be a smaller building occupying a smaller Project footprint and would therefore have relatively lower water demand compared to the larger Academic IV building analyzed in the EIR. The above discussion remains applicable to the Project and, therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to hydrology and water quality beyond those identified in the Master Plan EIR.

3.9 Land Use and Planning

The Master Plan EIR found that the Academic IV building would have no impact related to physical division of an established community because it would consist of infill development within the campus core and would not remove a roadway or otherwise prevent access. The Master Plan EIR determined that the Academic IV project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, including the Marina General Plan, Seaside General Plan, and Marine Airport Land Use Compatibility Plan and impacts would be less than significant.

The Taylor Science Building Project as currently proposed remains within the same site that was analyzed in the Master Plan EIR, but is proposed to be a smaller building occupying a smaller site. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to land use and planning beyond those identified in the Master Plan EIR.

3.10 Noise and Vibration

The Master Plan EIR found that roadway noise from the Master Plan, which would include development of the Academic IV project, would have a significant and unavoidable impact at Sixth Avenue/Gigling Road, because the University does not have jurisdiction over this off-campus location and therefore there would be no feasible mitigation measures that the University could implement at this location. The Master Plan EIR found that noise impacts from stationary sources like HVAC systems would be less than significant. In addition, the Master Plan EIR found that no impacts would occur related to exposure to excessive airport noise because the CSUMB campus is outside of the 60 dBA community equivalent noise level aviation noise contour.

As described in the Master Plan EIR, Academic IV was proposed to be located west of the Science Instructional Lab Annex, an existing daytime-only noise-sensitive receptor on the basis of it having occupied learning spaces and related interior uses. Depending on construction phase, construction activities could have occurred as close as 80 feet to the nearest existing western building façade. The Master Plan EIR predicted aggregate noise emission from construction activities for the Academic IV project at the nearest pre-existing noise-sensitive receptor and applied a threshold of 85 A-weighted decibels (dBA). Predicted noise levels ranged between 63 dBA for architectural finishes to 81 dBA for demolition of existing Building 13, grading, and paving, with other construction phases having intermediate noise levels. Based on these predicted noise levels, construction noise for the Academic IV project was found to be less than the FTA-based guidance criteria of 85 dBA over an 8-hour period at this nearest existing non-residential noise-sensitive receptor, and the impact would therefore be less than significant.

If the existing CSUMB Science Instructional Lab Annex contains vibration-sensitive instruments, construction of Academic IV could disrupt the use of this equipment for their intended purposes. The Master Plan EIR found that estimated vibration velocity levels from pile driving or a vibratory roller, if such equipment were used at the Academic IV construction site, would be greater than 69 VdB and thus exceed the FTA vibration velocity guidance limit of 65 VdB for facilities housing the operation of highly sensitive instruments. While a significant vibration impact was not identified, the Master Plan EIR recommended that MM-NOI-3 recommending that a vibration monitoring plan be prepared and implemented during the construction of Academic IV and comparable circumstances where vibration-sensitive instruments or processes are present in adjacent buildings during construction.

The Taylor Science Building Project as currently proposed remains within the same site boundary that was analyzed in the Master Plan EIR, but is proposed to be a smaller building occupying a smaller Project site area, and the proposed building location has shifted and is now located on the western portion of the site that was previously identified as a staging area. Demolition of Building 13 is no longer proposed as part of the Project, and therefore demolition noise associated with the removal of that building would not occur. Overall, due to the reduced size of the building, smaller construction area, and more limited demolition associated with only the removal of Parking Lot 19, construction noise impacts would be the same or reduced as compared to those identified for the Academic IV project in the Master Plan EIR. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to noise beyond those identified in the Master Plan EIR.

3.11 Population and Housing

The Master Plan EIR concluded that impacts related to population and housing would be less than significant. Direct population growth could result from development of academic uses, student services, and other campus uses that would allow CSUMB to increase its student enrollment. Additionally, indirect population growth related to the proposed Master Plan could result if roads or infrastructure were extended into currently unserved off-campus areas or if the capacity of the facilities, roadways, or utilities exceeds that required to serve proposed growth. The CSUMB Master Plan would increase enrollment to up to 12,700 FTES, of which Academic IV would provide for increased building capacity that would comprise an incremental portion of this overall growth, and this growth was accounted for in AMBAG's 2018 RGF. Furthermore, development allowed by the Master Plan including the Academic IV project would serve the campus. Therefore, the Master Plan EIR concluded that the Master Plan including the Academic IV project's direct or indirect impact related to substantial unplanned population growth, would be less than significant. As described in the Master Plan EIR, the Academic IV site does not contain housing and therefore would not displace housing or people and the impact would be less than significant.

The Taylor Science Building Project as currently proposed is consistent with the above analyses from the Master Plan EIR, as the Project remains within the same site boundary that was analyzed in the Master Plan EIR, but is proposed to occupy a smaller Project site area and the proposed size of the building has been reduced from approximately 95,000 GSF to approximately 16,000 GSF. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to population and housing beyond those identified in the Master Plan EIR.

3.12 Public Services and Recreation

The Master Plan EIR found that the impact of the Master Plan, including the Academic IV project, related to provision of public services or recreational facilities would be less than significant, and would not require construction of new or physically altered facilities or result in deterioration of existing neighborhood and regional parks. The Taylor Science Building as currently proposed is within the same Project site boundary that was analyzed in the Master Plan EIR and would comprise an incremental portion of the overall planned campus growth of up to 12,700 FTES. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to public services and recreation beyond those identified in the Master Plan EIR.

3.13 Transportation

The Master Plan EIR found that development of the Academic IV building would support increased enrollment and an associated increase in vehicle miles traveled (VMT), which would be offset by construction of VMT-reducing student housing also planned for the first 10 years of Master Plan implementation, and the impact would be less than significant. The Master Plan EIR found that while several near-term developments, including Academic IV, would result in removal of parking lots and could result in modifications to driveway access points, no modifications to local streets or intersections would occur and projects would be constructed in conformance with all applicable standards. Further, new or modified driveway access routes would be designed to provide for adequate emergency access and would require review by the CSU's Office of Fire Safety. Therefore, the Master Plan EIR concluded that impacts related to geometric design hazards and emergency access would be less than significant.

The Taylor Science Building Project as currently proposed is consistent with the above analyses from the Master Plan EIR, as the Project remains within the same site boundary that was analyzed in the Master Plan EIR, but is proposed to occupy a smaller Project site area and the proposed size of the building has been reduced from approximately 95,000 GSF to approximately 16,000 GSF. The building orientation and footprint would fit within the existing configurations for access to the existing roundabout, Parking Lot 13, all roads, Building 53, and Building 13. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to transportation beyond those identified in the Master Plan EIR.

3.14 Utilities and Energy

The Master Plan EIR found that the Master Plan, including the Academic IV project, would result in the addition of new buildings that would require new or replacement water, wastewater, electrical, natural gas and telecommunications connections, the impacts of which are included in the evaluations of each resource topic in the EIR. The EIR determined that no additional impacts associated with the construction of new or replacement water, wastewater, electrical, natural gas, heating hot water and chilled water, and telecommunications connections would occur beyond what is identified throughout the EIR.

Development allowed by the Master Plan, including the Academic IV project, would result in an increase in water demand. The Master Plan EIR estimated that water demand from the Academic IV project would be 2 AFY, based on a CSUMB water use rate of 0.000021 AFY/GSF, which would be a marginal portion of the CSUMB campus' total allocation from the MCWD of 1,035 AFY of potable groundwater and 87 AFY of recycled water. Building demolitions associated with the near-term development components of the Master Plan were estimated to result in a decrease in <1 AFY of demand based on actual metered use. Project design features included in the Master Plan also require implementation of a range of water conservation measures for each new project.

Regarding wastewater generation, the Master Plan EIR determined that wastewater generation for the near-term developments, including the Academic IV project, which would also result in demolition of Building 13, would be approximately 0.4 million gallons per day (MGD). This wastewater generation would be well within the remaining treatment capacity for the regional wastewater treatment plant estimated at 11 MGD. The conversion factor used to obtain wastewater generation from building water use was 1 AFY = 892.75 gallons per day.

The Master Plan EIR determined that landfill capacity at the Monterey Peninsula Landfill would be sufficient to accommodate development allowed by the Master Plan, including the Academic IV project. The Master Plan EIR

also found that the Master Plan, including the Academic IV project, would result in an increase in electricity, natural gas, and petroleum consumption that would be relatively minimal when compared with the State's usage and, due to efficiency increases and implementation of relevant PDFs and the CSU Sustainability Policy, such consumption would diminish and become more efficient over time and the impact would be less than significant.

The Taylor Science Building Project as currently proposed would no longer include the demolition of Building 13; therefore, Building 13's existing water demand would remain a part of the overall campus water demand. However, the proposed size of the building has been reduced from 95,000 GSF to approximately 16,000 GSF, resulting in reduced water demand, wastewater generation, solid waste generation, and energy consumption relative to that estimated in the Master Plan EIR. The Project would have a water demand of 0.34 AFY based on the CSUMB water use rate described above. Therefore, water demand for the Project would be lower than the estimated use of 2 AFY in the Master Plan EIR. Based on the wastewater generation conversion factor used in the Master Plan EIR, the Project would generate approximately 0.0003 MGD of wastewater, which would comprise a negligible portion of existing remaining treatment capacity. Given that the Project would be smaller in size than the Academic IV project evaluated in the Master Plan EIR, it would have associated reductions in utility and energy usage. Therefore, the Project is reflected in the Master Plan EIR's analysis of impacts. The Project would not result in new significant impacts or substantially more severe impacts related to transportation beyond those identified in the Master Plan EIR.

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4 Conclusion

As demonstrated in Chapter 3, Environmental Impact Report Consistency Analysis, the Project is reflected in the Master Plan EIR's analysis of impacts. The project is consistent with the CSUMB Master Plan in terms of Project location and use, and consistent with planned enrollment. Based on these findings, the Project is consistent with and within the analysis parameters of the Master Plan EIR. Mitigation measures contained in the adopted Mitigation Monitoring and Reporting Programs from the Master Plan EIR would be implemented as applicable to the Project (see Appendix A). As supported by the substantial evidence provided in this Finding of Consistency, additional environmental documentation is not required under CEQA.

The Project is within the scope of the adopted CSUMB Master Plan, which was the subject of an environmental evaluation in the certified CSUMB Master Plan Program EIR. The certified EIR was completed in accordance with CEQA and the CEQA Guidelines. Further, the certified EIR remains pertinent and continues to have strong informational value, despite minor Project changes. The Project has been evaluated under CEQA to determine whether such changes in the Project, circumstances, or information would trigger the need for any supplemental environmental documentation based on new or substantially more severe significant environmental impacts. As demonstrated in this Finding of Consistency, no further supplemental environmental review is required because:

1. The Project does not propose substantial changes to the original project which would require major revisions to the previously certified EIR due to the involvement of new or substantially more severe significant impacts;
2. The Project would not involve substantial changes with respect to the circumstances under which the original project was undertaken which would require major revisions to the previously certified EIR due to the involvement of new or substantially more severe significant impacts; and
3. No substantially important new information requiring new analysis of significant effects, mitigation, or alternatives is known that would require major revisions to the previously certified EIR due to the Project changes.

No further environmental documentation is required because all potentially significant effects (a) have been analyzed adequately in the previously certified EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to the previously certified EIR. Therefore, in accordance with CEQA and the CEQA Guidelines (Section 15168[c][2]), the Project is within the scope of the previously certified EIR; that EIR continues to be pertinent with considerable information value; and the Project changes do not give rise to any new or substantially more severe significant effects, nor do they require any new mitigation measures or alternatives. Accordingly, no new environmental document is required.

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5 References and Preparers

5.1 References Cited

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CSU (California State University). 2004. State University Administrative Manual (Section XI – Project Plan Development for Major Capital Construction Projects [Sections 9230- 9237]). May 2004.

CSUMB (California State University, Monterey Bay). 2022. California State University, Monterey Bay Master Plan: Final Environmental Impact Report. State Clearinghouse No. 2017051042. May 2022.

5.2 List of Preparers

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Appendix A

Mitigation Monitoring and Reporting Program

California State University
MONTEREY BAY

California State University, Monterey Bay Master Plan

Mitigation Monitoring and Reporting Program

Prepared for California State University, Monterey Bay
May 2022 - SCH No. 2017051042

MITIGATION MONITORING AND REPORTING PROGRAM

California State University Monterey Bay
Master Plan

MAY 2022

Printed on 30% post-consumer recycled material.

MITIGATION MONITORING AND REPORTING PROGRAM

2.1 INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.), California State University, Monterey Bay (CSUMB) prepared an Environmental Impact Report (EIR) (State Clearinghouse No. 2017051042) that identified potentially significant and significant impacts prior to mitigation related to: Biological Resources, Cultural Resources and Tribal Cultural Resources, Geology (Paleontological Resources), Greenhouse Gas Emissions, and Noise and Vibration. The EIR also identifies mitigation measures that would reduce the identified impacts to less-than-significant levels, with the exception of Noise at one off-campus location, which would remain significant with implementation of feasible mitigation measures. CEQA and the CEQA Guidelines (Public Resources Code Section 21081.6 and CEQA Guidelines Sections 15091[d] and 15097) require public agencies "to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval to mitigate or avoid significant effects on the environment." A Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the proposed Master Plan because the EIR identifies significant adverse impacts related to the Project implementation, and mitigation measures have been identified to reduce those impacts. Adoption of the MMRP would occur along with approval of the proposed Master Plan.

2.2 PURPOSE OF THE MITIGATION AND MONITORING PROGRAM

The MMRP has been prepared to ensure that all required mitigation measures are implemented and completed in a sufficient manner before and during project construction and operation. It also includes the project design features (PDFs) incorporated into the Project that serve to reduce environmental impacts. The MMRP table has been prepared to assist the responsible parties in implementing the mitigation measures. The table identifies each mitigation measure or PDF; the action required for the measure to be implemented; the time at which the monitoring is to occur; the monitoring conditions; and the agency or party responsible for ensuring that the monitoring is performed. Figure references provided in the PDFs are to figures presented in the Final EIR Chapter 3, Project Description.

2.3 ROLES AND RESPONSIBILITIES

Unless otherwise specified, CSUMB is responsible for taking all actions necessary to implement the mitigation measures under its jurisdiction according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. CSUMB, at its discretion, may delegate implementation responsibility or portions thereof to a licensed

contractor or other designated agent. Section 21081.6 of the Public Resources Code requires the lead agency to identify the "custodian of documents and other material" which constitutes the "record of proceedings" upon which the action on the Project was based. CSUMB is the custodian of such documents for the proposed Master Plan. Inquiries should be directed to:

CSUMB Office of the President
California State University, Monterey Bay
100 Campus Center, Building 1
Seaside, California, 93955

2.4 REPORTING

CSUMB shall require the contractor(s) to maintain records documenting compliance of the activity with the required mitigation measures or PDFs. Information regarding inspections and other requirements shall be compiled and explained in monthly or annual reports, as relevant. The reports shall be designed to simply and clearly identify whether mitigation measures have been adequately implemented. At a minimum, each report shall identify the mitigation measures or conditions to be monitored for implementation, whether compliance with the mitigation measures or conditions has occurred, the procedures used to assess compliance, and whether further action is required.

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
MITIGATION MEASURES				
Biological Resources				
Impact BIO-1: Special-Status Species. The Project could result in substantial adverse effects to special-status plant and wildlife species and their habitat.	**MM-BIO-1a:** Project-Specific Biological Assessments (HMP Species). The CSUMB CPD [Campus Planning and Development] Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact HMP species or potential habitat (HMP Species include: California tiger salamander, Smith's blue butterfly, Northern California legless lizard, Monterey ornate shrew, Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's-beak, sand-loving wallflower, Eastwood's goldenbush and Yadon's piperia). A report describing the results of the surveys shall be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report shall include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for HMP species to occur or HMP species observed, if any; and 3) maps of the locations of HMP species or potential habitat, if observed. If HMP species that do not require take authorization from the USFWS or CDFW are identified within the development site, salvage efforts for these species shall be evaluated by a qualified biologist in coordination with CSUMB CPD Department to further reduce impacts per the requirements of the HMP and BO. Where salvage is determined feasible and proposed, seed collection should occur from plants within the development site and/or topsoil should be salvaged within occupied areas to be disturbed. Seeds shall be collected during the appropriate time of year for each species by qualified biologists. The collected seeds and topsoil shall be used to revegetate temporarily disturbed construction areas and reseeding	Properly-timed survey to be conducted during project planning or design to allow lead time for mitigation planning and implementation. Report to be provided prior to any ground disturbance. No further action required if surveys are negative. Comply with HMP and BO if surveys are positive, including seed and topsoil salvage, if feasible. Comply with ESA and/or CESA if surveys are positive for listed species. Incorporate measures into construction contracts, as relevant.	Initial survey and reporting. Conduct monitoring if required to comply with HMP/BO or ESA and CESA.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	and restoration efforts on- or off-site, as determined appropriate by the qualified biologist and CSUMB CPD Department. For impacts to the HMP species within the development site that do require take authorization from the USFWS and/or CDFW, the CSUMB CPD Department shall comply with ESA and CESA and obtain necessary permits prior to construction. If non-HMP special-status species are identified during the implementation of this measure, MM-BIO-1b shall also be implemented.			
	MM-BIO-1b: Project-Specific Biological Assessments (Non-HMP Species). The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact a special-status species or their habitat. A report describing the results of the surveys shall be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report shall include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for special-status species to occur or special-status species observed, if any; 3) maps of the locations of special-status species or potential habitat, if observed; and 4) recommended mitigation measures, if applicable. If special-status species are determined not to occur at the development site, no additional mitigation is necessary. If special-status species are observed or determined to have the potential to occur, the project biologist shall recommend measures necessary to avoid, minimize, and/or compensate for identified impacts. Measures shall include, but are not limited to, revisions to the project design and project modifications, pre-construction surveys, construction buffers, construction best management practices, monitoring, non-native species control, restoration and preservation, and salvage and relocation.	Conduct properly- timed survey during project planning or design to allow lead time for mitigation planning and implementation. Report to be provided prior to any ground disturbance. No further action required if surveys are negative. Implement additional measures if surveys are positive; incorporate measures into construction contracts, as relevant.	Initial survey and reporting. Conduct pre-construction surveys and monitoring if recommended.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	MM-BIO1c: Pre-Construction Surveys for Protected Avian Species. Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species shall be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist shall be retained by the CSUMB CPD Department to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys shall be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys shall be determined by the qualified biologist based on review of the final construction plans and in coordination with the USFWS and CDFW, as needed for protected avian species nests. If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist shall notify the CSUMB CPD Department and an appropriate no-disturbance buffer shall be imposed within which no construction activities or disturbance shall take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.	Schedule vegetation/tree removal after September 16 and before January 31. Or, if construction occurs between February 1 and September 15, conduct pre-construction surveys within 14 days prior to construction activities, and ongoing during construction as needed. Incorporate measure into construction contracts.	One time prior to construction and ongoing during construction, depending on breeding and nesting seasons	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	MM-BIO-1d: Implement Open Space Protection Requirements. For open space areas adjacent to proposed campus development, the following measures shall be implemented: • Conduct an access assessment to identify necessary access controls. In some cases, structures including fences or other appropriate barriers may be required within the new development parcel to control access into the habitat areas. An assessment of access issues and necessary controls shall be completed as part of planning for the development and submitted to the CSUMB CPD Department for review and approval, prior to development. • Signs, interpretive displays, trailhead markers, or other information shall be installed and maintained at identified urban/wildland interface that illustrate the importance of the adjacent habitat area and prohibit trespass, motor vehicle entry, dumping of trash or yard wastes, pets off-leash, capture or harassment of wildlife, impacts to special-status species, and other unauthorized activities. • Incorporate non-native species control features into site design. Detention ponds or other water features associated with new development shall be sited as far from the urban/wildland interface as possible. Suitable barriers shall be located between these features and the habitat area boundary to prevent these features from becoming "sinks" for special-status wildlife species, as well as sources for invasive non-natives that could then move into the adjacent habitat area. • If detention ponds or other waterbodies must be located at the urban/wildland interface, a specific management program addressing control of non-native animals (e.g., bullfrogs) must be prepared and	Prior to final design approval. Incorporate measure into design contracts when proposed project is adjacent to open space areas.	Confirm measure is being implemented during design review	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	submitted for review and approval by the CSUMB CPD Department, prior to development. • Landscaping within the areas adjacent to open space areas shall consist of native or non-native plant species that shall not colonize reserve areas in the former Fort Ord outside the campus boundaries. Any landscaping or replanting required for the Project shall not use species listed as noxious by the CDFA. All landscape plans shall be reviewed by the CSUMB CPD Department. • Limit artificial lighting at the urban/wildland interface. Outdoor lighting associated with new development shall be low intensity, focused, and directional to preclude night illumination of the adjacent habitat area. Outdoor lighting shall be placed as far from the urban/wildland interface as possible given safety constraints. Facilities such as ball parks and fields that require high intensity night lighting (i.e., flood lights) shall be sited as far from the urban/wildland interface as possible. High-intensity lighting facing the habitat areas shall be directional and as low to the ground as possible to minimize long distance glare. • Develop and implement erosion control measures to prevent sediment transport into and within habitat areas. Erosion control measures shall be required where vegetation removal or soil disturbance occurs as a result of all facility construction and maintenance, including trail, road, or fuel break construction/maintenance, access controls, or stormwater management, consistent with existing stormwater management plans. Specific measures to be implemented shall be detailed in an erosion control plan. The erosion control plan shall include, at a minimum, the following measures. o Re-contour eroded areas.			

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	○ Maintain and grade areas along the reserve perimeter and main roads as appropriate to avoid washouts. Gullies shall be repaired as needed. ○ Install drainage features such as outlet ditches, rolling dips (similar to waterbars), and berms as needed to facilitate the proper drainage of storm runoff. ○ Add soil amendments such as fertilizers and gypsum for designated development areas only. ○ Prevent sediments from entering basins or swales that could be used by HMP species during erosion control activities. ○ Design and conduct erosion control measures to minimize the footprint of the structures and repairs, and design structures to minimize potential impacts on CTS that may be moving between breeding and upland habitats. ○ Use weed-free mulch, weed-free rice, sterile barley straw, or other similar functioning product where needed for erosion control. Seed native plant species to stabilize soils disturbed by erosion control activities and prevent colonization by invasive weeds. Incorporate native plant species to the extent practicable.			
	MM-BIO-1e: Pre-Construction Bat Assessment and Surveys. To avoid and reduce impacts to Townsend's big-eared bat, a qualified bat specialist or wildlife biologist shall conduct site surveys during the reproductive season (May 1 through September 15) to characterize bat utilization of the site and potential species present (techniques utilized to be determined by the biologist) prior to structure removal. Based on the results of these initial surveys, one or more of the following shall occur:	Prior to construction activities. Conduct initial surveys between May 1-September 15 when mature trees or structures will be removed. No further action required if surveys are negative.	Initial survey and reporting. Conduct pre-construction surveys and monitoring if recommended.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	• If it is determined that bats are not present at the site, no additional mitigation is required. • If it is determined that bats are utilizing the site and may be impacted by the development, pre-construction surveys shall be conducted no more than 30 days prior to any structure removal. If, according to the bat specialist, no bats or bat signs are observed in the course of the pre-construction surveys, structure removal may proceed. If bats and/or bat signs are observed during the pre-construction surveys, the biologist shall determine if disturbance will jeopardize the roost (i.e., maternity, day, or night). • If a single bat and/or only adult bats are roosting, removal of buildings may proceed after the bats have been safely excluded from the roost. Exclusion techniques shall be determined by the biologist and depend on the roost type; the biologist shall prepare a mitigation plan for provision of alternative habitat to be approved by the CDFW. • If an active maternity roost is detected, avoidance is preferred. Work in the vicinity of the roost (buffer to be determined by biologist) shall be postponed until the biologist monitoring the roost(s) determines that the young are no longer dependent on the roost. The monitor shall ensure that all bats have left the area of disturbance prior to initiation of structure removal. If avoidance is not possible and a maternity roost must be disrupted, a depredation permit would be required prior to removal of the roost.	Implement additional measures if surveys are positive; incorporate measures into construction contracts, as relevant. Prepare mitigation plan in coordination with CDFW, if necessary to exclude bats from habitat.		
	MM-BIO-1f: Pre-Construction Monterey Dusky-Footed Woodrat Surveys. Not more than thirty (30) days prior to the start of construction (including vegetation removal), a qualified biologist shall conduct a survey of the development sites to locate existing Monterey dusky-	Conduct pre-constructions surveys within 30 days prior to start of construction activities.	Initial survey and mapping. On-going monitoring during relocation of woodrat nests.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	footed woodrat nests. All Monterey dusky-footed woodrat nests shall be mapped and flagged for avoidance. Graphics depicting all Monterey dusky-footed woodrat nests shall be provided to CSUMB and the construction contractor. Any Monterey dusky-footed woodrat nests that cannot be avoided shall be relocated according to the following procedures. Each active nest shall be disturbed by the qualified biologist to the degree that the woodrats leave the nest and seek refuge elsewhere. After the nests have been disturbed, the nest sticks shall be removed from the impact areas and placed outside of areas planned for impacts. Nests shall be dismantled during the non-breeding season (between October 1 and December 31), if possible. If a litter of young is found or suspected, nest material shall be replaced and the nest left alone for 2-3 weeks, after this time the nest shall be rechecked to verify that young are capable of independent survival before proceeding with nest dismantling.	No further action required if surveys are negative. Implement additional measures if surveys are positive; incorporate measures into construction contracts, as relevant.		
	MM-BIO-1g: Smith's Blue Butterfly Habitat Avoidance/ESA Compliance. Smith's Blue Butterfly habitat (i.e., dune buckwheat) shall be avoided to the greatest extent feasible. Smith's Blue Butterfly habitat that will not be impacted by the Project shall be protected prior to and during construction to the maximum possible using exclusionary fencing and/or flagging. A biological monitor shall supervise the installation of protective fencing/flagging and monitor at least once per week until construction is complete to ensure that the protective fencing/flagging remains intact. If all Smith's Blue Butterfly habitat is avoided, no additional mitigation is necessary. If the Project will impact SBB habitat, CSUMB shall comply with the FESA and obtain necessary authorizations prior to construction due to the assumed presence of the federally listed SBB.	Conduct properly- timed survey to confirm presence of dune buckwheat during project planning or design to allow lead time for mitigation planning and implementation. Incorporate avoidance measures into construction contracts. If avoidance is not feasible, comply with FESA.	Monitor installation of protective fencing/flagging. Monitor fencing at least once per week until construction is complete.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	CSUMB shall be required to initiate consultation with the USFWS to receive take authorization. Take authorization would be granted through the issuance of an individual, project-specific incidental take permit. Mitigation for take likely will require restoration at a 3:1 ratio of impacted habitat. Dune buckwheat plants and/or seed salvage may also be required prior to ground disturbing activities.			
Impact BIO-2: Riparian and Wetland Habitat. The Project could result in a substantial adverse effect on riparian habitat or other sensitive community as identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, or on state or federally protected wetlands.	**MM-BIO-2:** Project-Specific Sensitive Natural Community Assessments. The CSUMB CPD Department shall require that for any development that could potentially impact a sensitive natural community, a survey of the site by a qualified biologist shall be required. A report describing the results of the survey shall be provided to CSUMB prior to any ground-disturbing activities. The report shall include but shall not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for sensitive habitats or sensitive habitats observed, if any; 3) maps of the locations of sensitive habitats or potential sensitive habitat, if observed; and 4) recommended avoidance and minimization measures, if applicable. If a potential state or federally protected wetland is newly identified to be present on the site, a formal wetland delineation shall be conducted in accordance with ACOE methodology. If a proposed development cannot avoid impacts to sensitive habitat areas, CSUMB shall require a compensatory habitat-based mitigation to reduce impacts. Compensatory mitigation must involve the preservation, restoration, or purchase of off-site mitigation credits for impacts to sensitive habitats. Mitigation must be conducted in-kind or within an approved mitigation bank in the region. The specific mitigation ratio for habitat-based mitigation shall be determined through consultation with the appropriate agency (i.e., CDFW, USFWS, or ACOE) on a project-by-project basis.	Conduct survey during project planning or design to allow lead time for mitigation planning and implementation. Report to be provided prior to any ground disturbance. No further action required if surveys are negative, or if habitat can be avoided. Comply with Fish and Game Code Section 1600 and/or Sections 401 and 404 of the Clean Water Act if surveys are positive and habitat cannot be avoided. Incorporate measures into construction contracts, as relevant.	Initial survey and reporting. Conduct monitoring if required to comply with Game Code Section 1600 and/or Sections 401 and 404 of the Clean Water Act.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	Impacts to sensitive habitats, including but not limited to, vernal pools, streambeds, waterways, or riparian habitat, protected under FGC Section 1600 and Sections 401 and 404 of the Clean Water Act, require regulatory permitting to reduce impacts. Acquisition of permits and implementation of the approved mitigation strategy would ensure impacts are fully mitigated and "no net loss" of wetland habitat would occur.			
Cultural Resources and Tribal Cultural Resources				
Impact CUL-1: Archaeological Resources. The Project could cause a substantial adverse change in the significance of unique archaeological resources or historic resources of an archaeological nature.	**MM-CUL-1a:** Sensitivity Training. CSUMB shall include a standard clause in every construction contract for the Project that requires cultural resource sensitivity training by a qualified archaeologist for workers prior to conducting earth disturbance in the vicinity of a documented cultural-resource-sensitive area, should one be identified in the future. Additionally, campus staff involved in earth-disturbing work in the vicinity of a documented resource sensitive area will also receive such training.	Prior to and ongoing during any ground disturbance in the vicinity of a documented cultural resource-sensitive area. Incorporate measures into construction contracts, as relevant.	Prior to and ongoing during any ground disturbance in the vicinity of a documented cultural resource-sensitive area.	CSUMB Campus Planning and Development
	MM-CUL-1b: Inadvertent Discovery Evaluation and Recordation. CSUMB shall include a standard inadvertent discovery clause in every construction contract for the Project, which requires that in the event that an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil-disturbing work within 100 feet of the find shall cease until a qualified archaeologist can evaluate the find and make a recommendation for how to proceed. For an archaeological resource that is encountered during construction, the campus shall: • Retain a qualified archaeologist to determine whether the resource has potential to qualify as a historical resource or a unique archaeological resource as outlined in the California Environmental	Implement during soil-disturbing work. Incorporate measure into construction contracts.	Ongoing during soil-disturbing construction activities.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	Quality Act (CEQA) (Public Resources Code § 21083.2). • If the resource has potential to be a historical resource or a unique archaeological resource, the qualified archaeologist, in consultation with CSUMB, shall prepare a research design and archaeological evaluation plan to assess whether the resource should be considered significant under CEQA criteria. • If the resource is determined significant, CSUMB shall provide for preservation in place, if feasible. If preservation in place is not feasible, in consultation with CSUMB, a qualified archaeologist will prepare a data recovery plan for retrieving data that is specific to the site's geographic extent and the significance of any resources encountered. The data recovery plan shall be developed prior to site development and implemented prior to or during site development (with a 100-foot buffer around the resource). The archaeologist shall also perform appropriate technical analyses, prepare a full written report and file it with the Northwest Information Center, and provide for the permanent curation of recovered materials.			
	MM-CUL-1c: Construction Monitoring. A Native American and archaeological monitor shall be present for earth-disturbing work in native soils within 750 feet of a documented archaeological resource or tribal cultural resource, if such resources are discovered and documented in the future. Depth to native soils on specific project sites is typically identified in project-specific geotechnical investigations.	On-going during ground-disturbing activities in native soil with the specified resources present. Incorporate measure into construction contracts.	Ongoing during ground-disturbing activities in native soil with the specified resources present.	CSUMB Campus Planning and Development
Impact CUL-2: Disturbance of Human Remains. The Project could inadvertently disturb human remains.	**MM-CUL-2:** Proper Handling of Human Remains. Should human remains be discovered at any time, work will halt in that area and procedures set forth in the California Public Resources Code (§ 5097.98) and State Health and Safety Code (§ 7050.5) will be followed, beginning with	Implement during ground-disturbing work. Incorporate measure into construction contracts.	Ongoing during ground-disturbing construction activities.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	notification to CSUMB and the County Coroner. If Native American remains are determined to be present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendant, who will arrange for the dignified disposition and treatment of the remains. The Ohlone/Costanoan-Esselen Nation (OCEN) shall be notified of the discovery even if not assigned as Most Likely Descendant.			
Geology, Soils, and Paleontology				
Impact GEO-5: Paleontological Resources. Project construction could directly or indirectly destroy a unique paleontological resource or site.	**MM-GEO-1:** Monitoring, Discovery, and Treatment of Paleontological Resources. Prior to the commencement of any grading activity, CSUMB shall retain a qualified paleontologist, as defined by the Society of Vertebrate Paleontology, to determine when, where, and the duration of paleontological monitoring that is warranted. The qualified paleontologist shall make these determinations based on construction plans, geotechnical reports if available, and subsurface geological observations that indicate the likely depth to undisturbed native sands that possess high paleontological sensitivity. The level of monitoring may range from full-time, part-time (spot-check), or unnecessary based on the qualified paleontologist's review of plans and relevant documentation as well as observations. Monitoring shall not be required under any conditions if excavations for proposed development do not extend into undisturbed native sands that possess high paleontological sensitivity. If it is determined that paleontological monitoring is required, qualified paleontologist shall attend any preconstruction meetings and manage the paleontological monitor(s) if he or she is not doing the monitoring. For monitoring that is required in a given work area, the paleontological monitor shall be equipped with necessary tools for the collection of fossils and associated geological and paleontological data. The monitor shall complete daily	Implement prior to ground-disturbing work. Incorporate measure into construction contracts. Final reporting following construction completion.	Initial determination of monitoring location and frequency. Ongoing during construction, if recommended	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	logs detailing the day's excavation activities and pertinent geological and paleontological data. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, which in most circumstances, is less than a day, the monitor shall remove the rope and allow grading to recommence in the area of the find. If it will require more than one (1) day to document and/or salvage the find, the qualified paleontologist shall work with CSUMB to determine an appropriate treatment plan to ensure the protection of fossil resources while not impeding development. Following the paleontological monitoring program, a final monitoring report shall be submitted to CSUMB for approval. The report should summarize the monitoring program and include geological observations and be accompanied by any paleontological resources recovered during paleontological monitoring for the development. The qualified paleontologist shall be responsible for ensuring that all fossils associated with the paleontological monitoring program are permanently curated with an accredited institution that maintains paleontological collections.			
Greenhouse Gas Emissions				
Impact GHG-1: Greenhouse Gas Emissions. The Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	**MM-GHG-1:** Building Decarbonization: Replace Natural Gas with Electricity in New and Existing Buildings. CSUMB shall replace natural gas energy use with electricity energy use in new and existing buildings to reduce natural gas consumption and associated greenhouse gas (GHG) emissions generated by CSUMB. Building electrification shall result in a minimum natural gas reduction of 603,330 therms (60,333 Metric Million	Calculate and report on building energy demand projections during the design phase. Prior to schematic design approval for buildings, provide a natural gas estimate with and without	Ongoing annually	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	British Thermal Unit [MMBTU]), which equates to an approximately 54% reduction in the 2035 Master Plan's estimated natural gas consumption (1,106,827 therms Master Plan buildout in 2035 – 603,330 therms reduction in natural gas = 503,497 therms in 2035 [110,683 MMBTU – 60,330 MMBTU = 50,353 MMBTU]). Replacing 603,330 therms of natural gas is estimated to require an increase in approximately 15,271 megawatt hours of electricity to achieve a reduction of approximately 2,068 metric tons per year of carbon dioxide equivalent per year (MT CO_2e) because electricity is a less GHG intensive energy source. This building decarbonization requirement in new and existing buildings can be met using different combinations of building electrification in new and existing residential and non-residential buildings, provided that 603,330 therms of natural gas is replaced with 15,271 megawatt hours of electricity by 2035. To ensure that a minimum of 603,330 therms of natural gas is replaced by electricity-provided energy in new and existing buildings by 2035, building energy demand projections will be calculated and reported on during the building design phase for new and existing buildings to be retrofitted. Prior to the schematic design approval for each new building or existing building to be retrofitted, CSUMB shall provide a natural gas estimate with and without electrification, which shall be tracked internally. Annually, CSUMB shall review the amount of natural gas replaced by electricity in new buildings to ensure that substantial progress is being made towards meeting the 603,330 therms replacement requirement for new and existing buildings under the Master Plan by 2035. CSUMB may pursue and implement other GHG-reducing strategies (e.g., additional solar PV, heat pump conversion, expanded TDM plan implementation) as a mechanism for achieving the required GHG reductions	electrification, which shall be tracked internally. Annually, review the amount of natural gas replaced by electricity and the amount of GHG emissions reductions associated with other GHG-reducing strategies.		

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	(approximately 2,051 MT CO_2e) by 2035. To ensure GHG emissions reductions from such strategies are properly accounted for, the GHG emissions reductions associated with such strategies shall be calculated and reported on during the design phase of these strategies. Annually, CSUMB shall review the amount of GHG emissions reductions associated with these other GHG-reducing strategies, along with the GHG reductions associated with building electrification, as indicated previously, to ensure that substantial progress is being made towards meeting the required GHG reductions under the Master Plan by 2035.			
Noise and Vibration				
Impact NOI-1: Substantial Temporary Increase in Ambient Noise Levels. The Project would generate a substantial temporary construction-related 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.	**MM-NOI-1:** CSUMB shall require that construction contractors implement the following practices and measures: • Construction activity shall generally be limited to the daytime hours between 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends and holidays. If nighttime construction is required, noise levels shall not exceed 65 dB L_{max} (slow response) when measured at the construction site boundary between the hours of 7:00 p.m. and 7:00 a.m. Loud construction activity (e.g., asphalt removal, large-scale grading operations) shall not be schedule during finals week and preferably will be scheduled during holidays, summer/winter break, etc. • All construction equipment shall be properly maintained and equipped with noise-reducing air intakes, exhaust mufflers, and engine shrouds in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation. • Electrical power, rather than diesel equipment, shall be used to run compressors and similar power tools	During construction activities. Incorporate measure into construction contracts.	Ongoing during construction.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	and to power any temporary structures, such as construction trailers. • All stationary construction equipment (e.g., electrical generators, pumps, refrigeration units, and air compressors) and equipment staging areas shall be located as far as feasible from occupied residences or educational land uses. • When anticipated construction activities are expected to occur less than 175 feet from an existing on-campus or off-campus residential land use, one or more of the following techniques shall be employed to keep noise levels below an eight-hour A-weighted energy-equivalent level (L_{eq8h}) of 80 dBA at the potentially affected sensitive receptors: o Reduce construction equipment and vehicle idling and active operation duration. o Install or erect on-site a temporary, solid noise wall (or acoustical blanket having sufficient mass, such as the incorporation of a mass-loaded vinyl skin or septum) of adequate height and horizontal extent so that it linearly occludes the direct sound path between the noise-producing construction process(es) or equipment and the sensitive receptor(s) of concern. Where impact-type equipment is anticipated on site, apply noise-attenuating shields, shrouds, portable barriers or enclosures, to reduce the magnitudes of generated impulse noises.			
Impact NOI-2: Substantial Permanent Increase in Ambient Noise Levels. The Project could generate a substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local	**MM-NOI-2:** Stadium Noise. To minimize noise levels generated by the replacement of the existing stadium with an expanded stadium with additional seating capacity, a noise assessment shall be conducted by a qualified acoustical engineer or noise specialist to evaluate potential increases in noise levels associated with the proposed new and expanded stadium. The assessment	Prior to final design. Incorporate measure into design contracts.	Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
general plan or noise ordinance, or applicable standards of other agencies, due to roadway noise and stadium noise.	shall be conducted prior to final design. Noise reduction measures shall be incorporated into the design to reduce increases in existing operational noise levels at nearby noise-sensitive land uses to below the applicable threshold (i.e., less than 65 dBA CNEL). Such measures may include, but are not limited to, the incorporation of structural shielding, enclosed bleachers, and revised placement for amplified sound system speakers.			
Impact NOI-3: Excessive Vibration. The Project would not generate excessive groundborne vibration or groundborne noise levels.	**MM-NOI-3:** Recommended Vibration Monitoring Plan. While not required to reduce a significant impact, it is recommended that CSUMB or its designee prepare a vibration monitoring plan by a qualified acoustician prior to beginning construction of any project that involves pile driving (or any heavy construction operation known to exhibit a reference vibration velocity level of 0.2 ips PPV or greater magnitude at 25 feet) within 250 feet of an existing facility housing medical, semiconductor, testing, manufacturing, musical recording, or other instruments and processes that are known to be highly sensitive to vibration and may thus have function compromised by undue levels of groundborne-transmitted vibration. At a minimum, the vibration monitoring plan shall require data be sent to the University noise control officer or designee on a weekly basis or more frequently as determined by the noise control officer. The data shall include vibration level measurements taken during the previous work period. In the event that there is reasonable probability that future measured vibration levels would exceed FTA guidance (65 VdB or more stringent criteria as the existing facility activities may require), the University shall take the steps necessary to ensure that future vibration levels do not exceed such limits, including suspending further construction activities that would result in excessive vibration levels until either alternative equipment or alternative construction procedures can be	Prior to construction of projects that require pile driving or other heavy construction operation within 250 feet of existing buildings housing sensitive instruments. Incorporate measure into construction contracts, as warranted.	Ongoing during construction activities that require pile driving or other heavy construction operation.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	used. Construction activities not associated with vibration generation could continue. In addition to the data described previously, the vibration monitoring plan shall also include the location of vibration monitors, the vibration instrumentation used, a data acquisition and retention plan, and exceedance notification and reporting procedures.			
PROJECT DESIGN FEATURES				
Open Space Framework				
PDF-OS-1	Open Space Types and Management. Manage and designate open space types consistent with Figure 3-8. Manage the natural open space and connecting landscape holistically to connect and protect habitats and sensitive species, percolate storm water runoff, visually unify the campus and connect bicycle and pedestrians to the built and natural environments. Avoid fragmenting natural open space and connecting landscape. Any development should allow for trail connections, peripheral streetscape improvements and the protection and access to viewsheds for the campus population.	Ongoing during Master Plan implementation. Prior to final design. Incorporate measure into design contracts.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-OS-2	Natural Open Space Protection. Maintain, enhance and/or restore natural open spaces, native habitats and sensitive species, while allowing for educational and passive recreation uses, such as trails. At a minimum, manage in accordance with the Fort Ord Habitat Management Plan and Habitat Conservation Plan EIR requirements and/or other best management practices.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-OS-3	Construction Best Management Practices. Establish and employ construction best management practices to avoid special-status plant and animal species and avoid or minimize erosion and sedimentation, where possible. Remove invasive species using best management practices during construction, demolition and landscape projects.	Ongoing during Master Plan implementation. Incorporate measure into construction contracts, as warranted.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
PDF-OS-4	Tree Restoration and Management Program. Continue and expand the CSUMB tree restoration program to maximize the health and stability of existing and replacement trees, while minimizing damage typically caused by the lack of proper tree care. The plan will include the following: a. All tree management will be performed under the guidance of a Certified Arborist. b. Heritage and mature trees, including those species no longer on the approved planting list, will be identified and managed with specific care. c. Campus Planning will approve and direct major trimming (over 30%) and replacement of all removed trees over 4-inches in diameter. d. Replacement of all removed trees 4-inches or greater in diameter at breast height (dbh), shall be provided at a minimum 2:1 ratio. The replacement ratio shall be based on the ultimate survival of planted trees and therefore the initial planting ratio will likely need to be higher. e. No vehicles, with the exception of grounds service vehicles, shall park on or in landscaped areas or within the root line of any tree, which is equal to a distance half the height of the tree from the trunk. f. Tree Campus USA certification will be pursued. g. Establish comprehensive oak woodland management program and associated measures for the Southern Oak Woodland, East Campus Open Space and East Campus Housing oak habitats.	Ongoing during Master Plan implementation. Incorporate measure into construction contracts, as warranted.	Ongoing	CSUMB Campus Planning and Development
PDF-OS-5	Habitat Restoration Fund. Establish a habitat restoration fund to collect funds for the replacement of trees and/or habitat that may be removed or disturbed during construction of proposed development. Restoration costs would be included in project budgets and/or provided by third parties doing work on campus to ensure funds are available.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
PDF-OS-6	Planting Specifications. After demolition and construction, stabilize newly created bare land with native plants and seed mixes to eliminate erosion. For permanent landscaping use consistent, low maintenance, native and drought-tolerant landscaping strategies that visually unify the campus by using a campus wide landscape palette informed by the campus Landscape Maintenance Plan and FORA Regional Urban Design Guidelines[1] (RUDG) palettes (FORA 2016). Limit turf to formal, athletic and recreational, and residential neighborhood open space types.	Ongoing during Master Plan implementation. Incorporate measure into construction contracts, as warranted.	Ongoing	CSUMB Campus Planning and Development
PDF-OS-7	Trail Features. Maximize landscaping, natural material surfaces and permeability along existing and future trails in the built environment in order to locally percolate stormwater runoff, encourage trail use and serve as a defining campus feature. Minimize human caused impacts along trail corridors by: minimizing obtrusive lighting, separating users by type and connecting people to and protecting the natural environment.	Ongoing during Master Plan implementation. Incorporate measure into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-OS-8	Outdoor Seating. Expand outdoor seating options in landscaped open spaces associated with transit/bike/pedestrian malls, formal open space, pathway improvement projects and residential courtyards.	Ongoing during Master Plan implementation. Incorporate measure into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-OS-9	Sustainability Commons. Establish the Sustainability Commons as the art, education and community-building center that serves as a model space for sustainable development and education.	Ongoing during Master Plan implementation. Incorporate measure into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-OS-10	Academic Open Space. As part of academic building projects, create academic open spaces such as plazas and courtyards adjacent to academic buildings to create opportunities for student and faculty interaction, and for studying, socializing and rest.	Ongoing during Master Plan implementation.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
		Incorporate measure into design contracts, as warranted.		
PDF-OS-11	Minimize Wildland Fire Hazards. Prepare and implement a defensible space plan to address landscape requirements for structures located: (1) along the eastern edge of the Main Campus, along Eighth Street (east of Fifth Avenue) and along Eighth Avenue between Inter-Garrison Road and Colonel Durham Street; (2) adjacent to the Southern Oak Woodlands; (3) along the undeveloped portions of Inter-Garrison Road; and (4) at the East Campus Housing area. Review and enhance the existing University evacuation plans, as part of the defensible space plan, to incorporate preplanned evacuation routes and safe refuge areas for the entire campus community in the event of a wildfire or threat of a wildfire, which would provide for the safe evacuation along key access routes around and through the campus. The defensible space plan shall conform to the requirements of California Public Resources Code § 4291 and California Government Code § 51182, which require creating and maintaining defensible space within 100 feet of structures. The plan shall also adhere to the defensible space standards outlined by the California Department of Forestry and Fire Protection.	Within first five years of Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
Transportation and Circulation (Mobility)				
PDF-MO-1	Faculty and Staff Housing. Move East Campus Housing student residents to the Main Campus, and reduce Community Housing Partner[2] residents in the East Campus Housing in order to accommodate housing for a minimum of 65% of faculty and staff. Continue to offer housing to staff and faculty at a minimum of 15% below market rate at units in Schoonover Park.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
PDF-MO-2	Student Housing. Expand the Main Campus student housing to accommodate the existing East Campus Housing student residential population and to continue to house a minimum of 60% of FTES. Continue to require first and second year undergraduate students not residing in the tri-county area (Santa Cruz, San Benito and Monterey Counties) to live on campus. Require and provide housing for 90% of International Students to live on campus. These student housing requirements are specified in the CSUMB Student Housing and Parking Guidelines (see Appendix C).	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-3	Mixed-Use Campus Development. To provide amenities that support and improve campus life and reduce vehicle travel off campus establish a mixture of uses in new and renovated residence halls, including but not limited to: multi-purpose classroom and social spaces, dining halls, convenience stores, mail services, housing staff offices and quiet study spaces.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-4	Mixture of Student Housing Types. Provide a mixture of bedroom and suite types across housing areas at a variety of rates. Accommodate a range of student types such as those with dependents, first year, returning students, residents, including traditional doubles, multiple occupant suites, student family apartments, accessible rooms, and live-in staff and faculty apartments.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-5	Compact Campus Core. Create a compact campus with increased density in the campus core to foster interaction and collaboration, reduce vehicle travel, and to create a vital campus community by implementing the following: a. Establish future development sites in the campus core on existing parking lots or on low density building occupied sites when buildings are at the end of their useful life. Maintain a minimum floor area ratio (FAR)	Ongoing during Master Plan implementation. Incorporate FAR requirements into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	of 1.0 for the aggregate non-residential program, and 0.75 for the residential program. b. Maintain the concentration of academic buildings within the campus core, allowing for pedestrian travel between buildings in under 10 minutes. Maintain student housing on Main Campus within a ten-minute walking radius of the campus core (see Figure 3-3).			
PDF-MO-6	TDM Plan. The campus will continue to implement, enhance, and expand TDM strategies to reduce single-occupant vehicle trips as part of a formal TDM Plan. The TDM Plan will include the following components: a. TDM Strategies. Expand upon existing alternative transportation programs (carshare, universal transit pass, late night CSUMB-specific Monterey shuttle or shared ride credit, Otter Cycle Center, bike rentals, bike repair, guided bike tours, and bike counter programs) by using strategies taken from the CSU Transportation Demand Management (TDM) Manual (2012) and other best practices as a guide for project and program development. b. Incentives Program. Establish and promote an incentives-based commuter program to encourage students, faculty and staff commuters to carpool and take active and transit modes of travel to campus. c. Parking Management. Implement strategies and measures to reduce parking demand including the following: • Consolidate academic and/or residential parking on the periphery of the campus and remove non-essential parking lots from the campus core per Figure 3-9. (See also PDF-MO-7 for information about multi-modal hubs.) • Maintain the existing parking supply of approximately 4,720 parking spaces at the consolidated lots by implementing increased	Ongoing during Master Plan implementation.	Ongoing Conduct periodic campus-wide travel surveys, as specified.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	parking prices (i.e., no net increase in parking will be provided). • Prohibit residential Freshmen and Sophomores from purchasing a parking permit, as specified in the CSUMB Student Housing and Parking Guidelines (Appendix C), to discourage Freshmen and Sophomores from using a car for travel. • Limit purchase of multiple permits by one individual at one time to maintain the integrity of different permit types. • Encourage transit and active transportation travel over single occupancy driving between East Campus Housing and the Main Campus. • Expand Electrical Vehicle Charging (charging only) stalls in accordance with State regulations and CSU Executive Order direction, and equitably distribute locations across campus. • Establish residential parking in proximity to new student residential development. • Establish parking permit programs/restrictions and lot assignments that discourage movement of vehicles between campus parking locations (i.e., establish "park once" policy), Main and East Campus housing, and encourage active and transit modes of travel. • Designate parking stalls in preferred locations for the promotion of carpooling, vanpooling, ridesharing and low and zero emission vehicles. • Allow limited special parking stalls throughout campus to accommodate accessible and service vehicles, deliveries, loading and unloading activities. d. <u>Transit Services.</u> Analyze unmet transit needs and expand transit services in collaboration with Monterey Salinas Transit and other local agencies as needed to provide the level of off-campus connections, inter-			

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	campus circulation and para-transportation identified in the TDM plan. (See also PDF-MO-12 through PDF-MO-16 for more information about transit services.) e. Bicycle, Scooter and Pedestrian Improvements. Identify, prioritize, and design bicycle, scooter and pedestrian improvements using connecting landscape features where appropriate. Identify capital project improvements and prioritize for implementation. Implement improvements as part of nearby capital projects, where possible. Provide a maintenance plan that creates a system for maintaining pavement quality, signage, bicycle racks and painted markings. (See also PDF-MO-17 and PDF-MO-18 for more information about bicycle and pedestrian mobility.) f. Monitoring. Conduct periodic campus-wide travel surveys to collect data on CSUMB student and faculty/staff transportation behavior, experiences, mode preferences, and mode shares. g. TDM Program Administration. Expand and manage TDM services and programs. Establish new staff position(s) to coordinate TDM services and programs and encourage office administration roles to take on advocacy roles for these programs within their offices. Establish an annual budget for non-capital transportation facilities maintenance and upgrades, planning, and TDM programs.			
PDF-MO-7	Multi-Modal Infrastructure. Expand the campus multi-modal transportation system infrastructure and programs. Establish two multimodal hubs, consistent with Figure 3-9, to provide centralized arrival points on campus from the four campus entries. The multimodal hubs will prioritize regional transit connections, shuttle service, carsharing, and visitors.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-8	Vehicle Restrictions. Establish restrictions to general vehicle travel through the campus core and locate vehicle	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	circulation and parking on the campus periphery consistent with Figure 3-9. Establish consistent place-making roadway barriers, signs, special paving and landscaping to communicate restricted access roadway entrances. Eliminate the use of bollards, k-rails or industrial looking measures to restrict vehicle access. Maintain traffic speeds at safe levels for all road users and implement traffic calming measures where vehicle behavior routinely exceeds safe levels.			Planning and Development
PDF-MO-9	Campus Entries. Create four major entries with signs which lead to two key arrival areas, including: Divarty Street and General Jim Moore Boulevard on the west side (Peninsula Gateway) and Inter-Garrison Road and Sixth Avenue on the east side (Valley Gateway) (see Figure 3-9).	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-10	Wayfinding. Expand and maintain a comprehensive regional wayfinding sign sequence, in coordination with state and local agencies, from the primary campus entrances, to campus parking locations.	Ongoing during Master Plan implementation. Incorporate wayfinding requirements into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-MO-11	Design Standards. Pursue universally accessible design throughout campus.	Ongoing during Master Plan implementation. Incorporate universally accessible design requirements into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-MO-12	Access to Transit Services. Maintain free or discounted access to campus, local and regional transit services, free at the time of boarding on campus, for all students with an active Otter ID. CSUMB and its contractors will coordinate with MST to ensure timed connections and to strive to implement multi-year agreements.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
PDF-MO-13	Regional Connections. Maintain connections on regional transit from Main Campus to East Campus, surrounding cities, and regional urban centers.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-14	Expansion of On-Campus Services. Improve campus circulator shuttle via a new campus shuttle service and/or regional transit stops, on Main Campus, to provide service within one-quarter mile of all occupied buildings or high traffic programmed sites, and directly on site at multimodal hubs and general parking lots consistent with Figure 3-10. Timing for the development of this shuttle will be based on the TDM plan. Provide access to on-campus service within ¼ mile walk of campus of all occupied Main Campus buildings.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-15	Para-Transportation Service. Expand para-transportation services on campus. Maintain wheelchair accessibility on transit service through campus.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-MO-16	Design Standards. At a minimum, maintain and design facilities serviced by transit to the standards developed by MST. Expand lighting and sheltered space with seating and posted service information at or within 100 feet of all transit fixed route stops. Expand wayfinding and live information for transit service at buildings with high pedestrian traffic.	Ongoing during Master Plan implementation. Incorporate MST design standards into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-MO-17	Bicycle/Scooter Mobility. Establish bicycle mobility as an important travel consideration, prioritized before internal vehicle travel, in campus development and programs by implementing the following: a. Establish at least one form of bicycle route facility on or adjacent to all campus roadways consistent with Figure 3-11.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	b. Maintain bicycle route facilities that connect to all local jurisdiction and regional bicycle route facilities consistent with Figure 3-11. c. Expand bicycle connections from campus residential neighborhoods in the direction of commercial developments along the campus periphery. d. Implement separated bicycle routes from regular vehicle travel lanes with physical buffers or develop separated paths as the preferred design alternative, where possible. e. Establish bicycle and skateboard dismount zones in areas that experience regular heavy pedestrian traffic. Mark and sign consistently with the campus wayfinding plans/standards. f. Expand and maintain both Class I (secure and covered facility) and Class II (standard outdoor rack) bicycle parking on site at every occupied building, and Class II bicycle parking at every outdoor event space, athletic venue, bus stop, and parking lot. Provide enough bicycle parking spaces to meet at a minimum LEED BD+C and or LEED ND standards. (See bicycle parking definitions in the Master Plan Guidelines.) Identify and develop scooter parking slow zones, prohibited zones and parking areas. g. Expand pedestrian-scale lighting and wayfinding along all bicycle pathways. h. Report and maintain a Bicycle Friendly University status from the League of American Bicyclists[SM].			
PDF-MO-18	Pedestrian Mobility. Establish pedestrian mobility as the primary travel consideration in campus development and programs by implementing the following: a. Expand accessible pedestrian pathways at every bus stop, bicycle parking area and parking lot and connect to the closest appropriate building consistent with Figure 3-12.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	b. Expand pedestrian connections from campus residential neighborhoods in the direction of commercial developments along the campus periphery. c. Expand campus trails and pathway networks linking to surrounding destinations, including Marina, Seaside, regional transportation hubs, FORTAG, Fort Ord Dunes State Park, Fort Ord National Monument, the Presidio of Monterey, and Monterey County lands. d. Expand and improve campus trails through natural open space areas with select amenities and trailhead signs at conveniently located entry points linked to popular campus pathways. e. Maintain a paved pathway width for at least two people to walk side by side comfortably on roadside sidewalks and primary pedestrian paths. Minimum 8-foot width where possible. f. Expand pedestrian-scale lighting, benches and wayfinding along all pedestrian pathways.			
PDF-MO-19	Construction Traffic Control Plan. When construction projects require significant work within existing roadways CSUMB will require the design team and/or the project contractor and their qualified registered Civil Engineer to implement a construction traffic control plan. This requirement will be incorporated into construction bid packages. The plans will conform with the current version of the State of California Department of Transportation Standard Specifications, where applicable, and will be reviewed and approved by CSUMB prior to implementation. The traffic control plan will include any detour plans and/or temporary traffic control devices warranted, per the current version of the California Manual on Uniform Traffic Controls Devices to provide for public safety, maintenance of access, temporary roadway closures, if needed, and construction-area signage. CSUMB shall inform emergency services, campus	Ongoing during Master Plan implementation. Incorporate measure into construction contracts, as warranted.	Ongoing during construction.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	transportation and MST of any roadway or lane closures and alternative travel routes to ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures.			
Water and Wastewater Systems				
PDF-W-1	Water Supply. Pursue development within the campus's water allocation,[3] or campus-generated supply by implementing the following: a. Establish and implement indoor and outdoor water use thresholds below CalGreen Building Code standards for new development. b. Establish internal water modeling for each capital project during the feasibility phase. c. Establish potable water conservation projects in high water demand areas first, such as residential housing and sports facilities. d. Retrofit high-using campus water fixtures with low-flow toilets and urinals. e. Pursue reduced cooling demand and implement a district scale heat recovery chilling system to reduce the water needs of cooling towers. f. Study expansion of non-potable water use to meet non-potable water demands in areas such as new projects, landscaping, toilet flushing, and industrial uses. Establish strategies for expanding methods of irrigating with recycled water supplies, including greywater, stormwater, and reclaimed water from either an outside supplier or self-production. g. Work with partner agencies, such as MCWD, to achieve fiscally responsible water conservation measures. h. Pursue aggressive water conservation and evaluate campus generated water supply possibilities on an ongoing basis to remain within the campus water allocation. i. Maintain an active role in planning regional potable and reclaimed water supplies. If regional water	Ongoing during Master Plan implementation. Incorporate building standards into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	augmentation efforts are infeasible or supply cannot meet campus needs, study the establishment of an on-site water recycling facility, with a corresponding CSUMB-owned collection network.			
PDF-W-2	Low-Impact Development (LID) Approach. Establish all landscapes as self-retaining stormwater management areas by using campus and building scale LID systems to maximize infiltration or retention for irrigation, and minimize stormwater runoff volumes into existing and larger campus-scale drain systems. This will be accomplished by implementing the following: a. Maximize use of building-scale LID design features to protect water quality such as green roofs, rain gardens, swales, stormwater harvesting, infiltration trenches and pervious paving. b. Maximize use of campus-scale LID design features to protect water quality such as porous paving, green streets, recreation fields, swales and basins. c. Infiltrate all storm water runoff within campus boundaries or easements. d. Develop standards for pervious pavement and pavement draining to natural areas as well as maintenance programs to support alternatives to concrete for pathways and outdoor gathering spaces. e. Conduct project-specific drainage analysis and/or consistency analysis during the design of individual developments to demonstrate that all criteria of the CSUMB Stormwater Master Plan are met. Incorporate the above LID features, as needed, into the design of each development project to ensure these criteria are met.	Ongoing during Master Plan implementation. Incorporate project-specific drainage analysis and/or consistency analysis and LID requirements into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-W-3	Storm Water Quality - Implement a regular storm water maintenance program to protect water quality and follow best management practices, including but not limited to the following:	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	a. Minimize use of pesticides and quick release fertilizers and use principles of integrated pest management. Do not use such materials in or near storm water facilities. b. Employ non-chemical controls (biological, physical and cultural controls) before using chemicals to treat a pest problem. c. Maintain compliance with existing standards for special handling, removal, and disposal of hazardous materials to an approved location during any improvements to water supply and distribution systems when undertaken by the University, or by others on University Property.			
Energy Systems and GHG Reduction				
PDF-E-1	Carbon Neutrality. Strive to meet the Second Nature Climate Commitment of achieving carbon neutrality for scope 1 and 2[4] emissions by 2030, as described in the Campus Sustainability Plan and its Carbon Neutrality Roadmap (CSUMB 2020), and strive to approach net positive energy[5] by implementing the following: a. Pursue limiting use of natural gas to only lab space and select food preparation areas, and sourcing heating needs from renewable or electric sources. (This could be achieved through Central Plant Expansion and Heat Pump Conversion Project identified in the Carbon Neutrality Roadmap.) b. Establish targeted applications for alternative energy sourcing when resources permit. If additional solar generation is developed, one priority application involves panel arrays as shade structures over parking lots, bus and bike shelters and walkways. For example, add solar on top of the Seventh Avenue parking lot. c. Establish the baseline embodied carbon footprint of each new development during the CSU Feasibility Study phase of a project and develop strategies for	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	reducing this footprint and funding any additional associated costs as part of the Project. d. Pursue multiple financing strategies for infrastructure and building improvements. e. Pursue potential participation in a CSU system Community Choice Aggregation (CCA) program,[6] as an energy procurement option and as a vehicle for net positive energy, if this option can enhance campus-based strategies. f. Explore public-private partnerships to fund renewable energy infrastructure. g. Create a renewable energy strategic plan to align growth, phasing, and infrastructure investment. h. Pursue low-emission or alternative fuel vehicles, when vehicle type allows, for campus service, department and program support fleet vehicles.			
PDF-E-2	Design for Energy Efficiency. Design and retrofit infrastructure and buildings to minimize energy use by implementing the following: a. Establish district-scale on-site energy production and distribution strategies rather than building by building. b. Study expansion of the district-scale electrical, chilled and hot water distribution, to serve building heating and cooling needs. c. Achieve a minimum 15% energy performance improvement target goal over current Title 24 code in new construction. d. Achieve a minimum 5% energy performance improvement target goal over 2016-17 usage in existing facilities in aggregate. e. Establish passive heating and cooling and thermal-mass building designs to reduce reliance on HVAC and ultimately to reduce required HVAC capacity. f. Establish standards for campus-scale energy conversion systems by cost, performance, and the	Ongoing during Master Plan implementation. Incorporate project-specific energy requirements into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	extent to which they can meet the campus carbon neutrality and net zero energy goals. g. CSUMB shall design and build all new buildings and major renovations to meet minimum requirements equivalent to LEED "Silver," while aiming for the highest green building energy standards possible, which includes designing systems to meet LEED Platinum or equivalent, or net zero energy (on a campus wide basis).			
PDF-E-3	Manage Energy Supply. Meet future demand for energy in a safe, reliable, and cost-effective manner by implementing the following: a. Maintain and perform regular energy efficiency upgrades to reduce energy use and maintain system resilience. b. Recommission major buildings every five years, as funding is available. c. Establish energy system efficiency retrofit projects with the assistance of the UC/CSU Energy Efficiency Partnership and programs like Savings by Design or other energy incentive programs. d. Establish funding mechanisms and replacement and rehabilitation thresholds for existing energy systems as they near the end of their usable life.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-E-4	Promote Resiliency. Expand or improve systems to be resilient to extreme weather or natural disasters and provide undisrupted service. Move overhead power lines underground and encourage Pacific, Gas & Electric to do the same with their overhead power lines on campus. Develop additional loop systems and points of supply to provide redundancy and reliability.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
Design Themes and Special Area Plans				
PDF-D-1	Building and Design Guidelines. The campus and/or Institutional Partners will implement the Design Themes and associated design concepts included in the Master Plan	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	Guidelines as all building and landscape projects are pursued. Additionally, FORA RUDG will be voluntarily complied with in all future improvements along the campus edges.	Incorporate design requirements into design contracts, as warranted.	Confirm measure is being implemented during design review.	Planning and Development
PDF-D-2	Design Review. Establish a Design Review Committee (DRC) on campus to review project architectural and stylistic consistency and contribution to the campus.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-D-3	Building Height Limits. Within the campus core, new buildings would not exceed the existing Library's elevation above mean sea level (approximately 310 feet above sea level). Outside of the campus core, new buildings would not exceed 5 stories.	Ongoing during Master Plan implementation. Incorporate height limits into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-D-4	Accessibility. Expand wayfinding cues for sight and mobility impaired pedestrians. Establish interior design standards for supplemental accessible design elements, such as automatic door push plates.	Ongoing during Master Plan implementation. Incorporate standards into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-D-5	Safety. Maintain lines of sight and incorporate crime prevention design principles into formal open spaces for safety and ease of surveillance.	Ongoing during Master Plan implementation. Incorporate standards into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-D-6	Waste Collection and Diversion. Continue to implement and update the CSUMB 2018 Materials Management and Conservation Plan and the Campus Sustainability Plan to achieve a solid waste diversion rate of 90% by 2035, including but not limited to the hiring of a full-time, zero-waste staff person to oversee and implement the plan. Related to design, centralize, conceal, color code and consistently sign waste collection across several buildings and exterior locations to reduce pick-up locations and cost. Exterior dumpsters should	Ongoing during Master Plan implementation. Incorporate standards into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
	be shielded from view by pedestrians and building occupants by landscaping and/or enclosures.			
PDF-D-7	Lighting. Meet Neighborhood Development (LEED ND) light pollution reduction requirements in all new building and pathway development. The LEED ND requirements reference the Engineering Society and International Dark Sky Association (IES/IDA) model light ordinance user guide (IES/IDA 2011). Lighting power density will adhere to Title 24 maximums. New lighting at the replacement stadium shall use LED lights, reflectors, visors, shields and customized optics and technology to precisely aim and illuminate the field.	Ongoing during Master Plan implementation. Incorporate lighting requirements into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-D-8	Noise. During the design phase of new buildings CSUMB, or its designee will prepare an acoustical study(s) of exterior proposed sound emissions generated from new stationary noise sources (outdoor-exposed HVAC systems, testing of emergency generators, etc.) that are to be located near existing sensitive receptor locations, including such receptor locations within 150 feet of new stationary noise sources. The study will inform measures to reduce noise to acceptable levels for nearby sensitive receptors. Additionally, the acoustical study(s) will determine the need for sound insulation within new buildings with noise-sensitive occupants (e.g., residences, classrooms) to ensure that exterior-to-interior noise intrusion from traffic or operation of stationary sources does not cause interior background sound levels of habitable spaces to exceed 45 dBA CNEL. Best engineering practices will be implemented in the design and selection of these systems and their noise-producing components, as well as means for noise control or sound abatement that would be expected to reduce noise from such stationary sources to comply with applicable standards at existing sensitive receptor locations.	Ongoing during Master Plan implementation. Incorporate project-specific acoustical studies and noise control measures into design contracts, as specified.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development

Impact	Mitigation Measure / Project Design Feature	Implementation Timing	Monitoring Frequency	Responsible Party
PDF-D-9	Signage. Establish ecological, sustainable and historical interpretive signage within the natural open space and connecting landscape and near, and as part of, new pathway development. Highlight and educate users about the natural and cultural heritage of CSUMB property. Prohibit large advertising signs on campus, except those that may be associated with bus shelters.	Ongoing during Master Plan implementation. Incorporate signage requirements into design contracts, as warranted.	Ongoing Confirm measure is being implemented during design review.	CSUMB Campus Planning and Development
PDF-D-10	Special Area Plans. The campus will pursue implementation of the special area plans included in the Master Plan Guidelines for the Main Quad, Divarty Pedestrian Mall, Inter-Garrison Road, the Crescent, Sustainability Commons and the Athletics and Recreation District.	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development
PDF-D-11	Emerging Living Community. To the extent feasible, maintain status of an "emerging living community" as defined by "Living Community Challenge Plan," and described in the Master Plan Guidelines and the Living Community Challenge Vision Plan.[7]	Ongoing during Master Plan implementation.	Ongoing	CSUMB Campus Planning and Development

Notes:

Prior to its dissolution, FORA adopted Regional Urban Design Guidelines (RUDG) that govern the visual quality of Fort Ord. The guidelines focus on enhancing the region making this area attractive and inviting to ensure the economic vitality of the entire Monterey Peninsula. The guidelines establish criteria for road design, setbacks, building height, landscaping, signage, and other matters of visual importance.

Community Housing Partners are made up of educational partners and military partners. Per the housing property conveyance to the CSU, CSU agreed to permit active duty military personnel, Department of Defense civilian employees and their families residing in on-campus housing units to remain until such time as 90% of the units are occupied by students and/or CSU employees and students and/or employees of other area institutions of higher education.

The campus has been allocated 1,035-acre feet per year (AFY) of potable water and contracted for 87 AFY of recycled water from MCWD for landscape irrigation.

Scope 1 carbon emissions are directly from fuel burned on campus (primarily natural gas for heating) or in university-owned vehicles. Scope 2 carbon emissions are associated with energy purchased by CSUMB and generated elsewhere, primarily grid electricity used on campus (CSUMB 2020).

A net-positive energy building produces more energy than it consumes. These types of buildings may consume energy from electric utilities, but the energy they export to the energy grid equals or exceeds their consumption.

A Community Choice Aggregation program is an alternative to the investor-owned utility energy supply system in which local entities aggregate the buying power of individual customers within a defined jurisdiction in order to secure alternative energy supply.

The Living Community Challenge is a framework for master planning, design, and construction and a tool to create a symbiotic relationship between people and all aspects of the built environment that was developed by the International Living Future Institute and strives to create a "socially just, culturally rich, and ecologically restorative" community.

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Appendix B

Biological Resources Existing Conditions Report

DRAFT

Biological Resources Existing Conditions Report

Taylor Science Building Project

SEPTEMBER 2024

Prepared for:

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APPENDICES

Acronyms and Abbreviations

Acronym	Definition
BSA	biological study area
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CRPR	California Rare Plant Rank
CSUMB	California State University, Monterey Bay
EIR	Environmental Impact Report
HMP	habitat management plan
MM	Mitigation Measure
USFWS	U.S. Fish and Wildlife Service

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1 Introduction

At the request of California State University, Monterey Bay (CSUMB), Dudek conducted a biological resources existing conditions assessment for the Taylor Science Building Project (project), which consists of constructing one educational facility on approximately 1.5 acres of land in the northern portion of the existing CSUMB campus. The purpose of this biological resources existing conditions report is to identify and analyze current biological resource conditions present on the 1.5-acre parcel and approximately 1 acre of proposed staging areas (totaling 2.5 acres) associated with the project, plus an approximately 500-foot buffer (biological study area [BSA]), to support compliance with the programmatic CSUMB Master Plan Environmental Impact Report (EIR) (SCH No. 2017051042). The project was identified and analyzed within the EIR as a near-term development project. This report summarizes the findings of the assessment, identifies potential sensitive biological resources within the BSA that should be avoided or mitigated during construction activities, and provides recommendations to avoid impacts to biological resources prior to and during proposed construction activities consistent with the CSUMB Master Plan EIR.

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2 Project Site Location and Description

The project site consists of a single approximately 1.5-acre parcel with 1 acre of proposed staging areas (totaling 2.5 acres) in the northeast quadrant of the CSUMB campus (Figures 1, Project Vicinity, and Figure 2, Project Site; all figures are in Appendix A). The BSA established for the project encompasses the surrounding campus development and open spaces within approximately 500 feet of the project site, totaling approximately 29.8 acres of land. The BSA is within the Marina U.S. Geological Survey 7.5-minute quadrangle.

The BSA is located within the CSUMB campus and contains mostly developed campus land consisting of academic buildings, parking lots, and maintained open space. Common vegetation within the BSA includes non-native grassland and ornamental plantings. Surrounding land uses consist of urban academic development and open space.

The topography of the BSA is mostly flat, with elevation ranging from approximately 216 to 244 feet above mean sea level. Monterey County experiences a coastal Mediterranean climate with cool, dry summers and cold, wet winters, with frequent fog influence from the Pacific Ocean. The average annual maximum temperature is 65.0°F, and the average minimum temperature is 48.0°F (WRCC 2024). Average annual precipitation is 19.73 inches, most of which falls between November and April (WRCC 2024).

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3 Methods

3.1 Literature Review

Special-status species potentially occurring in the BSA were identified through a literature search of the following sources: the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2024), the California Native Plant Society's Rare Plant Inventory (CNPS 2024a), and the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online planning tool (USFWS 2024a). Searches of the above-referenced databases were completed for the seven U.S. Geological Survey 7.5-minute quadrangles surrounding the BSA: Marina, Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels.

For this report, special-status species are defined as (1) plants or wildlife listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act; (2) plants or wildlife listed or candidates for listing as threatened or endangered under the California Endangered Species Act; (3) wildlife designated as Fully Protected under Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code; (4) wildlife designated as a California Species of Special Concern by CDFW; or (5) plants assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B by the California Native Plant Society. The California Rare Plant ranking system includes six rarity and endangerment ranks for categorizing plant species of concern, as follows:

- CRPR 1A – Plants presumed to be extinct in California
- CRPR 1B – Plants that are rare, threatened, or endangered in California and elsewhere
- CRPR 2A – Plants presumed to be extinct in California, but more common elsewhere
- CRPR 2B – Plants that are rare, threatened, or endangered in California, but more common elsewhere
- CRPR 3 – Plants about which more information is needed (a review list)
- CRPR 4 – Plants of limited distribution (a watch list)

Plants with CRPR 1A, 1B, 2A, or 2B may qualify as endangered, rare, or threatened species within the definition of California Environmental Quality Act (CEQA) Guidelines Section 15380. CDFW recommends that potential impacts to CRPR 1 and 2 species be evaluated in CEQA review documents. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380, but these species may be evaluated on a case-by-case basis.

3.2 Field Assessment

On April 25, 2024, Dudek biologists Laura Burris and Tara Johnson-Kelly conducted a reconnaissance-level field assessment of the BSA to identify and describe existing biological resources, including vegetation communities, wildlife habitat, aquatic resources (e.g., wetlands), and sensitive resources. Sensitive resources include vegetation communities that are considered sensitive by CDFW (2023a), special-status species and their habitat, and aquatic resources potentially subject to regulatory jurisdiction (e.g., waters of the United States protected under federal Clean Water Act). Determinations of the potential of special-status species to occur were based on a review of habitat types, soils, and elevation preferences, as well as the known geographic range of each species and nearby documented occurrences. Species were determined "not expected to occur" when the BSA was clearly outside the known geographic range of the species or did not contain suitable habitat to support the species.

Biologists conducted the site assessment on April 25, 2024. The assessment included mapping vegetation communities and land cover types within the BSA and assessing habitat suitability for special-status species. The site assessment was conducted on foot, using binoculars to visually assess the entire BSA from existing access roads and trails. Vegetation communities and sensitive biological resources were mapped using the ArcGIS Field Maps mobile app (ESRI 2024). Representative photographs are included in Appendix B, Representative Site Photographs.

All plant species were identified to the lowest taxonomic group possible. Nomenclature for plant species follow the Jepson Manual, Vascular Plants of California, Second Edition (Jepson Flora Project 2024). Wildlife species detected by sight, calls, tracks, scat, or other signs were recorded into a field notebook and/or a digital survey form. Wildlife species not observed, but expected to use the BSA, were identified based on known habitat preferences and regional distribution.

No formal wetland delineation or focused surveys for special-status animal species were conducted. The site assessment was sufficient to generally describe aquatic features in the BSA potentially subject to regulation by the U.S. Army Corps of Engineers, Central Coast Regional Water Quality Control Board, and/or CDFW.

3.3 Focused Botanical Survey

Concurrent with the field assessment, biologists conducted a reference check for special-status plants to inform the focused botanical surveys. Within the immediate vicinity of the CSUMB campus, the biologists identified Monterey spineflower (*Chorizanthe pungens* var. *pungens*), sandmat manzanita (*Arctostaphylos pumila*), Monterey ceanothus (*Ceanothus rigidus*), and Eastwood's goldenbush (*Ericameria fasciculata*). These species were therefore the target of the focused surveys within the BSA and project site. Meandering intuitive pedestrian transects were used to assess the BSA for rare plant occurrences and potentially suitable habitat. No special-status plant species were detected during the focused botanical survey of the BSA.

4 Existing Conditions

4.1 Vegetation Communities and Land Cover Types

Overall, the BSA consists of a developed college campus with academic buildings, roads, ornamental vegetation, and small areas of open space. Six vegetation communities or land cover types (described below and in Figure 3, Vegetation Communities and Land Covers) were observed and mapped during the site assessment and/or desktop review using the classifications described in A Manual of California Vegetation (CNPS 2024b). This classification system focuses on mapping vegetation at the two lowest levels of the National Vegetation Classification System hierarchy: associations and alliances. Associations are the most granular level and are grouped into alliances. Vegetation alliances and/or associations with a state rarity ranking of S1 through S3 are considered highly imperiled and designated as sensitive natural communities by CDFW (2023a). Some communities may not be considered sensitive at the alliance level but may contain associations that are.

4.1.1 Non-Native Grassland

The non-native grassland vegetation community (*Avena* spp.–*Bromus* spp. herbaceous semi-natural alliance) is a general vegetation classification covering a variety of non-native grasslands dominated by *Avena* and *Bromus* species. Within the BSA, this community is dominated by non-native grasses including ripgut brome (*Bromus diandrus*), slender oat (*Avena barbata*), rat-tail fescue (*Festuca myuros*), and Arabian schismus (*Schismus arabicus*). This alliance is not classified as a sensitive vegetation community on CDFW's California Natural Community List (CDFW 2023a). This vegetation community is found in several undeveloped locations throughout the BSA, totaling approximately 4.6 acres, and is subject to regular mowing.

4.1.2 Ice Plant Association

The ice plant vegetation community (*Carpobrotus* [*edulis*] association) is an association of the ice plant mats alliance. This association is dominated by non-native hottentot fig (*Carpobrotus edulis*) with few other species present. This association is not classified as a sensitive vegetation community on CDFW's California Natural Community List (CDFW 2023a). This vegetation community is found in one small undeveloped patch in the northern part of the BSA, totaling approximately 0.7 acres.

4.1.3 Coast Live Oak and Grass Association

The coast live oak and grass vegetation community (*Quercus agrifolia*/grass association) is an association of the coast live oak forest and woodland alliance. This association is dominated by coast live oak (*Quercus agrifolia*) in the tree canopy and non-native grasses in the understory. This association is not classified as a sensitive vegetation community on CDFW's California Natural Community List (CDFW 2023a). This community is found in a few undeveloped patches in the north and south parts of the BSA, totaling approximately 4.6 acres.

4.1.4 Ornamental Plantings

The ornamental plantings landcover consists of a variety of native and non-native plants that were intentionally planted during the development of the campus. These consist of native species such as Monterey cypress

(*Hesperocyparis macrocarpa*) and California buckeye (*Aesculus californica*), as well as non-native species such as strawberry tree (*Arbutus unedo*), roses (*Rosa* sp.), and non-native turf grasses such as Bermudagrass (*Cynodon dactylon*). This landcover was found throughout the BSA as landscape surrounding academic buildings, totaling approximately 5.9 acres.

4.1.5 Barren

The barren landcover includes open, barren patches of coarse loose sand with little vegetation cover. This landcover was found in one narrow strip in the southeast quadrant of the BSA, totaling approximately 0.2 acres.

4.1.6 Developed

The developed land cover includes academic buildings, paved roads and pedestrian walkways, parking lots, and other infrastructure for the college campus. Developed is the most common land cover within the BSA, covering approximately 13.8 acres. There was little to no vegetation associated with this land cover.

4.2 Soils and Hydrology

One soil type occurs within the BSA: Oceano loamy sand, 2% to 15% slopes (USDA 2024a; Figure 4, Soils). This soil is not considered hydric and is not known to support edaphic special-status plant species (i.e., the soils of the site are neither serpentine nor alkaline) (USDA 2024a). Soils in the BSA have likely been degraded over time from urban development activities including the introduction of petrochemicals from roadway runoff.

The BSA lies within the Monterey Bay Hydrologic Unit (Hydrologic Unit Code 12: 180600150305) (USGS 2024; Figure 5, Hydrologic Setting). No aquatic features were identified in the BSA during the reconnaissance-level survey, and there are no mapped wetlands or watercourses nearby (USGS 2024; USFWS 2024b).

4.3 Plant and Wildlife Species Observed

The BSA contains both non-native and native species; of the plants identifiable to species, a total of 93 species (43 native [46%] and 50 non-native [54%]) were recorded in the BSA (Appendix C, Plant Species Compendium). Common plant and tree species included coast live oak, Monterey cypress, hottentot fig, slender oat, and ripgut brome, among others.

Wildlife species observed or expected to occur within the BSA are those adapted to coast live oak savannah, non-native grassland, disturbed habitats, and urban edges that experience moderate to high levels of human activity. A total of eight wildlife species were observed during the site assessment: bushtit (*Psaltriparus minimus*), house finch (*Haemorhous mexicanus*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), western bluebird (*Sialia Mexicana*), Bewick's wren (*Thryomanes bewickii*), spotted towhee (*Pipilo maculatus*), and California ground squirrel (*Otospermophilus beecheyi*) (Appendix D, Wildlife Species Compendium). Other common bird species that may occur include red-tailed hawk (*Buteo jamaicensis*), California towhee (*Melozone crissalis*), Brewer's blackbird (*Euphagus cyanocephalus*), and chestnut-backed chickadee (*Poecile rufescens*), among others. Other common mammal species such as black-tailed deer (*Odocoileus hemionus*), coyote (*Canis latrans*), and raccoon (*Procyon lotor*) are likely to occur. While no amphibians or reptiles were observed, common species such

as Sierran treefrog (*Pseudacris sierra*), California slender salamander (*Batrachoseps attenuatus*), gopher snake (*Pituophis catenifer*), and western fence lizard (*Sceloporus occidentalis*) are likely to occur.

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5 Results

5.1 Special-Status Plant and Wildlife Species

5.1.1 Special-Status Plant Species

The CNDDB and California Native Plant Society's Rare Plant Inventory identified 56 special-status plant species as occurring or potentially occurring in the BSA vicinity (Appendix E, Special-Status Plant Species Potential to Occur). Of these, 43 were eliminated from further consideration due to a lack of suitable habitat or edaphic conditions (i.e., alkaline or serpentine soils) or the location of the BSA being outside a species' known geographic or elevation range. The 13 remaining species—Hickman's onion (*Allium hickmanii*), Toro manzanita (*Arctostaphylos montereyensis*), pink Johnny-nip (*Castilleja ambigua* var. *insalutata*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Monterey spineflower (*Chorizanthe pungens* var. *pungens*), seaside bird's beak (*Cordylanthus rigidus* ssp. *littoralis*), Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*), Point Reyes horkelia (*Horkelia marinensis*), Contra Costa goldfields (*Lasthenia conjugens*), marsh microseris (*Microseris paludosa*), Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*), Santa Cruz clover (*Trifolium buckwestiorum*), and Pacific Grove clover (*Trifolium polyodon*)—have a low potential to occur within the BSA and are not discussed further.

While Monterey cypress was recorded on the project site, these trees were intentionally planted for ornamental purposes and are not naturally occurring. The project site is out of elevational range for the species and lacks suitable habitat. Thus, this species is not expected to occur naturally on the project site. A full discussion of potential to occur justification is provided in Appendix E.

5.1.2 Special-Status Wildlife Species

The CNDDB and USFWS Information for Planning and Consultation tool identified 45 special-status wildlife species as occurring or potentially occurring in the BSA vicinity. Of these, 37 species were eliminated from consideration due to the absence of suitable habitat within the BSA or the BSA's location being outside of their known range (Appendix F, Special-Status Wildlife Species Potential to Occur). Four of the remaining eight species—globose dune beetle (*Coelus globous*), monarch butterfly (*Danaus plexippus pliexippus*), white-tailed kite (*Elanus leucurus*), and American badger (*Taxidea taxus*)—have a low potential (i.e., are unlikely) to occur within the BSA and are not discussed further. The four remaining species are determined to have a moderate to high potential to occur within the BSA based on the presence of suitable habitat and are discussed below. A full discussion of potential to occur justification is provided in Appendix F. There is no federally designated critical habitat for any listed species within the BSA (USFWS 2024c).

5.1.2.1 Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a candidate for listing as endangered or threatened under the California Endangered Species Act. Crotch's bumble bee inhabits open grassland and scrub habitats and is commonly associated with the following plant families: *Fabaceae*, *Apocynaceae*, *Asteraceae*, *Lamiaceae*, *Hydrophilidae*, *Asclepiadoideae*, and *Boraginaceae*. Example food plants include the genera *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia*. This species nests underground and overwinters in soft, disturbed soil. The flight

period for queens occurs from late February to late October, peaking in early April and again in July. The flight period for workers and males occurs from late March through September, peaking in early July (Xerces 2018).

Crotch's bumble bee has a moderate potential to occur in the BSA. The BSA has some floral resources for foraging and some small mammal burrows for nesting. Other bumble bee species were observed on the site during the reconnaissance survey in April 2024, although there are no CNDDB occurrences for Crotch's bumble bee within 5 miles of the project site (CDFW 2024).

5.1.2.2 Smith's Blue Butterfly

Smith's blue butterfly (*Euphilotes enoptes smithi*) is federally endangered and is included in the Fort Ord Habitat Management Plan (HMP) (USACE 1997). This species occurs in coastal and inland sand dunes, serpentine grasslands, and coastal cliffside chaparral (USFWS 1984, 2020). All life stages are strongly tied to two species of host plants: seacliff (dune) buckwheat[1] (*Eriogonum parvifolium*) and coast buckwheat (*E. latifolium*) (USFWS 1984, 2020). The flight season of the metapopulation around Monterey Bay is generally from mid-June to early August, with adults living for approximately 1 week near or on buckwheat flowerheads (USFWS 2020). Females deposit eggs on the flowerheads, which hatch 4–8 days later and mature in approximately 1 month. The pupae drop into the leaf litter and sand at the base of the host plants to overwinter, emerging as adults the following summer (USFWS 2020).

Smith's blue butterfly has moderate potential to occur in the BSA. Several patches of seacliff buckwheat were observed in the eastern half of the BSA along 6th Avenue during Dudek's April 2024 site assessment (Figure 3). The Biological Resources Report for the CSUMB Master Plan EIR also documented these occurrences during focused surveys for Smith's blue butterfly habitat (Denise Duffy & Associates 2022). Additionally, there are five CNDDB occurrences of Smith's blue butterfly within 5 miles of the BSA; the nearest documented occurrence is 1.6 miles west of the project site, a historical record from 1992 (Occ. No. 49; CDFW 2024).

5.1.2.3 Northern California Legless Lizard

Northern California legless lizard (*Anniella pulchra*) is a California Species of Special Concern and is included in the Fort Ord HMP (USACE 1997). It typically inhabits sandy or loose loamy soils in coastal sand dunes, coastal scrub, chaparral, pine-oak woodland, desert scrub, open grassland, and riparian areas (Thomson et al. 2016; Zeiner et al. 1990). It forages for insect larvae, small insects, and spiders at the base of shrubs (especially native shrubs) or other vegetation in loose sandy soil or leaf litter (Thomson et al. 2016; Zeiner et al. 1990). It occurs at elevations from near sea level to 1800 meters (6,000 feet) (Zeiner et al. 1990).

Northern California legless lizard has a high potential to occur in the BSA. The BSA has many patches of loose and sandy soil and a variety of vegetation for foraging. There are 27 CNDDB occurrences of this species within 5 miles of the BSA, the closest of which is approximately 0.5 miles to the north from 2009 (Occ. No. 36; CDFW 2024).

[1] The *California State University Monterey Bay Master Plan Environmental Impact Report* (CSUMB 2022) uses the common name of dune buckwheat for *Eriogonum parvifolium*; however, the USDA PLANTS Database (USDA 2024b) and Jepson Herbarium (Jepson Flora Project 2024) use the common name seacliff buckwheat. Seacliff buckwheat is also the common name used by USFWS in documents on Smith's blue butterfly (USFWS 1984, 2020).

5.1.2.4 Blainville's Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is a California Species of Special Concern generally occurring in sandy areas, washes, and floodplains in a variety of habitats including sage scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest (Thomson et al. 2016; Zeiner et al. 1990). It forages primarily on ants but will also feed on small beetles and other insects (Thomson et al. 2016; Zeiner et al. 1990). In the coastal northern portion of its range, the species typically occurs at elevations below 600 meters (2,000 feet) (Zeiner et al. 2016).

Blainville's horned lizard has moderate potential to occur in the BSA. The BSA has many patches of open sandy areas within the non-native grassland and coast live oak habitats that may provide suitable foraging habitat and shelter for this species. There are 5 CNDDB occurrences of this species within 5 miles of the BSA, the closest of which is approximately 1.4 miles to the northeast from 1992 (Occ. No. 591; CDFW 2024). The species has also been observed throughout Fort Ord National Monument (Denise Duffy & Associates 2022).

5.2 Nesting Birds

In California, all native birds and active bird nests (with eggs or young) are protected by Sections 3503 and 3503.5 of the California Fish and Game Code and the federal Migratory Bird Treaty Act of 1918. The trees and shrubs within and adjacent to the BSA provide abundant nesting habitat for several native resident and migratory bird species such as bushtit (*Psaltriparus minimus*), house finch (*Haemorhous mexicanus*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), western bluebird (*Sialia mexicana*), and spotted towhee (*Pipilo maculatus*). A Bewick's wren (*Thryomanes bewickii*) was observed provisioning young in the coast live oak woodland to the south of the project site within the BSA. Several other species of songbird were observed singing (a sign of territory establishment) during the April 2024 site assessment.

5.3 Sensitive Natural Communities

Sensitive natural communities are vegetation communities that are of limited distribution statewide or within a county or region. A list of sensitive natural communities in California is maintained by CDFW (2023a) based on the rarity of, and potential threats to, these communities in California. Communities with a state rarity ranking of S1 through S3 in CDFW's California Natural Community List (CDFW 2023a) are considered highly imperiled, and project impacts on high-quality occurrences of these communities are typically considered significant under CEQA. Sensitive natural communities often include riparian vegetation along rivers, streams, and lakes. As described in Section 4.1, there are no vegetation communities in the BSA that are considered sensitive natural communities by CDFW (2023a). While Monterey cypress was recorded on the project site, these trees were intentionally planted for ornamental purposes and are thus not considered part of the California coastal cypress woodland vegetation community, which would be classified as a sensitive natural community (CDFW 2023a).

5.4 Potentially Jurisdictional Aquatic Resources

No aquatic resources were identified during the reconnaissance-level survey in April 2024. Although no jurisdictional delineation was conducted, the survey was sufficient to identify and describe any aquatic features that may have been present and that may have been subject to jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act, the Central Coast Regional Water Quality Control Board pursuant to

Section 401 of the Clean Water Act or the California Porter-Cologne Act (Porter-Cologne), and/or CDFW under Section 1602 of the California Fish and Game Code.

6 Summary of Site Constraints and Recommendations

6.1 Special-Status Wildlife

Four special-status wildlife species—Crotch's bumble bee, Smith's blue butterfly, Northern California legless lizard, and Blainville's horned lizard—have moderate to high potential to occur on or in the vicinity of the BSA (Section 5.1.2).

6.1.1 Crotch's Bumble Bee

As previously described, Crotch's bumble bee has moderate potential to occur in the BSA, with suitable habitat for foraging and nesting present. Crotch's bumble bee may be indirectly impacted by the project through the removal of floral resources for foraging or directly injured or killed through the destruction of active colonies during ground disturbance activities. Crotch's bumble bee is not included in the Fort Ord HMP, and as such, CSUMB Master Plan EIR Mitigation Measure (MM) BIO-1b (Project-Specific Biological Assessments [Non-HMP Species]) applies as detailed below:

MM-BIO-1b: Project-Specific Biological Assessments (Non-HMP Species). The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact a special-status species or their habitat. A report describing the results of the surveys shall be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report shall include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for special-status species to occur or special-status species observed, if any; 3) maps of the locations of special-status species or potential habitat, if observed; and 4) recommended mitigation measures, if applicable. If special-status species are determined not to occur at the development site, no additional mitigation is necessary.

MM-BIO-1b directs that a project-specific biological assessment shall "recommend measures necessary to avoid, minimize, and/or compensate for identified impacts" (CSUMB 2022). This report constitutes the project-specific biological assessment cited in MM-BIO-1b. Implementing the following measures will ensure consistency with the CSUMB Master Plan EIR MM-BIO-1b and impact conclusions.

- Conduct pre-construction nesting surveys prior to any vegetation removal or ground disturbance activities scheduled during the colony active period (April 1 through August 31). Surveys should be conducted by a qualified biologist in accordance with CDFW's 2023 Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023b).
- The pre-construction survey shall be conducted within 30 calendar days prior to the start of project construction activities and shall include a minimum of three visits, a minimum of 1 week apart. The qualified biologist shall submit the results of the pre-construction survey to CDFW for review and written approval prior to initiating any construction activities.

- If Crotch's bumble bees are determined to be present, then a photographic survey following CDFW's 2023 survey guidance shall be required. If additional activities (e.g., capture or handling) are deemed necessary based on photographic surveys, then the qualified biologist shall obtain required authorization via a Memorandum of Understanding or Scientific Collecting Permit pursuant to CDFW's 2023 survey guidance (CDFW 2023b). Survey methods that involve lethal take of species are not acceptable.
- If pre-construction surveys identify active Crotch's bumble bee nest colonies, the qualified biologist shall notify CDFW in writing and establish, monitor, and maintain no-work buffers around the nest(s) and any associated floral resources. The size and configuration of the no-work buffer shall be based on best professional judgement of the biologist. At a minimum, the buffer shall provide at least 50 feet of clearance from construction activities around any nest entrances and maintain disturbance-free airspace between the nest and nearby floral resources. Construction activities shall not occur within the no-work buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for 3 consecutive days indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony).

6.1.2 Smith's Blue Butterfly

As previously described, Smith's blue butterfly has moderate potential to occur within the BSA, with appropriate host plants (seacliff buckwheat) present in the eastern portion of the BSA, ranging from approximately 370 feet northeast to 178 feet east of the limits of disturbance and adjacent to the staging areas. Removal of native buckwheat that may be hosting Smith's blue butterfly eggs or larvae could result in direct mortality of this species, if present, reducing the viability of the local population of this rare species and further contributing to its decline. Removal of host plants would also constitute "take" of the species under the federal Endangered Species Act, defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC 1532[19]). Harm is defined as "any act that kills or injures the species, including significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering" (50 CFR 17.3). Smith's blue butterfly is included in the Fort Ord HMP, and implementation of the CSUMB Master Plan MM-BIO-1g (Smith's Blue Butterfly Habitat Avoidance/ESA Compliance) (CSUMB 2022) will ensure consistency with the CSUMB Master Plan EIR impact conclusions.

MM-BIO-1g: Smith's Blue Butterfly Habitat Avoidance/ESA [Endangered Species Act] Compliance. Smith's blue butterfly habitat (i.e., [seacliff] buckwheat) shall be avoided to the greatest extent feasible. Smith's blue butterfly habitat that will not be impacted by the project shall be protected prior to and during construction to the maximum extent possible using exclusionary fencing and/or flagging. A biological monitor shall supervise the installation of protective fencing/flagging and monitor at least once per week until construction is complete to ensure that the protective fencing/flagging remains intact.

If all Smith's blue butterfly habitat is avoided, no additional mitigation is necessary. If the project will impact Smith's blue butterfly habitat, CSUMB shall comply with the FESA [Federal Endangered Species Act] and obtain necessary authorizations prior to construction due to the assumed presence of the federally listed Smith's blue butterfly. CSUMB shall be required to initiate consultation with the USFWS to receive take authorization. Take authorization would be granted through the issuance of an individual, project-specific incidental take permit. Mitigation for take

likely will require restoration at a 3:1 ratio of impacted habitat. [Seacliff] buckwheat plants and/or seed salvage may also be required prior to ground disturbing activities.

6.1.3 Northern California Legless Lizard

As previously described, Northern California legless lizard has high potential to occur within the BSA, with many areas of sandy, loose soil and shrubs for foraging and shelter. Northern California legless lizard may be indirectly affected by loss of foraging habitat or directly injured or killed by machinery or soil excavation during ground disturbance activities. Northern California legless lizard is included in the Fort Ord HMP, and as such, the CSUMB Master Plan MM-BIO-1a (Project-Specific Biological Assessments [HMP Species]) applies as detailed below:

MM-BIO-1a: Project-Specific Biological Assessments (HMP Species). The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact HMP species or potential habitat (HMP Species include: California tiger salamander, Smith's blue butterfly, Northern California legless lizard, Monterey ornate shrew, Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's beak, sand-loving wallflower, Eastwood's goldenbush and Yadon's piperia). A report describing the results of the surveys shall be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report shall include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for special-status species to occur or special-status species observed, if any; 3) maps of the locations of special-status species or potential habitat, if observed.

If HMP species that do not require take authorization from the USFWS or CDFW are identified within the development site, salvage efforts for these species shall be evaluated by a qualified biologist in coordination with CSUMB CPD Department to further reduce impacts per the requirements of the HMP and BO [Biological Opinion]. Where salvage is determined feasible and proposed, seed collection should occur from plants within the development site and/or topsoil should be salvaged within occupied areas to be disturbed. Seeds shall be collected during the appropriate time of year for each species by qualified biologists. The collected seeds and topsoil shall be used to revegetate temporarily disturbed construction areas and reseeding and restoration efforts on- or off-site, as determined appropriate by the qualified biologist and CSUMB CPD Department. For impacts to the HMP species within the development site that do require take authorization from the USFWS and/or CDFW, the CSUMB CPD Department shall comply with ESA and CESA [California Endangered Species Act] and obtain necessary permits prior to construction If non-HMP special-status species are identified during the implementation of this measure, MM-BIO-1b shall also be implemented.

MM-BIO-1a directs that "For impacts to the HMP species within the development site that do require take authorization from the USFWS and/or CDFW, the CSUMB CPD Department shall comply with ESA and CESA and obtain necessary permits prior to construction" (CSUMB 2022). However, as a California Species of Special Concern, Northern California legless lizard would not require take authorization from CDFW and is therefore unaddressed by MM-BIO-1a, despite being an HMP species. However, this species was analyzed in the CSUMB Master Plan EIR (which includes the Taylor Science Building project), which determined that potential impacts to this species from campus development would be less than significant and would not contribute to the statewide decline of this species or their populations within the former Fort Ord. Habitat preservation within designated off-campus habitat reserves and corridors, habitat management requirements and development restrictions of the

HMP, and deed covenants were determined to be sufficient to mitigate impacts to Northern California legless lizard to a less than significant level (CSUMB 2022).

6.1.4 Blainville's Horned Lizard

As previously described, Blainville's horned lizard has moderate potential to occur within the BSA, with many areas of sandy, loose soil and shrubs for foraging and shelter. Blainville's horned lizard may be indirectly affected by loss of foraging habitat or directly injured or killed by machinery or soil excavation during ground disturbance activities. Blainville's horned lizard is not included in the Fort Ord HMP, and as such, the CSUMB Master Plan EIR MM-BIO-1b (see Section 6.1.1 for MM-BIO-1b) directs that a project-specific biological assessment shall "recommend measures necessary to avoid, minimize, and/or compensate for identified impacts" (CSUMB 2022). This report constitutes the project-specific biological assessment cited in MM-BIO-1b. Implementing the following measures will ensure consistency with the Master Plan EIR MM-BIO-1b and impact conclusions.

- Conduct a focused survey no more than 1 week prior to initial ground disturbance activities within all areas of suitable habitat that will be directly affected by ground disturbance activities and within 50 feet of such areas. Suitable habitat for this species in the BSA consists of sandy, loose soils, especially at the base of shrubs or other vegetation. Suitable habitat areas should be flagged for complete avoidance.
- If avoidance of suitable habitat is not feasible and suitable habitat is within the active work area, then a qualified biologist or biological monitor should be present during all ground disturbance activities. Relocation of individual Blainville's horned lizard may be necessary, in consultation with CDFW as appropriate and with all applicable permits. Species-appropriate exclusion fencing may be necessary to prevent individuals from returning to the active work area if determined to be present.

6.1.5 Nesting and Migratory Birds

As previously described, the BSA provides suitable nesting habitat for a variety of native bird species. Vegetation removal or construction activities conducted during the nesting bird season (typically defined by CDFW as February 1 to August 31) may directly impact nesting and migratory birds through destruction of active nests. Additionally, prolonged loud construction noise and increases in human activity could disturb nesting birds, resulting in nest abandonment or failure. Nesting birds are included in the Fort Ord HMP, and implementation of the CSUMB Master Plan MM-BIO-1c (Pre-Construction Surveys for Protected Avian Species) (CSUMB 2022) will ensure consistency with the CSUMB Master Plan EIR impact conclusions.

MM-BIO-1c: Pre-Construction Surveys for Protected Avian Species. Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species shall be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist shall be retained by the CSUMB CPD Department to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys shall be conducted no more than 14 days prior to the start of construction activities during the early part the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals,

and because some species breed multiple times in a season. The necessity and timing of these continued surveys shall be determined by the qualified biologist based on review of the final construction plans and in coordination with the USFWS and CDFW, as needed for protected avian species nests.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist shall notify the CSUMB CPD Department and an appropriate no-disturbance buffer shall be imposed within which no construction activities or disturbance shall take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

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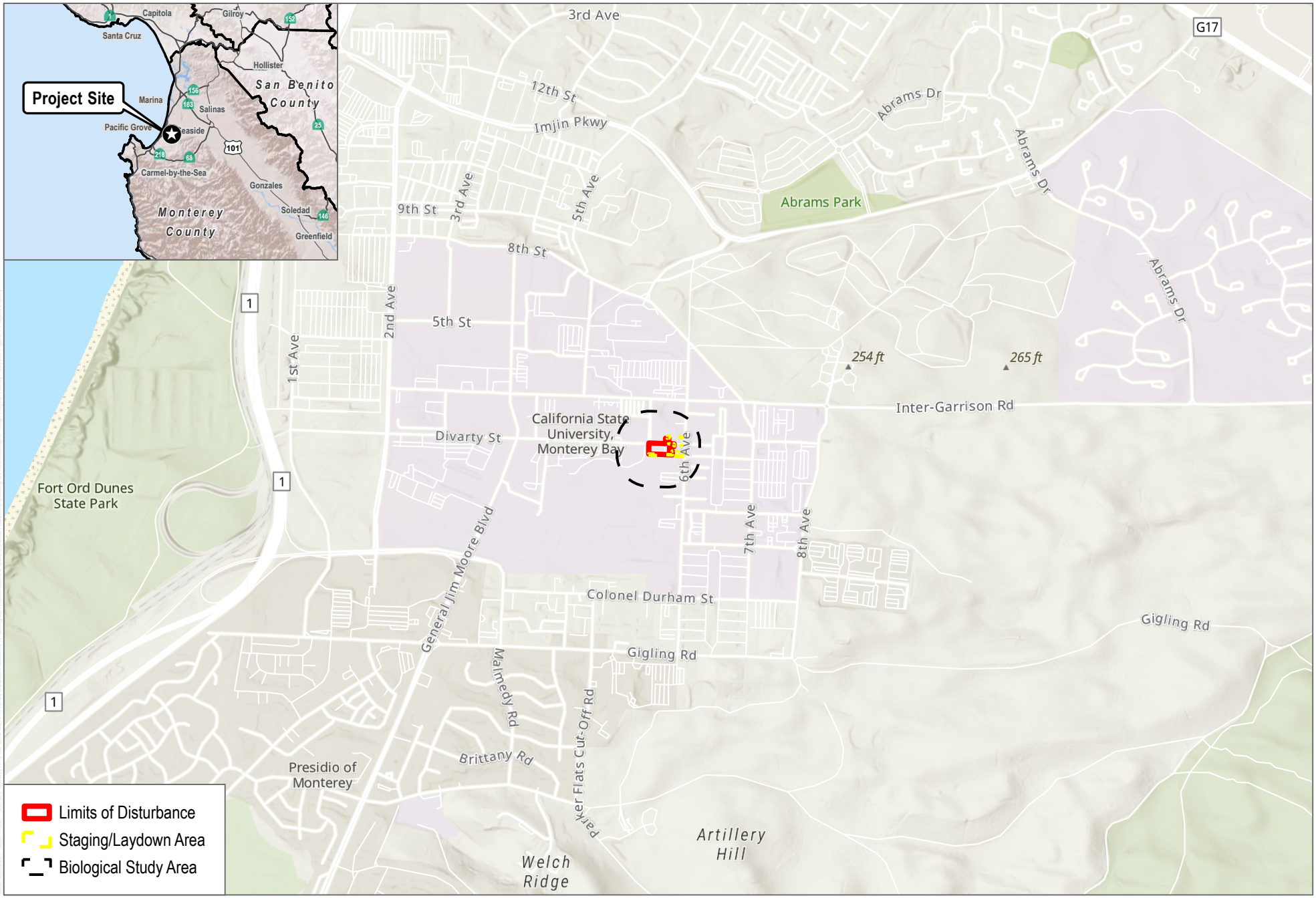
Appendix A
Figures 1–5



SOURCE: USGS National Map 2024

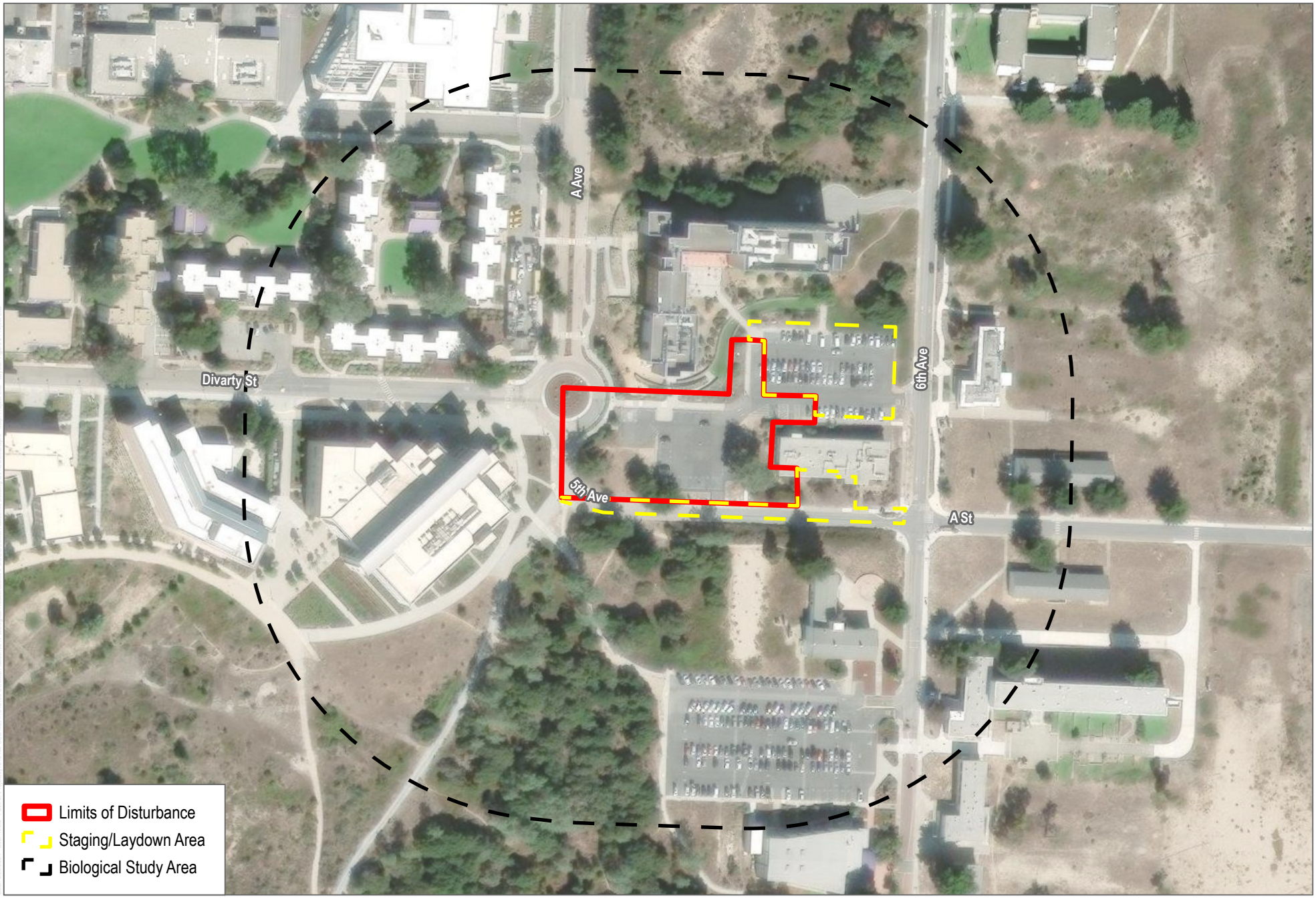
DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Vicinity

CSU Monterey Bay Academic IV Building Project



SOURCE: ESRI Imagery Accessed 2024; OpenStreetMap2019

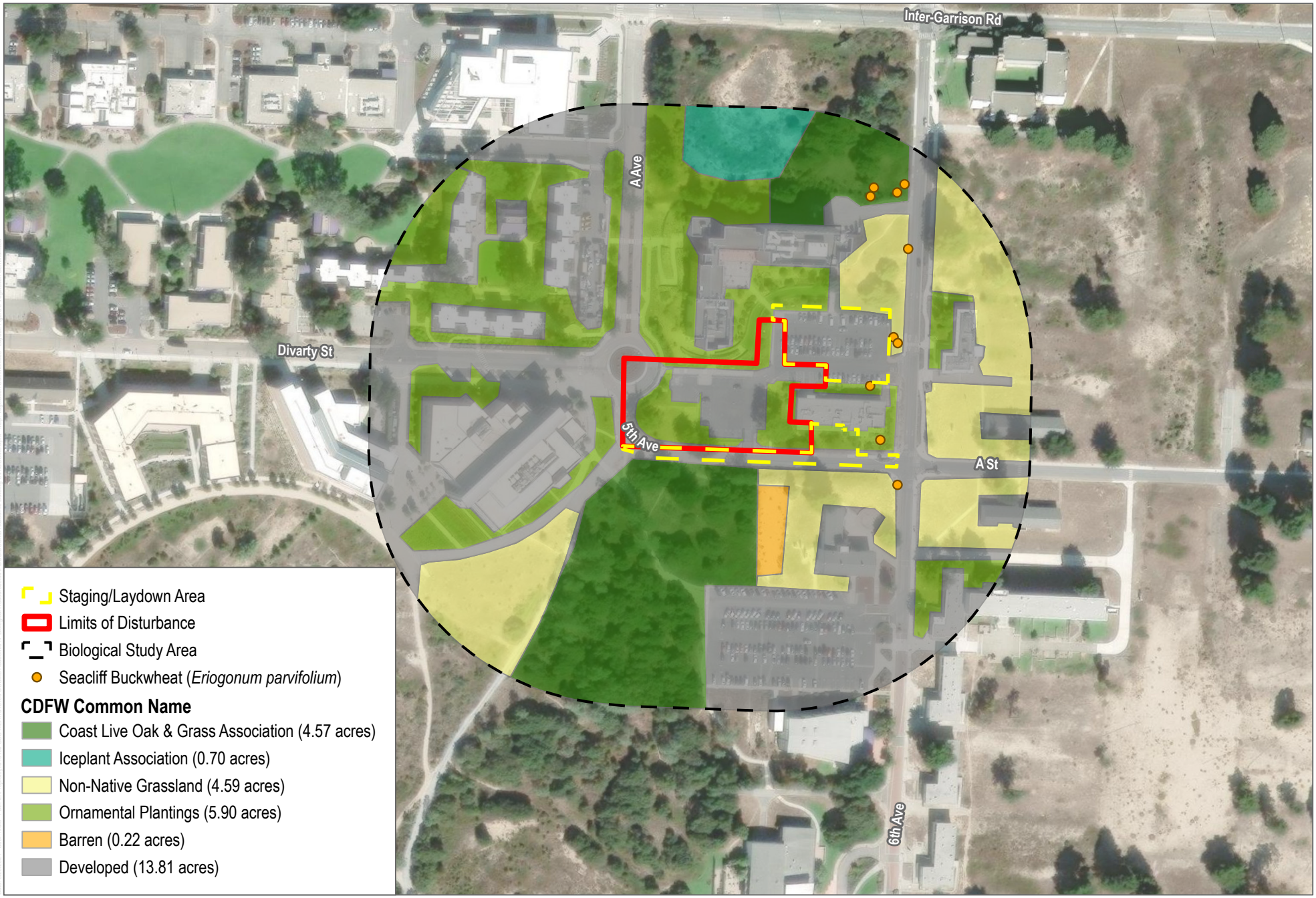
DUDEK

0 100 200 Feet

FIGURE 2

Project Site

CSU Monterey Bay Academic IV Building Project



SOURCE: ESRI Imagery Accessed 2024; OpenStreetMaps 2019, CDFW

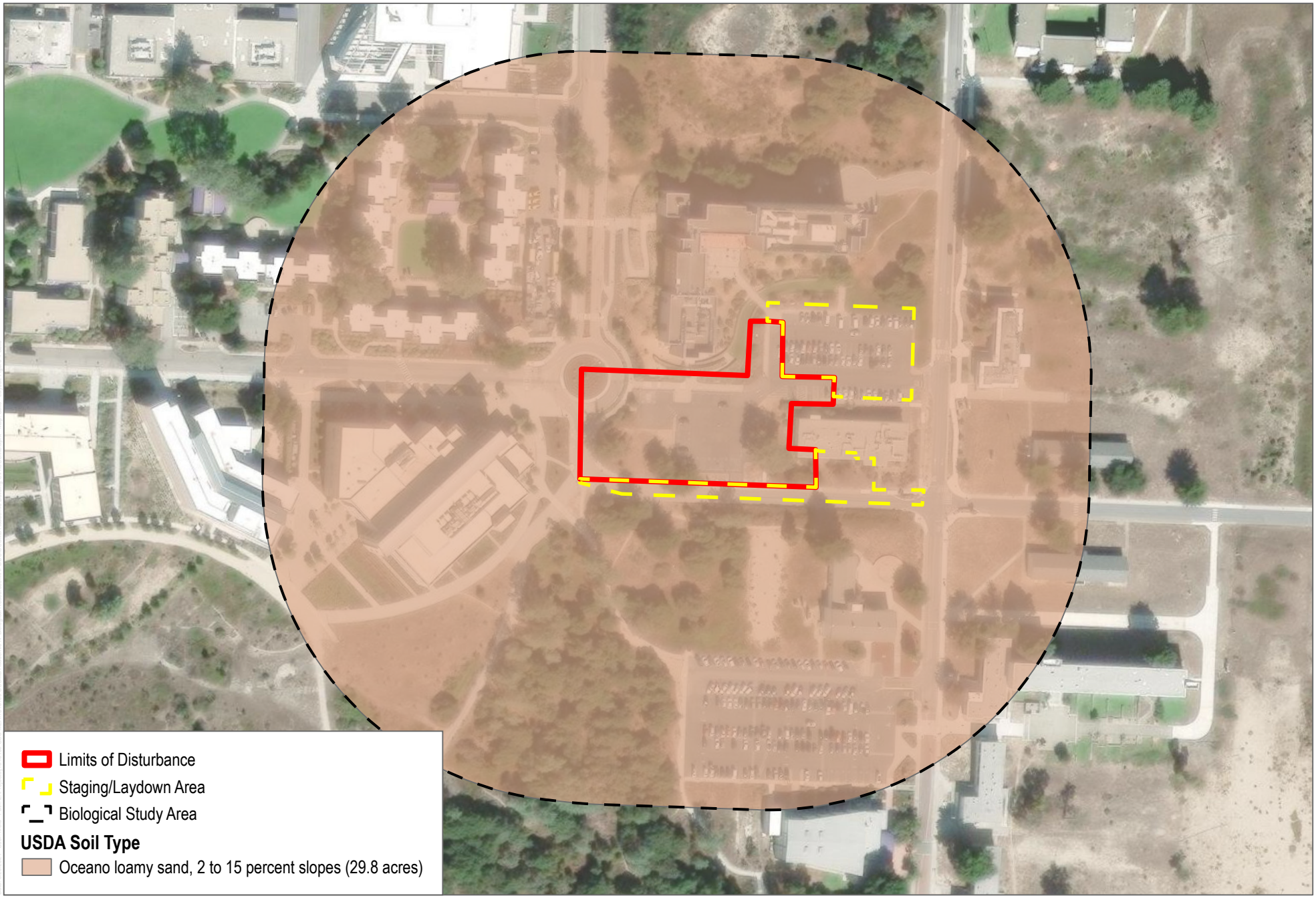
DUDEK

0 125 250 Feet

FIGURE 3

Vegetation Communities and Land Covers

CSU Monterey Bay Academic IV Building Project



SOURCE: Esri Imagery Accessed 2024; USDA

DUDEK

0 100 200 Feet

FIGURE 4

Soils

CSU Monterey Bay Academic IV Building Project

SOURCE: Esri Imagery Accessed 2024; OpenStreetMaps 2019; NHD; NWI; FEMA

DUDEK

0 500 1,000 Feet

FIGURE 5

Hydrologic Setting

CSU Monterey Bay Academic IV Building Project

Appendix B
Representative Site Photographs

Photo 1. Overview of the project site.

Photo 2. Ornamental vegetation on the project site.

Photo 3. Non-native grassland vegetation community.

Photo 4. Coast live oak and grass association.

Photo 5. Ice plant association and non-native grassland vegetation communities.

Photo 6. Barren land cover.

Photo 7. Developed land cover.

Photo 8. Smith's blue butterfly host plants, seacliff buckwheat (*Eriogonum parvifolium*).

Appendix C
Plant Species Compendium

Vascular Species

Eudicots

AIZOACEAE – FIG-MARIGOLD FAMILY

* *Carpobrotus edulis* – hottentot fig

ANACARDIACEAE – SUMAC OR CASHEW FAMILY

Toxicodendron diversilobum – poison oak

APIACEAE – CARROT FAMILY

* *Conium maculatum* – poison hemlock

Daucus pusillus – American wild carrot

ASTERACEAE – SUNFLOWER FAMILY

Achillea millefolium – common yarrow

Baccharis pilularis – coyote brush

* *Centaurea melitensis* – Maltese star-thistle
* *Cotula coronopifolia* – brass buttons

Ericameria parryi – Parry's rabbitbrush

HETEROTHECA GRANDIFLORA – TELEGRAPHWEED

* *Hypochaeris glabra* – smooth cat's ear

Lasthenia gracilis – needle goldfields

Layia chrysanthemoides – smooth tidytips

* *Logfia gallica* – narrowleaf cottonrose

Matricaria discoidea – disc mayweed

* *Senecio vulgaris* – old-man-in-the-Spring
* *Silybum marianum* – blessed milkthistle
* *Soliva sessilis* – field burrweed
* *Sonchus asper* – spiny sowthistle

BORAGINACEAE – BORAGE FAMILY

Amsinckia intermedia – common fiddleneck

BRASSICACEAE – MUSTARD FAMILY

* *Capsella bursa-pastoris* – shepherd's purse
* *Lepidium didymum* – lesser swinecress
* *Rosmarinus officinalis* – rosemary

CARYOPHYLLACEAE – PINK FAMILY

Cardionema ramosissimum – sandcarpet
Cerastium arvense – field chickweed
* *Polycarpon tetraphyllum* – fourleaf manyseed
* *Silene gallica* – common catchfly

CHENOPODIACEAE – GOOSEFOOT FAMILY

* *Atriplex semibaccata* – Australian saltbush

CRASSULACEAE – STONECROP FAMILY

Crassula aquatica – water pygmyweed

ERICACEAE – HEATH FAMILY

* *Arbutus unedo* – strawberry tree

EUPHORBIACEAE – SPURGE FAMILY

* *Euphorbia maculata* – spotted sandmat

FABACEAE – LEGUME FAMILY

Acmispon strigosus – strigose bird's-foot trefoil
* *Lotus corniculatus* – bird's-foot trefoil
Lupinus bicolor – miniature lupine
* *Medicago polymorpha* – burclover
* *Melilotus indicus* – annual yellow sweetclover
* *Trifolium dubium* – suckling clover
* *Trifolium hirtum* – rose clover
Trifolium obtusiflorum – clammy clover
Trifolium variegatum var. *variegatum* – white-tip clover
* *Vicia sativa* – garden vetch

FAGACEAE – OAK FAMILY

Quercus agrifolia – coast live oak

GERANIACEAE – GERANIUM FAMILY

* *Erodium botrys* – longbeak stork's bill
* *Erodium cicutarium* – redstem stork's bill
* *Erodium moschatum* – musky stork's bill
* *Geranium dissectum* – cutleaf geranium
* *Geranium molle* – dovefoot geranium

GROSSULARIACEAE – GOOSEBERRY FAMILY

Ribes speciosum – fuchsiaflower gooseberry

HYDROPHYLLACEAE – WATERLEAF FAMILY

Phacelia cicutaria – caterpillar phacelia
Pholistoma auritum – blue fiestaflower

LAMIACEAE – MINT FAMILY

* *Lamium amplexicaule* – henbit deadnettle
* *Marrubium vulgare* – horehound
Salvia mellifera – black sage
Trichostema micranthum – small-flowered bluecurls

MALVACEAE – MALLOW FAMILY

Fremontodendron californicum – California flannelbush
* *Malva parviflora* – cheeseweed mallow

MONTIACEAE – MONTIA FAMILY

Calandrinia menziesii – red maids
Claytonia perfoliata – miner's lettuce

MYRSINACEAE – MYRSINE FAMILY

* *Lysimachia arvensis* – scarlet pimpernel

MYRTACEAE – MYRTLE FAMILY

* *Eucalyptus globulus* – Tasmanian bluegum
* *Leptospermum laevigatum* – Australian teatree
* *Melaleuca citrina* – crimson bottlebrush

ONAGRACEAE – EVENING PRIMROSE FAMILY

Camissoniopsis cheiranthifolia – beach suncup
Clarkia purpurea – winecup clarkia

OXALIDACEAE – OXALIS FAMILY

* *Oxalis fontana* – no common name

PAPAVERACEAE – POPPY FAMILY

Eschscholzia californica – California poppy

PLANTAGINACEAE – PLANTAIN FAMILY

* *Plantago coronopus* – buckhorn plantain
Plantago erecta – dwarf plantain
* *Plantago lanceolata* – narrowleaf plantain

PLATANACEAE – PLANE TREE, SYCAMORE FAMILY

Platanus racemosa – California sycamore

POLYGONACEAE – BUCKWHEAT FAMILY

Eriogonum fasciculatum – California buckwheat

* *Rumex acetosella* – common sheep sorrel

ROSACEAE – ROSE FAMILY

Adenostoma fasciculatum – chamise

SALICACEAE – WILLOW FAMILY

Salix lasiolepis – arroyo willow

SAPINDACEAE – SOAPBERRY FAMILY

Aesculus californica – California buckeye

Gymnosperms and Gnetophytes

CUPRESSACEAE – CYPRESS FAMILY

Hesperocyparis macrocarpa – Monterey cypress

PINACEAE – PINE FAMILY

Pinus contorta – lodgepole pine

Pinus radiata – Monterey pine

Monocots

CYPERACEAE – SEDGE FAMILY

Carex barbarae – white-root

IRIDACEAE – IRIS FAMILY

Sisyrinchium bellum – western blue-eyed grass

POACEAE – GRASS FAMILY

* *Aira caryophyllea* – silver hairgrass

* *Avena barbata* – slender oat

* *Bromus caroli-henrici* – weedy brome

* *Bromus diandrus* – ripgut brome

* *Bromus madritensis* – compact brome

* *Cynodon dactylon* – Bermudagrass

* *Festuca myuros* – rat-tail fescue

* *Poa annua* – annual bluegrass

POA SECUNDA – ONESIDED BLUEGRASS

* *Schismus arabicus* – Arabian schismus
* *Stipa pulchra* – purple needlegrass
* *Stipa tenuissima* – no common name

THEMIDACEAE – BRODIAEA FAMILY

Dipterostemon capitatus – bluedicks

* signifies introduced (non-native) species

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Appendix D
Wildlife Species Compendium

Wildlife Species

Birds

Bushtits

AEGITHALIDAE – LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus – bushtit

Finches

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus – house finch

Hummingbirds

TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird

Jays, Magpies and Crows

CORVIDAE – CROWS AND JAYS

Corvus brachyrhynchos – American crow

Thrushes

TURDIDAE – THRUSHES

Sialia mexicana – western bluebird

Wrens

TROGLODYTIDAE – WRENS

Thryomanes bewickii – Bewick's wren

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Pipilo maculatus – spotted towhee

Mammals

Squirrels

SCIURIDAE – SQUIRRELS

Otospermophilus beecheyi – California ground squirrel

* signifies introduced (non-native) species

Appendix E

Special-Status Plant Species Potential to Occur

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
Agrostis lacuna-vernalis	vernal pool bent grass	None/None/1B.1	Vernal pools (mima mounds)/annual herb/ Apr–May/375–475	**Not expected to occur.** The BSA is outside of the species' known elevation range and has no vernal pool habitat.
Allium hickmanii	Hickman's onion	None/None/1B.2	Chaparral (maritime), Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/Mar–May/15–655	**Low potential to occur.** There is non-native grassland habitat within the BSA, but it is highly disturbed and regularly maintained. The nearest documented occurrence is 1.7 miles east of the BSA from 2009 (Occ. No. 18; CDFW 2024).
Aphyllon robbinsii	Robbins' broomrape	None/None/1B.1	Coastal bluff scrub, Coastal dunes (possibly); Rocky, Sandy/annual herb (achlorophyllous)/Apr–July/ 0–330	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Arctostaphylos hookeri ssp. *hookeri*	Hooker's manzanita	None/None/1B.2	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Coastal scrub; Sandy/perennial evergreen shrub/Jan–June/ 150–1,755	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is 1 mile southeast of the BSA from 2012 (Occ. No. 5; CDFW 2024).
Arctostaphylos montereyensis	Toro manzanita	None/None/1B.2	Chaparral (maritime), Cismontane woodland, Coastal scrub; Sandy/perennial evergreen shrub/Feb–Mar/100–2,395	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. However, there is a documented occurrence overlapping the BSA from 2012 (Occ. No. 14; CDFW 2024).
Arctostaphylos pajaroensis	Pajaro manzanita	None/None/1B.1	Chaparral (sandy)/perennial evergreen shrub/Dec–Mar/ 100–2,490	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is 0.9 miles west of the BSA from 2000 (Occ. No. 19; CDFW 2024).
Arctostaphylos pumila	sandmat manzanita	None/None/1B.2	Chaparral (maritime), Cismontane woodland, Closed-cone	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation.

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
			coniferous forest, Coastal dunes, Coastal scrub; Openings, Sandy/perennial evergreen shrub/Feb–May/10–675	There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is 0.2 miles north of the BSA from 2017 (Occ. No. 15; CDFW 2024).
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	Marshes and swamps (brackish, freshwater); Openings, Sandy/perennial stoloniferous herb/May–Aug/10–560	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no aquatic habitat for this species in the BSA.
Astragalus tener var. *tener*	alkali milk-vetch	None/None/1B.2	Playas, Valley and foothill grassland (adobe clay), Vernal pools; Alkaline/annual herb/ Mar–June/5–195	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA, but there are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Astragalus tener var. *titi*	coastal dunes milk-vetch	FE/SE/1B.1	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie (mesic); Mesic (often), Vernally Mesic (often)/annual herb/ Mar–May/5–165	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Castilleja ambigua var. *insalutata*	pink Johnny-nip	None/None/1B.1	Coastal prairie, Coastal scrub/annual herb (hemiparasitic)/ May–Aug/0–330	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrence is 1.2 miles east of the BSA from 1999 (Occ. No. 13; CDFW 2024).
Ceanothus rigidus	Monterey ceanothus	None/None/4.2	Chaparral, Closed-cone coniferous forest, Coastal scrub; Sandy/perennial evergreen shrub/Feb–Apr(June)/10–1,800	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	None/None/1B.1	Valley and foothill grassland (alkaline)/annual herb/May–Oct (Nov)/0–755	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
				BSA. The nearest documented occurrence is 3.9 miles southeast of the BSA from 1994 (Occ. No. 24; CDFW 2024).
Chorizanthe minutiflora	Fort Ord spineflower	None/None/1B.2	Chaparral (maritime), Coastal scrub; Openings, Sandy/annual herb/Apr–July/180–490	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is 1.1 miles southeast of the BSA from sometime after 2010 (Occ. No. 4; CDFW 2024).
Chorizanthe pungens var. *pungens*	Monterey spineflower	FT/None/1B.2	Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; Sandy/annual herb/Apr–June (July–Aug)/ 10–1,475	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrence is 0.2 miles north and east of the BSA from 2016 (Occ. No. 2; CDFW 2024).
Chorizanthe robusta var. *robusta*	robust spineflower	FE/None/1B.1	Chaparral (maritime), Cismontane woodland (openings), Coastal dunes, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/annual herb/ Apr–Sep/10–985	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Clarkia jolonensis	Jolon clarkia	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/annual herb/ Apr–June/65–2,165	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is an extirpated population 3.6 miles southwest of the BSA from 1912 (Occ. No. 11; CDFW 2024).
Collinsia multicolor	San Francisco collinsia	None/None/1B.2	Closed-cone coniferous forest, Coastal scrub; Serpentinite (sometimes)/annual herb/(Feb)Mar–May/100–900	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
Cordylanthus rigidus ssp. *littoralis*	seaside bird's-beak	None/SE/1B.1	Chaparral (maritime), Cismontane woodland, Closed-cone coniferous forest, Coastal dunes, Coastal scrub; Disturbed areas (often), Sandy/annual herb (hemiparasitic)/Apr–Oct/0–1,685	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are several documented occurrences within 5 miles of the BSA; the nearest documented occurrence is 1.8 miles southwest of the BSA from 1941 that may be extirpated (Occ. No. 1; CDFW 2024).
Delphinium californicum ssp. *interius*	Hospital Canyon larkspur	None/None/1B.2	Chaparral (openings), Cismontane woodland (mesic), Coastal scrub/perennial herb/ Apr–June/640–3,590	**Not expected to occur.** The BSA is outside of the species' known elevation range.
Delphinium hutchinsoniae	Hutchinson's larkspur	None/None/1B.2	Broadleafed upland forest, Chaparral, Coastal prairie, Coastal scrub/perennial herb/ Mar–June/0–1,400	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA, but there are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Delphinium umbraculorum	umbrella larkspur	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/ Apr–June/1,310–5,245	**Not expected to occur.** The BSA is outside of the species' known elevation range.
Ericameria fasciculata	Eastwood's goldenbush	None/None/1B.1	Chaparral (maritime), Closed-cone coniferous forest, Coastal dunes, Coastal scrub; Openings, Sandy/perennial evergreen shrub/July–Oct/100–900	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is 0.5 miles north of the BSA from 2003 (Occ. No. 13; CDFW 2024).
Eriogonum nortonii	Pinnacles buckwheat	None/None/1B.3	Chaparral, Valley and foothill grassland; Burned areas (often), Sandy/annual herb/(Apr) Aug (Sep) May–June/985–3,195	**Not expected to occur**. The BSA is outside of the species' known elevation range.
Eryngium montereyense	Fort Ord button-celery	None/None/1B.1	Vernal pools; Sandy, Vernally Mesic/perennial herb/ Mar–May/395–590	**Not expected to occur.** The BSA is outside of the species' known elevation range.

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
Erysimum ammophilum	sand-loving wallflower	None/None/1B.2	Chaparral (maritime), Coastal dunes, Coastal scrub; Openings, Sandy/perennial herb/Feb–June (July–Aug)/0–195	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is a historical record 1.2 miles north of the BSA from 1992 (Occ. No. 8; CDFW 2024).
Erysimum menziesii	Menzies' wallflower	FE/SE/1B.1	Coastal dunes/perennial herb/Mar–Sep/0–115	**Not expected to occur.** The BSA is outside of the species' known elevation range.
Fritillaria liliacea	fragrant fritillary	None/None/1B.2	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland; Serpentinite (often)/perennial bulbiferous herb/Feb–Apr/10–1,345	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA, but there are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Gilia tenuiflora ssp. *arenaria*	Monterey gilia	FE/ST/1B.2	Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub; Openings, Sandy/annual herb/Apr–June/0–150	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is 0.4 miles northeast of the BSA from 2009 (Occ. No. 31; CDFW 2024).
Hesperocyparis goveniana	Gowen cypress	FT/None/1B.2	Chaparral (maritime), Closed-cone coniferous forest/perennial evergreen tree//100–985	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Hesperocyparis macrocarpa	Monterey cypress	None/None/1B.2	Closed-cone coniferous forest/perennial evergreen tree//35–100	**Not expected to occur.** There are individuals of this species present within the BSA; however, these were intentionally planted and are not naturally occurring. The BSA is outside of the species' known elevation range and there are no documented natural occurrences within 5 miles of the BSA (CDFW 2024).
Holocarpha macradenia	Santa Cruz tarplant	FT/SE/1B.1	Coastal prairie, Coastal scrub, Valley and foothill grassland; Clay	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation.

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
			(often), Sandy/annual herb/June–Oct/35–720	There is non-native grassland habitat within the BSA, but there are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Horkelia cuneata var. *sericea*	Kellogg's horkelia	None/None/1B.1	Chaparral (maritime), Closed-cone coniferous forest, Coastal dunes, Coastal scrub; Gravelly (sometimes), Openings, Sandy (sometimes)/perennial herb/ Apr–Sep/35–655	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is a historical record 0.7 miles east of the BSA from 1992 (Occ. No. 16); there are several other occurrences within 5 miles of the BSA (CDFW 2024).
Horkelia marinensis	Point Reyes horkelia	None/None/1B.2	Coastal dunes, Coastal prairie, Coastal scrub; Sandy/perennial herb/May–Sep/15–2,475	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrence is 2.2 miles north of the BSA (Occ. No. 28; CDFW 2024).
Lasthenia conjugens	Contra Costa goldfields	FE/None/1B.1	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, Vernal pools; Mesic/annual herb/Mar–June/ 0–1,540	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrence is 2.5 miles southeast of the BSA from 2016 (Occ. No. 41; CDFW 2024)
Layia carnosa	beach layia	FT/SE/1B.1	Coastal dunes, Coastal scrub (sandy)/annual herb/Mar–July/ 0–195	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Legenere limosa	legenere	None/None/1B.1	Vernal pools/annual herb/ Apr–June/5–2,885	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no vernal pool habitat for this species in the BSA. The nearest documented occurrence is 2.9 miles southeast of the BSA from 2009 (Occ. No. 82; CDFW 2024).

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
Lupinus tidestromii	Tidestrom's lupine	FE/SE/1B.1	Coastal dunes/perennial rhizomatous herb/Apr–June/ 0–330	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Malacothamnus palmeri var. *involucratus*	Carmel Valley bush-mallow	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub/perennial deciduous shrub/Apr–Oct/ 100–3,605	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Malacothrix saxatilis var. *arachnoidea*	Carmel Valley malacothrix	None/None/1B.2	Chaparral (rocky), Coastal scrub/perennial rhizomatous herb/(Mar)June–Dec/80–3,39	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Meconella oregana	Oregon meconella	None/None/1B.1	Coastal prairie, Coastal scrub/annual herb/Mar–Apr/ 820–2,030	**Not expected to occur.** The BSA is outside of the species' known elevation range.
Microseris paludosa	marsh microseris	None/None/1B.2	Cismontane woodland, Closed-cone coniferous forest, Coastal scrub, Valley and foothill grassland/perennial herb/ Apr–June (July)/15–1,160	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrences are 2.4 miles southeast of the BSA from 2009 and 2007 (Occ. Nos. 34 and 36; CDFW 2024).
Monardella sinuata ssp. *nigrescens*	northern curly-leaved monardella	None/None/1B.2	Chaparral (SCR Co.), Coastal dunes, Coastal scrub, Lower montane coniferous forest (SCR Co., ponderosa pine sandhills); Sandy/annual herb/(Apr) May–July (Aug–Sep)/0–985	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is a historical record 0.7 miles east of the BSA from 1919 (Occ. No. 6); a more recent

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
				occurrence from 2013 is 1.3 miles southeast of the BSA (Occ. No. 2; CDFW 2024).
Monolopia gracilens	woodland woollythreads	None/None/1B.2	Broadleafed upland forest (openings), Chaparral (openings), Cismontane woodland, North Coast coniferous forest (openings), Valley and foothill grassland; Serpentinite/annual herb/(Feb)Mar–July/330–3,935	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA, but there are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Pinus radiata	Monterey pine	None/None/1B.1	Cismontane woodland, Closed-cone coniferous forest/perennial evergreen tree//80–605	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is 4.3 miles south of the BSA from 2018 (Occ. No. 4; CDFW 2024).
Piperia yadonii	Yadon's rein orchid	FE/None/1B.1	Chaparral (maritime), Closed-cone coniferous forest, Coastal bluff scrub; Sandy/perennial herb/(Feb)May–Aug/35–1,670	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is a historical record 1.6 miles north of the BSA from 1992 (Occ. No. 9; CDFW 2024).
Plagiobothrys chorisianus var. *chorisianus*	Choris' popcornflower	None/None/1B.2	Chaparral, Coastal prairie, Coastal scrub; Mesic/annual herb/ Mar–June/10–525	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrence is 2.9 miles southeast of the project BSA from 2009 (Occ. No. 14; CDFW 2024).
Potentilla hickmanii	Hickman's cinquefoil	FE/SE/1B.1	Closed-cone coniferous forest, Coastal bluff scrub, Marshes and swamps (freshwater), Meadows and seeps (vernally mesic)/perennial herb/ Apr–Aug/35–490	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
Ramalina thrausta	angel's hair lichen	None/None/2B.1	North Coast coniferous forest/fruticose lichen (epiphytic)//245–1,410	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Rosa pinetorum	pine rose	None/None/1B.2	Cismontane woodland, Closed-cone coniferous forest/perennial shrub/May–July/5–3,100	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. The nearest documented occurrence is a historical record 4.5 miles southwest of the BSA from 1975 (Occ. No. 14; CDFW 2024).
Stebbinsoseris decipiens	Santa Cruz microseris	None/None/1B.2	Broadleafed upland forest, Chaparral, Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Valley and foothill grassland; Openings, Serpentinite (sometimes)/annual herb/ Apr–May/35–1,640	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA, but there are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Sulcaria spiralifera	twisted horsehair lichen	None/None/1B.2	Coastal dunes (SLO Co.), North Coast coniferous forest (immediate coast)/fruticose lichen (epiphytic)//0–295	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Trifolium buckwestiorum	Santa Cruz clover	None/None/1B.1	Broadleafed upland forest, Cismontane woodland, Coastal prairie; Gravelly/annual herb/Apr–Oct/115–2,000	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrence is a historical record 2.1 miles east of the BSA from 1998 (Occ. No. 11; CDFW 2024).

Scientific Name	Common Name	Status* (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the BSA
Trifolium hydrophilum	saline clover	None/None/1B.2	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools/annual herb/Apr–June/0–985	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA, but there are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Trifolium polyodon	Pacific Grove clover	None/SR/1B.1	Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Valley and foothill grassland; Granitic (sometimes), Mesic/annual herb/Apr–June(July)/15–1,390	**Low potential to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is non-native grassland habitat within the BSA. The nearest documented occurrence is 4.6 miles southeast of the BSA from 2010 (Occ. No. 18; CDFW 2024).
Trifolium trichocalyx	Monterey clover	FE/SE/1B.1	Closed-cone coniferous forest (burned areas, openings, sandy)/annual herb/Apr–June/ 100–1,000	**Not expected to occur.** The BSA is developed with regular maintenance and limited native vegetation. There is no suitable native vegetation for this species in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).

Status Legend:
FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal Candidate for listing
SE: State listed as endangered
ST: State listed as threatened
SC: State Candidate for listing
SR: State Rare
CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Review List: Plants about which more information is needed
CRPR 4: Watch List: Plants of limited distribution
.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

References:

CDFW. 2024. California Natural Diversity Database (CNDDB). RareFind, version 5.3.0. Biogeographic Data Branch. Accessed July 2024. https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx.

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Appendix F

Special-Status Wildlife Species Potential to Occur

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
Invertebrates				
Bombus crotchii	Crotch's bumble bee	None/SC	Open grassland and scrub communities supporting suitable floral resources.	**Moderate potential to occur.** The BSA has some floral resources for foraging and limited small mammal burrows for nesting, and other bumble bee species were observed on the site during the reconnaissance survey in April 2024. There are no CNDDB occurrences within 5 miles of the BSA (CDFW 2024).
Bombus occidentalis	western bumble bee	None/SC	Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease.	**Not expected to occur.** The species' current range does not overlap the BSA (CDFW 2023), and there are no CNDDB occurrences within 5 miles of the BSA (CDFW 2024).
Coelus globosus	globose dune beetle	None/None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico.	**Low potential to occur.** The BSA has sandy soils but lacks natural dune habitat. The nearest CNDDB occurrence is a historical record 3.3 miles southwest of the BSA from 1972 (Occ. No. 20; CDFW 2024).
Danaus plexippus plexippus pop. 1	monarch - California overwintering population	FC/None	Wind-protected tree groves with nectar sources and nearby water sources.	**Low potential to occur.** The BSA has some floral resources for foraging, but trees do not provide substantial protection from wind and there are no water resources nearby. The BSA is not near any known overwintering sites (Xerces 2016) and there are no CNDDB occurrences within 5 miles (CDFW 2024).
Euphilotes enoptes smithi	Smith's blue butterfly	FE/None	Sand dunes, scrub, chaparral, grassland, and their ecotones. Host plants include *Eriogonum latifolium* and *E. parvifolium* for both larvae and adults.	**Moderate potential to occur.** The BSA has suitable host plants (*Eriogonum parvifolium*). There is a historical CNDDB occurrence 1.6 miles west of the BSA from 1992 (Occ. No. 49; CDFW 2024).
Linderiella occidentalis	California linderiella	None/None	Cool soft-water vernal pools in grasslands below 1,000 feet above mean sea level.	**Not expected to occur.** There is no vernal pool habitat in the BSA.

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
Tryonia imitator	mimic tryonia (=California brackish water snail)	None/None	Inhabits coastal lagoons, estuaries, and saltmarshes, from Sonoma County south to San Diego County.	**Not expected to occur.** There are no aquatic habitats in the BSA.
Fishes				
Eucyclogobius newberryi	tidewater goby	FE/None	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River.	**Not expected to occur.** There are no aquatic habitats in the BSA.
Lavinia exilicauda harengus	Pajaro/Salinas hitch	None/SSC	Found in Pajaro and Salinas River systems, both tributary to Monterey Bay.	**Not expected to occur.** There are no aquatic habitats in the BSA.
Oncorhynchus mykiss irideus pop. 9	steelhead - south-central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead.	**Not expected to occur.** There are no aquatic habitats in the BSA.
Spirinchus thaleichthys	longfin smelt	FC/ST	Aquatic, estuary.	**Not expected to occur.** There are no aquatic habitats in the BSA.
Amphibians				
Ambystoma californiense pop. 1	California tiger salamander - central California DPS	FT/ST, WL	Annual grassland, valley–foothill hardwood, and valley–foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and man-made pools if predatory fishes are absent.	**Not expected to occur.** There is no aquatic breeding habitat in the BSA, and no nearby aquatic habitat from which to disperse. There are multiple documented occurrences within 5 miles of the BSA, but these are all outside of the developed urban area surrounding the BSA (CDFW 2024).
Ambystoma macrodactylum croceum	Santa Cruz long-toed salamander	FE/FP, SE	Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey Counties.	**Not expected to occur.** There is no aquatic breeding habitat in the BSA, and no nearby aquatic habitat from which to disperse. There

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
				are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Rana boylii pop. 6	foothill yellow-legged frog - south coast DPS	FE/SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland.	**Not expected to occur.** There are no aquatic habitats in the BSA. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands.	**Not expected to occur.** There is no aquatic breeding habitat in the BSA, and no nearby aquatic habitat from which to disperse. The nearest CNDDB occurrence is 4.5 miles northeast of the BSA from 2009 (Occ. No. 997; CDFW 2024).
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture.	**Not expected to occur.** There is no aquatic breeding habitat in the BSA, and no nearby aquatic habitat from which to disperse. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Taricha torosa (Monterey Co. south only)	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland.	**Not expected to occur.** There is no suitable forest or chaparral habitat in the BSA, and grassland habitat is highly disturbed and regularly maintained. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Reptiles				
Anniella pulchra	northern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils.	**High potential to occur.** The BSA has suitable sandy soils and patchy open space nearby with scrub habitat. The nearest documented occurrence is 0.5 miles north of the BSA from 2009 (Occ. No. 36) and there are multiple other occurrences within 5 miles of the BSA (CDFW 2024).
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains	**Moderate potential to occur.** The BSA has suitable sandy soils and patchy open space

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
			including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats.	nearby with scrub habitat. The nearest documented occurrence is 1.4 miles northeast of the BSA (Occ. No. 591); four other occurrences are within 5 miles of the BSA (CDFW 2024).
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools.	**Not expected to occur.** There are no aquatic habitats in the BSA, and no nearby aquatic habitats from which to disperse. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Actinemys marmorata	northwestern pond turtle	FPT/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter. Ranges from mid-Monterey Bay northward (USFWS 2023).	**Not expected to occur.** There are no aquatic habitats in the BSA, and no nearby aquatic habitats from which to disperse. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Actinemys pallida	southwestern pond turtle	FPT/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter. Ranges from mid-Monterey Bay southward (USFWS 2023).	**Not expected to occur.** There are no aquatic habitats in the BSA, and no nearby aquatic habitats from which to disperse. The nearest documented occurrence is a historical record 2.3 miles north of the BSA from 1992 (Occ. No. 215; CDFW 2024).
Birds				
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture.	**Not expected to nest or forage.** The BSA lacks suitable nesting habitat, and grassland habitat is highly disturbed and regularly maintained. The nearest documented occurrence is 2.5 miles north of the BSA from 2001 (Occ. No. 396; CDFW 2024).
Asio flammeus (nesting)	short-eared owl	BCC/SSC	Grassland, prairies, dunes, meadows, irrigated lands, and saline and freshwater emergent wetlands.	**Not expected to nest or forage.** The BSA has grassland habitat, but it is highly disturbed and regularly maintained. There are no

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
				documented occurrences within 5 miles of the BSA (CDFW 2024).
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows.	**Not expected to nest or forage.** The BSA has grassland habitat, but it is highly disturbed and regularly maintained. The nearest documented occurrence is a historical record 1 mile north of the BSA from 1965 (Occ. No. 579; CDFW 2024)
Buteo regalis (wintering)	ferruginous hawk	None/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture.	**Not expected to nest or forage.** The BSA has grassland habitat, but it is highly disturbed and regularly maintained and is too small for this species' foraging needs. The nearest documented occurrence is 2.5 miles north of the BSA from 2004 (Occ. No. 9; CDFW 2024).
Charadrius nivosus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds.	**Not expected to nest or forage**. The BSA lacks suitable nesting and foraging habitat. There are four documented occurrences within 5 miles of the BSA, but these are all restricted to coastal beaches (CDFW 2024).
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water.	**Not expected to nest or forage.** The BSA lacks suitable nesting and foraging habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Cypseloides niger (nesting)	black swift	BCC/SSC	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats.	**Not expected to nest or forage.** The BSA lacks suitable nesting and foraging habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands.	**Low potential to nest or forage.** The BSA has limited trees for nesting and grassland patches are likely too small to provide suitable foraging habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
Eremophila alpestris actia	California horned lark	None/WL	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	**Not expected to nest or forage.** The BSA has grassland habitat, but it is highly disturbed and regularly maintained. The two nearest documented occurrences are 2.5 mile north of the BSA (Occ. Nos. 65 and 69; CDFW 2024).
Falco mexicanus (nesting)	prairie falcon	None/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs.	**Not expected to nest or forage.** The BSA has grassland habitat, but it is highly disturbed and regularly maintained and is too small for this species' foraging needs. The nearest documented occurrence is within the Spreckels quad 3.2 miles southeast of the BSA, but the specific location is not visible (Occ. No. 431; CDFW 2024).
Falco peregrinus anatum (nesting)	American peregrine falcon	FPD/SCD	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present.	**Not expected to nest or forage.** The BSA lacks suitable nesting and foraging habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Laterallus jamaicensis coturniculus	California black rail	None/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation.	**Not expected to nest or forage.** The BSA lacks suitable nesting and foraging habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Pelecanus occidentalis californicus (nesting colonies and communal roosts)	California brown pelican	FPD/SCD	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands.	**Not expected to nest or forage.** The BSA lacks suitable nesting and foraging habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Rallus obsoletus obsoletus	California Ridgway's rail	FE/FP, SE	Tidal salt or brackish marshes of the San Francisco Estuary.	**Not expected to nest or forage.** The BSA lacks suitable nesting and foraging habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration.	**Not expected to nest or forage.** The BSA lacks suitable nesting and foraging habitat. The nearest documented occurrence is 1 mile southwest of the BSA from 2012 (Occ. No. 291; CDFW 2024).
Mammals				
Aeorestes cinereus	northern hoary bat	None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	**Not expected to occur.** The BSA lacks suitable habitat. Trees on the site are relatively small and do not provide suitable roosting habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	**Not expected to occur.** The BSA lacks suitable habitat and has no cavities for roosting. The nearest documented occurrence is 3.6 miles west of the BSA from 2013 (Occ. No. 400; CDFW 2024).
Eumetopias jubatus	Steller (=northern) sea-lion	FPD/SSC	Beaches, ledges, and rocky reefs	**Not expected to occur.** The BSA is inland and lacks suitable habitat. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Neotoma macrotis luciana	Monterey dusky-footed woodrat	None/SSC	Dense forest, oak woodland, and chaparral with a moderately dense understory and abundant dead wood	**Not expected to occur.** The BSA is on developed land with maintained vegetation and little understory. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).
Puma concolor	mountain lion (Southern California/Central Coast ESU)	None/SC	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts.	**Not expected to occur.** The BSA is on developed land with maintained vegetation and little understory. There are no documented occurrences within 5 miles of the BSA (CDFW 2024).

Scientific Name	Common Name	Status* (Federal/State)	Habitat	Potential to Occur in the BSA
Reithrodontomys megalotis distichlis	Salinas harvest mouse	None/None	Coastal saltmarsh, freshwater wetland, and adjacent upland grassland	**Not expected to occur.** The BSA lacks suitable habitat. There are four historical documented occurrences within 5 miles of the BSA; all are from the 1930s (CDFW 2024).
Sorex ornatus salarius	Monterey shrew	None/SSC	Saltmarsh, riparian, wetlands, uplands of Salinas River Delta	**Not expected to occur.** The BSA lacks suitable habitat. The nearest documented occurrence is a historical record 4.0 miles southeast of the BSA from 1909 (Occ. No. 3; CDFW 2024).
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Low potential to occur.** The BSA has grassland habitat, but it is highly disturbed and regularly maintained. Nearby scrub habitat is of moderate quality. The nearest documented occurrence is a historical record 1.3 miles east of the BSA from 1992 (Occ. No. 246; CDFW 2024).

* **Status:**
FE: Federally Endangered
FT: Federally Threatened
FC: Federal Candidate for Listing
BCC: Bird of Conservation Concern
FP: Fully Protected Species
SE: State Endangered
ST: State Threatened
SC: State Candidate for Listing
SSC: Species of Special Concern
WL: CDFW Watch List Species

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Appendix C

Archaeological Resources Report

DRAFT

Archaeological Cultural Resource Section 106 Review

Edward 'Ted' Taylor Science and Engineering Academic Building Monterey, California

NOVEMBER 2024

Prepared for:

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOAA/ONMS/MBNMS
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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APE	Area of Potential Effects
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CSUMB	California State University, Monterey Bay
EIR	Environmental Impact Report
MM	mitigation measure
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act

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1 Introduction

This report presents the results of an archaeological cultural resources investigation conducted by Dudek for the proposed Taylor Science Building Project (Project) in accordance with the requirements of Section 106 of the National Historic Preservation Act (NHPA; 36 Code of Federal Regulations [CFR] 800). The Project was identified and analyzed within the California State University, Monterey Bay (CSUMB) Master Plan Environmental Impact Report (EIR) as a near-term development project (CSUMB 2022). The purpose of this report is to update the California Historical Resources Information System (CHRIS) records search that was originally conducted in 2017, complete an intensive survey of the portion of the archaeological Area of Potential Effects (APE), and provide a Section 106–compliant report and recommended findings to support the National Oceanic and Atmospheric Administration's (NOAA's) obligations under the NHPA. This report will also support the California Environmental Quality Act (CEQA) analysis of consistency with the prior Master Plan EIR. Impacts to built environment resources are not addressed by this study. A separate report documenting Section 106 cultural resources compliance for built environment resources has also been prepared by Dudek (Donovan-Boyd et al. 2024).

The Project is situated on the main campus of CSUMB in Seaside, California (Figure 1, Regional Location). The Project is proposed to be located on the main campus just outside the campus core, northwest of the 6th Avenue/A Street intersection on existing Parking Lot 19 (Figure 2, Project Site). The parking lot northeast of the Science Research Lab Annex would be used as a construction laydown area. The proposed Project location and surrounding area consists of mostly developed campus land consisting of academic buildings, parking lots, and maintained open space. The Project location is south of the existing Chapman Academic Science Center (Building 53), southeast of campus housing, including Cypress Hall (Building 202), Asilomar Hall (Building 203), Willits Hall (Building 204), and Manzanita Hall (Building 205), and Wave Hall (Building 4), and east of Tanimura and Antle Family Memorial Library (Building 508) across A Street, north of a natural area and the Cinematic Arts and Technology Building (Building 27), and west of the Science Research Lab Annex (Building 13), the Science Instructional Lab Annex (Building 50), the Department of Marine Science Building (Building 49), and the Music and Performing Arts Building (Building 48). The Project location consists primarily of previously disturbed and impervious surfaces, including an asphalt parking lot that covers most of the site and the landscaped areas that surround the asphalt parking lot.

On September 5, 2024, Dudek archaeologist Jennifer De Alba, BA, surveyed the portion of the APE subject to potential direct impacts to potential archaeological resources; no potential cultural resources were identified during the survey. Dudek's level of effort and findings on this project fulfills the Section 106 requirements for investigation and Dudek recommends a finding of No Historic Properties Affected for the Project.

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2 Description of the Project and Its Area of Potential Effects (36 CFR Section 800.11(d)(1))

NOAA's Office of National Marine Sanctuaries proposes joining California State University, Monterey Bay (CSUMB or the University) to develop a new science facility. CSUMB has planned to construct a new science facility since its previous Master Plan was drafted in 2004. NOAA would provide partial funding to CSUMB for a portion of the construction and maintenance of the new, approximately 25,000-gross-square-foot Taylor Science Building and relocate the principal office of Monterey Bay National Marine Sanctuary (MBNMS or the sanctuary) to the new building (Project). Provision of federal funding is a federal action subject to review under Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR Section 800.4[a][1]); therefore, the Project must comply with Section 106. NOAA is the lead federal agency.

The portion of the Project archaeological APE addressed in this report is the portion that could potentially impact archaeological resources, as depicted in Figure 2. In this report, reference to the APE is to the archaeological APE only. This APE is defined as the area north of A Steet and west of 6th Avenue. The western boundary is identified as A Street, with the northwest corner centered on the roundabout where A Street, 5th Avenue, and Divarty Street connect. The northern boundary runs east from the roundabout, parallel to Divarty Street until it shifts north toward the Chapman Science Academic Center, slightly west of the paved parking lot. Upon reaching the northern edge of the parking lot, the APE continues east to the edge of the parking lot. From there, the APE returns west, then south, then east, around the Science Research Lab Annex. At approximately 140 feet east of the west end of the Annex, the APE shifts south to the northern edge of A Street before continuing east to the intersection with 6th Avenue. A Street and the northeastern parking area will be used as staging areas. As depicted in red in Figure 2, the main limits of disturbance within the APE are north and east of A Street, west of the Science Research Lab Annex, and southwest of the northeastern parking lot. In total, the APE encompasses 2.5 acres, including approximately 1.5 acres for the building site and approximately 1 acre for construction staging and laydown use. The vertical APE does not exceed 5 feet below the ground surface.

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3 Description of the Steps Taken to Identify Historic Properties (36 CFR Section 800.11(e)(2))

3.1 Cultural Setting

The Project site lies within the territory prehistorically occupied by the Costanoan or Ohlone people. Costanoan refers to eight separate Penutian-stock language groups situated roughly from modern-day Richmond in the north to Big Sur in the south. The Rumsen tribelet occupied the University vicinity (Levy 1978; Native Land Digital 2024).

Pre-Contact Period

Glimpses into the ways of life for pre-contact Californians continue to be pieced together through studies of ethnography and archaeology. Early European explorers from the sixteenth and eighteenth centuries provided the first written descriptions about the native Californians they encountered, although details are sparse. Attempts at systematic ethnographies did not occur until the early twentieth century, generations after the effects of missionization and integration had altered Costanoan/Ohlone lifestyles drastically. Much of these studies focused on recording Native languages before they fell into disuse. Information from the archaeological record continues to fill in the gaps of pre-contact lifeways. Archaeologists extrapolate trends in tool use, trade, diet, and migration from studies on archaeological sites. Costanoan/Ohlone descendants are often invited to participate in decisions about their ancestral sites and to educate others about their traditional lifeways.

Information from the archaeological record continues to fill in the gaps of what life was like during prehistoric times. Prehistoric research in the Monterey Bay dates to the early 1900s, although the bulk of archaeological excavations date to the 1960s and later. Early research was conducted by archaeologists such as Beardsley and Pilling in the 1940s and 1950s. More recent excavations and surveys include the work of Cartier (1993), Dietz et al. (1988), Hylkema (1991), Jones (1993), Mikkelsen et al. (2000), Jones and Ferneau (2002a), Jones et al. (1999), and Milliken et al. (1999) among others referenced below. Jones et al. (2007) present a synthetic overview of prehistoric adaptive change in the Central Coast. This temporal framework, for the prehistoric era of greater Central California coast, spans a period of approximately 10,000–12,000 years and divides into six different periods. Researchers distinguish these periods by perceived changes in prehistoric settlement patterns, subsistence practices, and technological advances. These adaptive shifts identify differences in temporally discrete artifact assemblages, site locations, and site types. Table 1 summarizes the cultural chronology presented by Jones et al. (2007).

Table 1. California Central Coast Chronology

Temporal Period	Date Range
Paleo-Indian	pre-8000 cal B.C.
Millingstone (or Early Archaic)	8000 to 3500 cal B.C.
Early	3500 to 600 cal B.C.
Middle	600 cal B.C. to cal A.D. 1000
Middle-Late Transition	cal A.D. 1000–1250

Table 1. California Central Coast Chronology

Temporal Period	Date Range
Late	cal A.D. to 1250–1769

Source: Jones et al. (2007).

Paleo-Indian

The Paleo-Indian era represents people's initial occupation of the region and is quite sparse across the Monterey Bay region. Evidence of this era is generally expressed through isolated artifacts or sparse lithic scatters (Bertrando 2004). Farther south, in the San Luis Obispo area, fluted points characterizing this era are documented near the town of Nipomo (Mills et al. 2005) and Santa Margarita (Gibson 1996). No points of this type have been found yet in the Monterey Bay. Possible occupation dating to the Paleo-Indian Period is reported at CA-SCR-38/123, at Wilder Ranch (Bryne 2002), and in CA-SCR-177 in Scotts Valley (Cartier 1993). The traditional interpretation is that people living during this time were highly mobile hunters who focused subsistence efforts on large mammals. In contrast, Erlandson et al. (2007) proposes a "kelp highway" hypothesis for the peopling of the Americas. Proponents of this model argue that the earliest inhabitants of the region focused their economic pursuits on coastal resources. Archaeological sites that support this hypothesis are mainly from the Santa Barbara Channel Islands. Some scholars hypothesize that Paleo-Indian sites in the Bay Area may exist but are inundated due to rising ocean levels throughout the Holocene (Jones 1995).

Millingstone

Settlement in the Monterey Bay appears with more frequency in the Millingstone Period. Sites of this era have been discovered in Big Sur (Jones 2003; Fitzgerald and Jones 1999) and Moss Landing (Jones and Jones 1992; Milliken et al. 1999). Assemblages are characterized by abundant millingstones and handstones, core and core-cobble tools, thick rectangular (L-series) Olivella beads, and a low incidence of projectile points, generally lanceolate or large side-notched varieties (Jones et al. 2007). Eccentric crescents are also found in Millingstone components. Sites are often associated with shellfish remains and small mammal bone, which suggest a collecting-focused economy. Newsome et al. (2004) report that stable isotope studies on human bone, from a Millingstone component, indicate a diet composed of 70%–84% marine resources. Contrary to these findings, deer remains are abundant at some Millingstone sites (cf. Jones et al. 2008), which suggests a flexible subsistence focus. People living during the Millingstone era are thought to have been highly mobile.

Early

The Early Period corresponds with the earliest era of what Rogers (1929) called the "Hunting Culture." According to Rogers, the "Hunting Culture" continues through to the Middle-Late Transition in the present framework. The Early Period is marked by a greater emphasis on formalized flaked stone tools, such as projectile points and bifaces, and the initial use of mortar and pestle technology. Early Period sites are located in more varied environmental contexts than millingstone sites, suggesting more intensive use of the landscape than previously (Jones and Waugh 1997).

Early Period artifact assemblages are characterized by Large Side-notched points, Rossi Square-stemmed points, Spire-lopped (A), End-ground (B2b and B2c), Cap (B4), and Rectangular (L-series) Olivella beads. Other artifacts include less temporally diagnostic Contracting-stemmed and Año Nuevo long-stemmed points, and bone gorges.

Early Period sites are common and often found in estuary settings along the coast or along river terraces inland and are present in both Monterey and Santa Cruz Counties. Coastal sites dating to this period include CA-MNT-108 (Breschini and Haversat 1992a), CA-SCR-7 (Jones and Hildebrandt 1990), and CA-SCR-38/123 (Jones and Hildebrandt 1994).

Archaeologists have long debated whether the shift in site locations and artifact assemblages during this time represent either population intrusion as a result of mid-Holocene warming trends, or an in situ adaptive shift (cf. Mikkelsen et al. 2000). The initial use of mortars and pestles during this time appears to reflect a more labor-intensive economy associated with the adoption of acorn processing (cf. Basgall 1987).

Middle

The trend toward greater labor investment is apparent in the Middle Period. During this time, there is increased use of plant resources, more long-term occupation at habitation sites, and a greater variety of smaller "use-specific" localities. Artifacts common to this era include Contracting-stemmed projectile points, a greater variety of Olivella shell beads, and Haliotis ornaments that include discs and rings (Jones 2003). Bone tools and ornaments are also common, especially in the richer coastal contexts (Jones and Ferneau 2002a; Jones and Waugh 1995), and circular shell fishhooks are present for the first time. Grooved stone net sinkers are also found in coastal sites. Mortars and pestles become more common than millingstones and handstones at some sites (Jones et al. 2007). Important Middle Period sites include CA-MNT-282 at Willow Creek (Jones 2003; Pohorecky 1976) and CA-MNT-229 at Elkhorn Slough (Dietz et al. 1988). Middle Period sites north of the Monterey Bay include CA-SCR-9 and CA-SMA-218 at Año Nuevo (Hylkema 1991).

Jones et al. (2007) discuss the Middle Period in the context of Rogers' "Hunting Culture" because it is seen as a continuation of the pattern that begins in the Early Period. The pattern reflects a greater emphasis on labor-intensive technologies that include projectile and plant processing. Additionally, faunal evidence highlights a shift toward prey species that are more labor intensive to capture, either by search and processing time or technological needs. These labor-intensive species include small schooling fishes, sea otters, rabbits, and plants such as acorn. Jones and Haney (2005) offer that Early and Middle Period sites are difficult to distinguish without shell beads due to the similarity of artifact assemblages.

Middle-Late Transition

The Middle-Late Transition also marks the end of Rogers' "Hunting Culture," which seems to occur sometime during this era. Artifacts associated with the Middle-Late Transition include Contracting-stemmed, double side-notched, and small leaf-shaped projectile points. The latter are thought to represent the introduction of bow and arrow technology to the region. A variety of Olivella shell bead types are found in these deposits and include B2, B3, G1, G2, G6, and K1 varieties (Jones 1995), notched line sinkers, hopper mortars, and circular shell fishhooks (Jones et al. 2007). Sites in Monterey County that correspond with this time are CA-MNT-1233 and CA-MNT-281 at Willow Creek (Pohorecky 1976), CA-MNT-1754, and CA-MNT-745 in Priest Valley (Hildebrandt 2006).

The Middle-Late Transition is a time that appears to correspond with social reorganization across the region. This era is also a period of rapid climatic change known as the Medieval Climatic Anomaly (Jones et al. 2007). The Medieval Climatic Anomaly is proposed as an impetus for the cultural change that was a response to fluctuations between cool-wet and warm-dry conditions that characterize the event (Jones et al. 1999). Archaeological sites are rarer during this period, which may reflect a decline in regional population (Jones and Ferneau 2002b).

Late

Late Period sites are found in a variety of environmental conditions and include newly occupied task sites and encampments, as well as previously occupied localities. Artifacts associated with this era include Cottonwood and Desert Side-notched arrow points, flaked stone drills, steatite and clamshell disc beads, Haliotis disc beads, Olivella bead types E1 and E2, and earlier used B2, B3, G1, G6, and K1 types. Millingstones, handstones, mortars, pestles, and circular shell fishhooks also continue to be used (Jones et al. 2007). Sites dating to this era are found in coastal and interior contexts. In the Monterey Bay area, Late Period sites include CA-MNT-143 at Asilomar State Beach (Brady et al. 2009), CA-MNT-1765 at Moro Cojo Slough (Fitzgerald et al. 1995), CA-MNT-1485/H and CA-MNT-1486/H at Rancho San Carlos (Breschini and Haversat 1992b), and CA-SCR-117 at Davenport Landing (Fitzgerald and Ruby 1997).

Coastal sites dating to the Late Period tend to be more resource acquisition or processing sites, while residential occupation is more common inland (Jones et al. 2007).

Historical Period

The first European to explore the Monterey Bay was Sebastián Vizcaíno, who, in 1602, was sent by the Spanish government to map the Californian coastline (Holm et al. 2013). It was Vizcaíno who named the area "Puerto de Monterey" after the viceroy of New Spain. The location of Vizcaíno's landing (and later Junipero Serra) lies near the City of Monterey's harbor. The Gaspar de Portolá expedition traveled through the region in 1769 and returned in 1770 to establish both the Monterey Presidio, Spain's first military base in Alta California, and Mission San Carlos Borreméo de Carmelo.

The establishment of the Spanish missions drastically altered the lifeways of the Native Americans. The Spanish conscripted members of local Native American communities to move to the Mission San Carlos Borreméo de Carmelo, where they were indoctrinated as Catholic neophytes.

Mexico gained independence from Spain in 1821. In 1934, the Mexican government secularized the mission lands releasing the Native Americans from control of the mission-system. The City of Monterey continued as the capital of Alta California and the Californios, the Mexicans who settled in the region, were given land grants. The United States of America acquired Alta California after landing at Monterey in the 1848 during the Mexican–American War. California became a state in 1850.

The U.S. Army has had a presence on the Presidio grounds since the land was first acquired in 1848. The Army established present iteration of the Presidio of Monterey in 1902, although the land had been used as a presidio at various times since 1792. The eastern portion of the Monterey Presidio is included in the El Castillo District that is significant due to its development and use by Spanish authorities starting from 1792. The El Castillo District and the west-central portion of the Presidio is documented as the POM District, which is significant under the National Register of Historic Places (NRHP) for its development and use from 1902–1939, when the U.S. Army reestablished use of the land as a place to garrison the returning troops. This portion of the Presidio was planned and built between 1902 and 1910 and operated as a cavalry-infantry-artillery cantonment.

3.2 Records Search

To identify previously recorded/known historic properties that may be affected by the proposed undertaking, Dudek defined a study area, which included the University boundary and a 0.5-mile buffer. On August 29, 2024, Charles Mikulik of Charles Mikulik Archaeological Consulting conducted a CHRIS records search at the Northwest Information Center (NWIC), located at Sonoma State University (NWIC File No. 24-0306; Appendix A). The records search request included lands within 0.5 miles of the study area and reviewed:

- Resource records and reports on file at NWIC
- State Office of Historic Preservation (OHP) Historic Properties Directory
- OHP Archaeological Determinations of Eligibility
- California Inventory of Historical Resources (1976)
- Historical maps
- Local inventories
- Bureau of Land Management General Land Office and/or rancho plat maps

3.2.1 Previously Recorded Resources

The results of the records search indicated that eight cultural resources have been previously recorded within a 0.5-mile radius of the University boundary. One of the previously recorded resources (P-27-000385) has been recorded on the former Fort Ord, potentially within the Project archaeological APE (Table 2; see Appendix A, Figure 3-1). However, the exact location of the prehistoric site (P-27-000385) is unknown; the site record provides no locational data other than "On the Fort Ord Military Reservation," which extends well beyond the Project APE (Pilling 1950). Furthermore, the site was described as "destroyed by bulldozing in ca. 1940" (Pilling 1950). The additional previously recorded cultural resources recorded within a 0.5-mile radius of the University boundary include one prehistoric isolate and six built environment resources. All previously recorded cultural resources located within a 0.5-mile radius of the University are summarized in Table 2 below, followed by a brief summary of the cultural resource recorded as overlapping the Project APE.

Table 2. Recorded Cultural Resources within the Records Search Study Area

Primary	Trinomial	Resource Name	Resource Type	Age	Recording Events	NRHP Eligibility
Potentially Within the Project archaeological APE (n=1)						
P-27-000385	CA-MNT-280	[none]	Site	Prehistoric	1950 (A.R. Pilling, UCAS)	Unlikely eligible
Within 0.5-mile buffer of the University (n=7)						
P-27-001724	CA-MNT-1818H	Henneken	Site	Historic	1993 (David Fee, Harding Lawson Associates); 1993 (David W. Babson, [none]); 1994 (David W. Babson, Tri-Services	Strong potential for NRHP eligibility, Criterion D

Table 2. Recorded Cultural Resources within the Records Search Study Area

Primary	Trinomial	Resource Name	Resource Type	Age	Recording Events	NRHP Eligibility
					Cultural Resource Center, USA-CERL)	
P-27-002895		Building TR9080, former Fort Ord	Building	Historic	2007 (Matt Bischoff, CSP, Monterey District)	Unknown
P-27-002896		Building TR9081, former Fort Ord	Building	Historic	2007 (Matt Bischoff, CSP, Monterey District)	Unknown
P-27-003872		FORTAG ISO-1	Isolate	Prehistoric	2019 (Mary Pfeiffer, Rudy Dinarte, Rincon Consultants, Inc.)	Unlikely eligible
P-27-003874		Bridge 44-0081	Structure	Historic	2019 (Susan Zamudio-Gurrola, Rincon Consultants, Inc.)	Unknown
P-27-003875		Bridge 44-0202	Structure	Historic	2019 (Susan Zamudio-Gurrola, Rincon Consultants, Inc.)	Unknown
P-27-003876		Bridge 44-0200	Structure	Historic	2019 (Susan Zamudio-Gurrola, Rincon Consultants, Inc.)	Unknown

Notes: NRHP = National Register of Historic Places; APE = area of potential effects.

P-27-000385 (CA-MNT-280)

A. R. Pilling (1950) recorded this site as an "Occupation site" on the Fort Ord Military Reservation. There is no specific description of the location of the site nor the characteristics of the site, other than it was "destroyed by bulldozing in ca. 1940." Due to the vast size of the Fort Ord Military Reservation (19,220 acres), the limited recorded information available regarding the site, and the destroyed site condition, it is unlikely that the site could be identified.

3.2.2 Previously Conducted Studies

A review of NWIC records indicates that no previously conducted studies intersect the Project APE. A total of 20 previously conducted studies included portions of the University's main campus. Two of the studies (S-33677 and S-45823) are immediately adjacent to and west of the Project APE but do not intersect it. Twenty-two other previous technical studies have been conducted within a 0.5-mile radius of the University (Table 3; see Appendix A, Figure 3-2). An additional study by Dudek (Brady 2019) intersects the Project APE but was not on file with NWIC at the time of the records search. Table 3 summarizes all previous cultural resource studies conducted within a 0.5-mile radius of the University, followed by summaries of the previous cultural resource study performed by Dudek in 2019 and the adjacent reports.

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
Studies within the Project APE (n=1)				
	Brady, Ryan	2019	Cultural Resource Inventory for the CSU Monterey Bay EIR Master Plan Project, Monterey County, California	Dudek
Studies within portions of the University, outside the Project APE (n=20)				
S-003418	Ann S. Peak & Associates	1978	Cultural Resource Assessment of the Proposed Effluent Disposal System, Fort Ord, Monterey County, California	Ann S. Peak & Associates
S-003441	Monterey County	1975	Archeological Survey, Fort Ord, Monterey County	Monterey County
S-005210	Michael Swernoff	1982	A Reconnaissance Cultural Resources Survey of Fort Ord, California.	Professional Analysts
S-005210a	Michael Swernoff	1981	A Reconnaissance Cultural Resources Survey of Fort Ord, California, Draft Report	Professional Analysts
S-018372	Philip R. Waite	1995	A Cultural Resources Survey of 783 Hectares, Fort Ord, Monterey County, California	Geo-Marine, Inc.
S-022738	Mary Doane and Trudy Haversat	2000	Preliminary Archaeological Reconnaissance of the MBEST 18" Water Pipeline Project, Marina, Monterey County, California	Archaeological Consulting
S-023023	Mary Doane and Trudy Haversat	2000	Preliminary Archaeological Reconnaissance of the 2nd Avenue/12th Street Project, in the Former Fort Ord, Monterey County, California	Archaeological Consulting
S-025416	Mary Doane and Trudy Haversat	2002	Preliminary Archaeological Reconnaissance for the First Tee Project and Two Separate Recreational Facility Sites in the Former Fort Ord, Monterey County, California	Archaeological Consulting
S-033677	Mary Doane and Trudy Haversat	1999	Preliminary Archaeological Reconnaissance of the Marina Coast Water District Recycled Water Pipeline Project, Monterey County, California	Archaeological Consulting
S-033677a	Mary Doane and Trudy Haversat	2006	Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, Northern Segment, In Marina and Seaside, Monterey County, California	Archaeological Consulting

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
S-033677b	Mary Doane and Gary S. Breshini	2007	Phase I Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California (Revised May 22, 2007)	Archaeological Consulting
S-033677c	Mary Doane and Gary S. Breschini	2006	Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California	Archaeological Consulting
S-033677d	Mary Doane and Gary S. Breschini	2007	Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Monterey County, California	Archaeological Consulting
S-033677e	Mary Doane and Gary S. Breschini	2007	Preliminary Archaeological Reconnaissance for the Marina Coast Water District Well 34 Project, In Marina, Monterey County, California	Archaeological Consulting
S-033677d	Mary Doane and Gary S. Breschini	2007	Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Monterey County, California	Archaeological Consulting
S-033677e	Mary Doane and Gary S. Breschini	2007	Preliminary Archaeological Reconnaissance for the Marina Coast Water District Well 34 Project, In Marina, Monterey County, California	Archaeological Consulting
S-035060	Mary Doane and Gary Breschini	2008	Preliminary Archaeological Reconnaissance for the Projects at Main Gate in the Former Fort Ord, Seaside, Monterey County, California	Archaeological Consulting
S-035677	Lorna Billat	2008	Collocation ("CO") Submission Packet, FCC Form 621, Fort Ord, CA-13188A	EarthTouch, Inc.
S-035677a	Dana E. Supernowicz	2008	Cultural Resources Study of the Fort Ord Project AT&T Mobility Site No. CA-13188A, 2050 Inter-Garrison Road, Marina, Monterey County, California 93955	Historic Resource Associates
S-037693	Mary Doane and Gary S. Breschini	2010	Phase I Archaeological Survey for the Central Coast California Veterans Cemetery	Archaeological Consulting

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
			and Eastside Road Infrastructure Projects, Seaside, Monterey County, California	
S-044238	Aniela Travers	2013	Cultural Resources Survey, California State University Monterey Bay/CN3776, NWC Eighth Avenue and A Street, Seaside, Monterey County, California, 93955, Unsectioned	EBI Consulting
S-045823	Mary Doane and Gary S. Breschini	2014	Phase I Archaeology Survey for the Proposed Monterey Peninsula Groundwater Replenishment Project, Northern Monterey County, California	Archaeological Consulting
S-045823a	Gary Breschini	2015	Monterey Peninsula Groundwater Replenishment Project minor APR change, Reclamation Ditch Diversion in Salinas and Blanco Drain Diversion in Marina (letter report)	Archaeological Consulting
S-045823b		2015	Draft Report, Addendum Cultural Resources Inventory for the Pure Water Monterey Groundwater Replenishment Project, Monterey County, California	Pacific Legacy, Inc.
S-045823c	Gary Scholze, Julianne Polanco, and Wendy Pierce	2018	EPA_2016_0304_001, Continuation of 106 Compliance for the Pure Water Monterey Groundwater Replenishment Project, Monterey County, Clean Water State Revolving Fund No. C-06-8028-110 (your letter of February 12,2018)	Office of Historic Preservation, State Water Resources Control Board
S-045823d	Anastasia T. Leigh and Julianne Polanco	2016	[BUR_2016_0815_001] National Historic Preservation Act (NHPA) Section 106 Consultation for the Pure Water Monterey Groundwater Replenishment (GWR) Project, Monterey County, California (# 16-SCA0-096)	Office of Historic Preservation, Bureau of Reclamation
S-047095	Allika Ruby	2015	Archaeological Survey Report for the PG&E Salinas #1 and Salinas #2 Pole Replacement Project, Monterey County, California	Far Western Anthropological Research Group, Inc
S-048462	David W. Babson	1993	An Inventory of Historic-Period Archaeological Sites at Fort Ord, Monterey County, California	Tri-Services Cultural Resources Team, United States Army
S-048462a	James E. Bowman	1994	Management Summary of the Historic Period Archaeological Survey at Fort Ord, Monterey County, California	Tri-Services Cultural Resources Center, U.S. Army Corps of Engineers, Construction Engineering Research Laboratories

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
S-048462b	Daniel Lapp, Chad Randl, Patrick Nowlan, Virge Jenkins, Carla Spradlin, Joseph Murphey, Sam Hunter	1993	Historical and Architectural Documentation Reports for Fort Ord, California	U.S. Army Construction Engineering Research Laboratory, Tri-Services Cultural Resources Research Center
S-048462c	Joseph S. Murphey	1992	Historic American Building Survey Report for Stilwell Hall, Fort Ord, California	U.S. Army Corps of Engineers
S-048462d	Virge Jenkins, Patrick Nowlan, Dan Lapp, Sam Hunter, Don Uzarski, Carla Spradlin, and Keith Landreth	1992	HABS Level IV Documentation Reports and Photos, Ford Ord, CA	U.S. Army Construction Engineering Research Laboratory
S-048462e	Charles Wittleder, Samuel Hunter, and Don Uzarski	1992	Condition Assessment of Fort Ord, Part 1, Stilwell Hall	U.S. Army Construction Engineering Research Laboratory
S-048462f	Elizabeth Rutherford, Samual Hunter, Charles Wittleder, and Don Uzarski	1992	Condition Assessment of Fort Ord, Part 2, East Garrison	U.S. Army Construction Engineering Research Laboratory
S-049322	Heidi Koenig	2017	Cultural Resources Survey Report, Monterey Peninsula Water Supply Project, Monterey County	Environmental Science Associates
S-049322a	Paul Michel and Julianne Polanco	2017	NOAA_2017_0403_001, Section 106 Consultation for the Monterey Peninsula Water Supply Project, Monterey County, California	National Oceanic and Atmospheric Administration; Office of Historic Preservation
S-051989	Neal Kaptain	2018	Historic Property Survey Report, Imjin Parkway Widening Project, Marina, Monterey County, California, California Department of Transportation District 5, Federal Identification No. RSTPL-5416(011)	LSA Associates, Inc
S-051989a	Neal Kaptain	2018	Archaeological Survey Report, Imjin Parkway Widening Project, Marina,	LSA Associates, Inc

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
			Monterey County, California, California Department of Transportation District 5, Federal Identification No. RSTPL-5416(011)	
S-053705	H. Haas, S. Treffers, D. Merrick, M. Pfeiffer, and S. Zamudio-Gurrola	2019	Cultural Resources Assessment Report, Fort Ord Regional Trail and Greenway (FORTAG) Project, Monterey County, California	Rincon Consultants, Inc.
S-053705a	Steven Treffers and Christopher Duran	2020	Historic Property Survey Report for the Ford Ord Regional Trail and Greenway (FORTAG) Project, County of Monterey, EA 05-1M570, MON-68-Post Mile 0.01/1.1, E-FIS 05-2000- 0029	Rincon Consultants, Inc.
S-053705b	Christopher Duran, Hannah Haas, Mary Pfeiffer, and Susan Zamudio-Gurrola	2019	Archaeological Survey Report for the Fort Ord Regional Trail and Greenway (FORTAG) Project, County of Monterey, California, EA 05-1M570, MON-68-Post Mile 0.01/1.1, E-FIS Project No. 05-2000-0029	Rincon Consultants, Inc.
S-053705c	Theadora Fuerstenberg and Chris Duran	2023	Addendum to the Historic Property Survey Report/Archaeological Survey Report for the Fort Ord Regional Trail and Greenway (FORTAG) Canyon Del Rey/State Route 218 Segment Project (letter report)	Rincon Consultants, Inc.
S-053768	Ryan Brady	2019	Cultural Resource Inventory for the CSU Monterey Bay EIR Master Plan Project, Monterey County, California (letter report)	Dudek
S-055378	Mary Doane and Gary Breschini	2007	Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California	Archaeological Consulting
S-055378a	Gary Breschini and Mary Doane	2007	Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Monterey County, California	Archaeological Consulting
S-055378b	Milford Wayne Donaldson	2008	BUR080313B: Marina Coast Water District Regional Urban Recycled Water Project, Monterey County, California (Project No. 06- SCA0-259)	Office of Historic Preservation

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
Studies within a 0.5-mile buffer of the University boundary (n=22)				
S-003345	Tony F. Weber and Ann S. Peak	1976	Monterey Peninsula Regional Wastewater Treatment System Expansion Project	Ann S. Peak & Associates
S-003345a	Ann S. Peak	1976	Appendix I: Cultural Resource Assessment of the Interceptor Line – East of Blanco Road and West of Davis Road (Augmentation of Monterey Peninsula Regional Wastewater Treatment System)	Ann S. Peak & Associates
S-003345b	Ann S. Peak and Melinda A. Peak	1978	Cultural Resource Assessment of the Selected Alternative of the Monterey Regional Wastewater Treatment System, Monterey County, California.	Ann S. Peak & Associates
S-003345c	Melinda A. Peak	1980	Test drilling for cultural resources, Monterey Regional Wastewater Treatment Project: Interceptor line from the Salinas Sewage Treatment Plant to the Blanco Road crossing of the Salinas River (letter report)	Ann S. Peak & Associates
S-010561	Paul D. Bouey	1989	Archaeological Reconnaissance of the Salinas Valley Seawater Intrusion Project, Monterey County, California	Far Western Anthropological Research Group, Inc.
S-010561a	Jones & Stokes Associates, Inc.	1994	Addendum 2 to the Archaeological Reconnaissance of the Salinas Valley Seawater Intrusion Project	Jones & Stokes Associates, Inc.
S-010561b	Jones & Stokes Associates, Inc.	1994	Addendum 3 to the Archaeological Reconnaissance of the Salinas Valley Seawater Intrusion Project: Archaeological Testing and Determination of Eligibility of Site CA-MNT-1803	Jones & Stokes Associates, Inc.
S-010561c	Far Western Anthropologic al Research Group, Inc.	1992	Addendum to the Archaeological Reconnaissance of the Salinas Valley Seawater Intrusion Project (Purchase Order No. R93022975)	Far Western Anthropological Research Group, Inc.
S-010561d	Leslie C. Glover and Paul D. Bouey	1992	Letter Addendum to the Archaeological Survey of the Salinas Valley Seawater Intrusion Project: Alternative Corridors (Purchase Order No. R93022975) (letter report)	Far Western Anthropological Research Group, Inc.
S-014001	Anna Runnings and Gary Breschini	1992	Preliminary Cultural Resources Reconnaissance for the MPWMD Desalinization Pipeline, Monterey County, California	Archaeological Consulting
S-016225	James E. Bowman and	1994	Report on the Historic Period Archaeological Survey at Henneken's	Tri-Services Cultural Resources Research

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
	Robert Chenier		Ranch and the Windmill Site, Fort Ord, Monterey County, California	Center, U.S. Army Corps of Engineers, Construction Engineering Research Laboratories
S-020626	Sunshine Psota	1998	Review of Historic Resources for Site SF-754-01, New Monopole at 1st Ave. and 2nd St., Fort Ord, Monterey County, California (letter report)	Anthropological Studies Center, Sonoma State University
S-020626a	Sunshine Psota	1998	Review of Historic Resources for Site SF754-01, New Monopole at 6th Army Avenue, Fort Ord, Monterey County, California (letter report)	Anthropological Studies Center, Sonoma State University
S-022537	Kelda Wilson	2000	Negative Archaeological Survey Report, 05-MON-1 PM R80.7-R85.3 CU 05-168 EA 05-0A3301, Proposal to Place an Asphalt Concrete Overlay on the Class 1 Bike Path on State Route 1 in Seaside and Marina, Monterey County	California Department of Transportation
S-022657	Izaak Sawyer, Laurie Pfeiffer, Karen Rasmussen, and Judy Berryman	2000	Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Science Applications International Corporation
S-025535	Colin I. Busby	2001	Negative Archaeological Survey Report, signal and other roadway improvements at the intersection of Reservation Road and Imjin Road, City of Marina, Monterey County	Basin Research Associates, Inc.
S-029425	Scott Billat	2004	Construction of a 70 foot Monopole and New Equipment Shelter, Mars/SF-1036(resubmittal), 599 DX Road, Marina Ca.	EarthTouch Inc.
S-029425a	Erika Thal	2004	Cultural Resource Assessment for the Mars (SF-1036) Cellular Facility on 599 DX Road, Marina, Monterey County, California	EarthTouch Inc.
S-029932	Michael Darcangelo and Laura Leach-Palm	2004	Archaeological Survey Report on the University Villages Specific Plan, 390 Acre Project Area, at Former Fort Ord, Monterey County, California.	Far Western Anthropological Research Group, Inc.
S-031953	Wayne H. Bonner and James M. Keasling	2006	Cultural Resource Records Search Results and Site Visit for T-Mobile Telecommunications Facility Candidate SF15153 (Metro Marina Monopine/Amateur Radio Club), 599 DX	Michael Brandman Associates

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
			Drive, Marina, Monterey County, California (letter report)	
S-033596	Mary L. Maniery and Cindy L. Baker	2007	Cultural Resource Inventory and Evaluation of United States Army Reserve 63D Regional Readiness Command Facilities; Contract No. W912C8-05-P-0052	PAR Environmental Services, Inc.
S-033596a	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Heroic War Dead USAR Center/Area Maintenance Support Activity 85 (G), Oakland, California; P-01-[010831], 63D Regional Readiness Command Facility CA036, Contract No. W912C8-05-P	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596b	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Oakland USAR Center #2, Oakland, California; P-01-01830, 63D Regional Readiness Command Facility CA-125, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596c	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve PFC Bacciglieri Armed Forces Reserve Center, Concord, California; P-07-002752, 63 D Regional Readiness Command Facility CA007, Contract No. W912C8-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596d	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Col. Hunter Hall USAR Center, San Pablo, California; P-07-002753, 63D Regional Readiness Command Facility CA 070, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596e	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Fort Ord USAR Center, Marina, California; 63D Regional Readiness Command Facility CA012, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596f	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Moss Landing Local Training Area, Moss Landing, California; 63D Regional Readiness Command Facility CA189, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
S-033596g	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Jones Hall USAR Center, Mountain View, California; P-43-001836, 63D Regional Readiness Command Facility CA031, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596h	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Richey Hall USAR Center, San Jose, California; P-43-000728, 63D Regional Readiness Command Facility CA069, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596i	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve Moffett USAR Center, Mountain View, California; P-43-001837, 63D Regional Readiness Command Facility CA120, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596j	U.S. Army Reserve; PAR Environmental Services, Inc.	2007	Cultural Resources Inventory and Evaluation of the United States Army Reserve PFC Young USAR Center, Vallejo, California; P- [48-000752], 63D Regional Readiness Command Facility CA-090, Contract No. W912C8-05-P-0052	U.S. Army Reserve; PAR Environmental Services, Inc.
S-033596k	Milford Wayne Donaldson and James O. Anderson	2007	USA070613A; Inventory and Evaluation of Historic Resources at 63D Regional Readiness Command, US Army Reserve Center in California	California Office of Historic Preservation; U.S. Army
S-034302	James Keasling	2008	Cultural Resource Records Search and Site Visit Results for Sprint Nextel Candidate MO45XC018 (Fort Ord), 4251 General Jim Moore Boulevard, Seaside, Monterey County, California	Michael Brandman and Associates
S-034406	Scott Billat	2007	New Tower ("NT") Submission Packet FCC Form 620, Fort Ord Seaside, SF-18350A	EarthTouch, Inc.
S-035979	Susan Morley	2009	Preliminary Cultural Resources Reconnaissance of Assessor's Parcel Number 031-251-004 in the City of Marina, County of Monterey, California	Achasta Archaeological Services
S-037725	Allika Ruby	2010	Archaeological Survey Report for the Monterey Light Rail Transit Project	Far Western Anthropological Research Services, Inc.
S-038840	Mary Doane and Gary S. Breschini	2012	Phase 1 Archaeological Survey for the Fort Ord Dunes State Park Project Near Seaside, Monterey County, California	Archaeological Consulting

Table 3. Previously Conducted Studies within the Study APE

Report Number	Authors	Year	Title	Publisher
S-039072	Basin Research Associates	2009	Cultural Resources Review, Gigling Road and South Boundary Road Improvements, Within Former Fort Ord, Monterey County, California	Basin Research Associates
S-039246	Tobin Rodman	2012	Cultural Resources Constraints Study for the Replacement of the Marina, 6th Street Wood Pole Replacement Project, Monterey County, California, PG&E No. 30787086/7690	Parus Consulting
S-046930	Roderic McLean	2014	FCC Form 620, New Tower ("NT") Submission Packet, Verizon Wireless Imjin and Abrams Facility, 2700 Imjin Parkway, Marina, California 93933	Bureau Veritas
S-046930a	LSA Associates, Inc.	2014	Cultural Resource Assessment Class III Inventory, Verizon Wireless Services, Imjin and Abrams Facility, City of Marina, County of Monterey, California	LSA Associates, Inc.
S-049322	Heidi Koenig	2017	Cultural Resources Survey Report, Monterey Peninsula Water Supply Project, Monterey County	Environmental Science Associates
S-049322a	Paul Michel and Julianne Polanco	2017	NOAA_2017_0403_001, Section 106 Consultation for the Monterey Peninsula Water Supply Project, Monterey County, California	National Oceanic and Atmospheric Administration; Office of Historic Preservation
S-053052	Heidi Koenig	2018	Cultural Resources Survey and Assessment, Monterey Bay Opportunistic Beach Nourishment Program	Environmental Science Associates
S-053870	David J. Fee and Tim Laughlin	1993	Report, Cultural Resources Field Survey and Preliminary Significance Assessment, Environmental Assessment, Groundwater Well Destruction, Fort Ord Complex, Fort Ord, California (letter report)	Harding Lawson Associates

Note: APE = area of potential effects

Cultural Resource Inventory for the CSU Monterey Bay EIR Master Plan Project, Monterey County, California (Brady 2019)

This study is a cultural resources inventory completed to partially satisfy the University's requirements under the California Environmental Quality Act for its proposed EIR Master Plan Project. This study included a CHRIS records search at NWIC with a 0.5-mile buffer around the University and a mixed-level survey of several buildings and proposed project areas throughout the main campus. One archaeological site, P-27-000385, was identified as potentially within the Project APE. However, the site record provides no locational data other than "On the Fort Ord Military Reservation," which extends well beyond the proposed project area. The current Project APE was not intensively surveyed due to active construction at the time.

S-33677a-d: Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, Northern Segment, In Marina and Seaside, Monterey County, California (Doane and Haversat 2006; Doane and Breschini 2007)

This study is linked to a waterline project that spans from northeast of the City of Marina through the former Fort Ord to downtown Monterey. It connects reservoirs, pump stations, laterals, and several pipelines. This linear study lines several existing streets in the west of the Project APE. One historic site was found within the confines of former Fort Ord but was not affected by the project and does not exist within the Project APE or the 0.5-mile buffer around the University boundary.

S-45823: Phase 1 Archaeological Survey for the Proposed Monterey Peninsula Groundwater Replenishment Project, Northern Monterey County, California (Doane and Breschini 2014)

This study is a water resources improvement project, which would inject treated water from a new water treatment plant into the Seaside Groundwater Basin. The study area is vast and involves lands in Marina, Seaside, Monterey, and Pacific Grove, as well as unincorporated lands around Marina, Salinas, and Castroville. The study borders the Project APE to the west. Background research for the study identified six prehistoric and 13 historic resources within the records search area; however, no resources were located within the Project APE. No resources were identified during the survey.

3.3 Native American Consultation

NOAA will conduct consultation with Tribal partners and interested parties for the Project in accordance with 36 CFR Section 800.2(d). To support these efforts, Dudek submitted a Sacred Lands File (SLF) search request to the Native American Heritage Commission (NAHC) on August 16, 2024. Dudek requested information on Tribal cultural resources that may be present within or near the Project APE, and a list of Tribal individuals who may have additional information. The NAHC responded on September 10, 2024, with negative results for the SLF search. NAHC provided contacts for 11 separate groups (Appendix B). Dudek provided this list to NOAA. Three responses have been received as of the date of this report. On October 11, 2024, Cultural Resources Officer for the Costanoan Rumsen Carmel Tribe, Samuel Thunder Rodriguez, responded requesting to be included in formal consultation with NOAA. Karen White, Chairwoman of the Xolo-Salinan Tribe, responded on October 11, 2024, stating the Project does not fall within their ancestral lands. A third response was received on October 13, 2024, from Irenne Zwierlein, Chairperson of the Amah Mutsun Tribal Band of San Juan Bautista. Chairperson Zwierlein requested cultural resources sensitivity training for all personnel associated with the Project, as well as the presence of an archaeologist and Tribal monitor during all ground-disturbing construction activities if the results of the SLF search were positive. NOAA's Native American consultation and community outreach is ongoing as of the date of this report.

3.4 Cultural Resources Survey

Dudek archaeologist Jennifer De Alba, BA, conducted an intensive archaeological survey of the APE on September 5, 2024 (Appendix C). To accomplish the survey, Ms. De Alba walked parallel transects spaced no greater than 15 meters apart across the APE, closely inspecting the ground surface for prehistoric and historical period cultural materials, as well as topographic indicators and soil characteristics that might be evidence of subsurface cultural materials. Where partially exposed soil was encountered, she used small hand tools to increase soil visibility by

removing light vegetation, duff, and imported materials such as wood chips. The focus of the survey was to characterize existing conditions and identify whether archaeological resources were located, or had the potential to be located, within the APE.

The survey included the area of proposed disturbance and two staging/laydown areas. The first staging/laydown area, located northeast of the area of proposed disturbance, is 100% paved and was in use as a parking lot at the time of the survey. There was no ground surface visibility at the parking lot. Landscaped areas north and east of the first staging/laydown area were examined and provided poor visibility. The second staging/laydown area is located south and southeast of the area of proposed disturbance, is approximately 70% paved, and was in use as a road and a landscaped area at the time of the survey. Exposed ground surface within the second staging/laydown area provided excellent ground surface visibility. The area of proposed disturbance is approximately 60% paved and was in use as a parking lot and landscaped areas at the time of the survey. Exposed ground surface within the area of proposed disturbance provided fair to excellent ground surface visibility, with an area of dense vegetation present along 5th Avenue. Rodent holes and evidence of utilities were present throughout the landscaped areas within the area of proposed disturbance. No cultural material was observed within the Project APE. All soils appeared to be native soils and were consistent with the U.S. Department of Agriculture's description of Oceano loamy sand (USDA 2024).

3.5 Basis for Determining That No Historic Properties Are Present or Affected (36 CFR Section 800.11(d)(3))

Dudek found no evidence for potential historic properties during the intensive survey of the APE. NOAA will complete the Tribal and community outreach for this Project in accordance with 36 CFR Section 800.2(d). In conjunction with that effort, Dudek's background research, outreach, and field efforts fulfill the Section 106 requirements for historic properties investigation. Based on the results of these studies, Dudek recommends a finding of No Historic Properties Affected for the Project.

3.6 Views Provided by Consulting Parties and the Public (36 CFR Section 800.2(d))

Consistent with 36 CFR Section 800.2(d), NOAA will continue consultation with local public groups, agencies, and Native American contacts regarding the Project.

4 Summary and Recommendations

All cultural resource fieldwork and reporting for this Project has been conducted by archaeologists meeting the Secretary of the Interior's Professional Qualifications Standards. Dudek sent a SLF search to the NAHC. The NAHC responded with negative results and provided contacts for 11 separate groups. NOAA is consulting with Tribal partners on this Project.

A cultural resources records search of the CHRIS at the NWIC reported one cultural resource to be potentially located within the Project APE. Dudek completed a field survey of the APE, which included a 50-foot buffer around the limits of known disturbance, and identified no prehistoric cultural material. Since the cultural resource potentially within the APE was not identified and was likely documented somewhere else on the Fort Ord Military Installation, the Project will not affect a NRHP-eligible property.

Although the cultural resource identified is likely previously destroyed, there is still potential for new excavation to uncover previously unidentified human remains or other materials of cultural importance. To ensure that any newly discovered cultural resources are documented and addressed according to federal, state, and local standards, Dudek recommends that mitigation measures (MMs) from the CSUMB Master Plan Final EIR be followed for the Project (CSUMB 2022). The Master Plan EIR MMs are as follows:

MM-CUL-1a: Sensitivity Training. CSUMB shall include a standard clause in every construction contract for the Project that requires cultural resource sensitivity training by a qualified archaeologist for workers prior to conducting earth disturbance in the vicinity of a documented cultural-resource-sensitive area, should one be identified in the future. Additionally, campus staff involved in earth-disturbing work in the vicinity of a documented resource sensitive area will also receive such training.

MM-CUL-1b: Inadvertent Discovery Evaluation and Recordation. CSUMB shall include a standard inadvertent discovery clause in every construction contract for the Project, which requires that in the event that an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil-disturbing work within 100 feet of the find shall cease until a qualified archaeologist can evaluate the find and make a recommendation for how to proceed. For an archaeological resource that is encountered during construction, the campus shall:

- Retain a qualified archaeologist to determine whether the resource has potential to qualify as a historical resource or a unique archaeological resource as outlined in the California Environmental Quality Act (CEQA) (Public Resources Code § 21083.2).
- If the resource has potential to be a historical resource or a unique archaeological resource, the qualified archaeologist, in consultation with CSUMB, shall prepare a research design and archaeological evaluation plan to assess whether the resource should be considered significant under CEQA criteria.
- If the resource is determined significant, CSUMB shall provide for preservation in place, if feasible. If preservation in place is not feasible, in consultation with CSUMB, a qualified archaeologist will prepare a data recovery plan for retrieving data that is specific to the site's geographic extent and the significance of any resources encountered. The data recovery plan shall be developed prior to site development and implemented prior to or during site development (with a 100-foot buffer around the resource). The archaeologist shall also perform

appropriate technical analyses, prepare a full written report and file it with the Northwest Information Center, and provide for the permanent curation of recovered materials.

MM-CUL-1c: Construction Monitoring. A Native American and archaeological monitor shall be present for earth-disturbing work in native soils within 750 feet of a documented archaeological resource or tribal cultural resource, if such resources are discovered and documented in the future. Depth to native soils on specific project sites is typically identified in project-specific geotechnical investigations.

MM-CUL-2: Proper Handling of Human Remains. Should human remains be discovered at any time, work will halt in that area and procedures set forth in the California Public Resources Code (§ 5097.98) and State Health and Safety Code (§ 7050.5) will be followed, beginning with notification to CSUMB and the County Coroner. If Native American remains are determined to be present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendant, who will arrange for the dignified disposition and treatment of the remains. The Ohlone/Costanoan-Esselen Nation (OCEN) shall be notified of the discovery even if not assigned as Most Likely Descendant.

Should you have any questions relating to this report and its findings, please do not hesitate to contact me directly at 831.291.8370 or amoniz@dudek.com.

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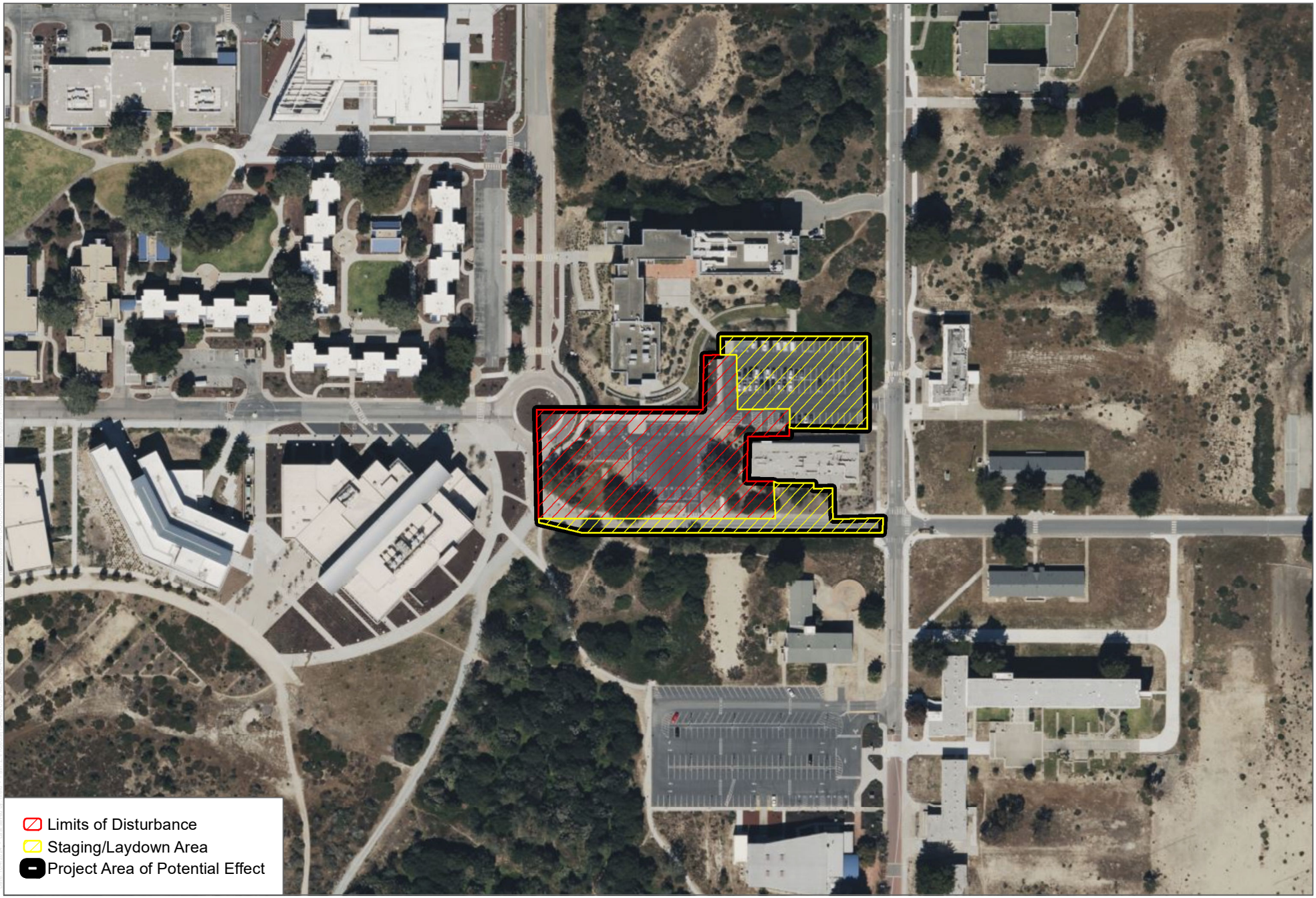
SOURCE: Page/BMS Design Group 2017

FIGURE 1

Regional Location

Taylor Science Building Project

DUDEK



SOURCE: Bing Maps 2024

DUDEK

0 100 200 Feet

FIGURE 2

Project Site

Taylor Science Building Project

Appendix A

NWIC Records Search Results (Confidential)

Redacted

Appendix B

NAHC Search Request and Results (Confidential)

Redacted

Appendix C
Survey Photo Log

FORMS DUDEK FIELD DATA REPORT

Photo Log

Record: 309	
Name	*Jennifer De Alba*
Project Name	*CSUMB Academic Building IV*
Project Number	*15464.09*
Date	*2024-09-05*

Photo(s)	
Photo	
Cardinal Direction Facing	*West*
Photo Description	*Northern border of northern laydown yard.*
Photo Location	*Latitude:36.653122,* *Longitude:-121.793551,* *Altitude:71.203340,* *Speed:0.123075,* *Horizontal Accuracy:4.298150,* *Vertical Accuracy:6.147672,* *Time:09/05/2024 10:20:22 PDT*

Photo(s)

Photo	
Cardinal Direction Facing	*South*
Photo Description	*Eastern border of northern laydown yard.*
Photo Location	*Latitude:36.653084,* *Longitude:-121.793556,* *Altitude:71.062483,* *Speed:0.018125,* *Horizontal Accuracy:4.770151,* *Vertical Accuracy:3.327190,* *Time:09/05/2024 10:20:46 PDT*

Photo(s)

Photo	

Cardinal Direction Facing	*West*
Photo Description	*Southern boundary of southern laydown yard.*
Photo Location	*Latitude:36.652365,* *Longitude:-121.793515,* *Altitude:75.124961,* *Speed:0.245578,* *Horizontal Accuracy:6.882910,* *Vertical Accuracy:8.795645,* *Time:09/05/2024 10:24:52 PDT*

Photo(s)	
Photo	
Cardinal Direction Facing	*North*
Photo Description	*Eastern boundary of Area of Potential Effect (APE).*
Photo Location	*Latitude:36.652407,* *Longitude:-121.794369,* *Altitude:75.672949,* *Speed:0.880679,* *Horizontal Accuracy:4.819796,* *Vertical Accuracy:5.808887,* *Time:09/05/2024 10:30:00 PDT*

Photo(s)

Photo	
Cardinal Direction Facing	*East*
Photo Description	*Southern boundary of APE.*
Photo Location	*Latitude:36.652529,* *Longitude:-121.795202,* *Altitude:75.529976,* *Speed:0.000000,* *Horizontal Accuracy:4.861468,* *Vertical Accuracy:3.192282,* *Time:09/05/2024 10:36:54 PDT*

Photo(s)

Photo	

Cardinal Direction Facing	*East*
Photo Description	*Northern boundary of APE.*
Photo Location	*Latitude:36.652835,* *Longitude:-121.794992,* *Altitude:74.173410,* *Speed:0.000000,* *Horizontal Accuracy:4.829975,* *Vertical Accuracy:3.239734,* *Time:09/05/2024 10:42:53 PDT*

Photo(s)

Photo	
Cardinal Direction Facing	*South*
Photo Description	*Western boundary of APE.*
Photo Location	*Latitude:36.652841,* *Longitude:-121.795043,* *Altitude:74.290653,* *Speed:0.033157,* *Horizontal Accuracy:4.795375,* *Vertical Accuracy:3.290732,* *Time:09/05/2024 10:46:26 PDT*