Environmental Impact Report Addendum for the Student Housing Program

California Polytechnic State University, San Luis Obispo

Prepared for:

California Polytechnic State University
1 Grand Avenue, Building 70
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June 2024

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LIST OF ABBREVIATIONS

AB	Assembly Bill
BMP	best management practices
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal Poly or University	California Polytechnic State University, San Luis Obispo
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Campus Master Plan	2035 Campus Master Plan
CEQA	California Environmental Quality Act
CO	carbon monoxide
CRLF	California red-legged frog
CSU	California State University
EHS	Cal Poly Environmental Health and Safety
EIR	Environmental Impact Report
GHG	greenhouse gas
GP	Guiding Principles
I/I	inflow and infiltration
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Development
MS4	Municipal Separate Storm Sewer System
$MTCO_2e$	metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
PM_{10}	particulate matter with diameters generally 10 micrometers and smaller
PolyCAP	Cal Poly Climate Action Plan
ROG	reactive organic gases
SB	Senate Bill
sf	square feet
SLOAPCD	San Luis Obispo County Air Pollution Control District
SR	State Route
SWPPP	storm water pollution prevention plan
TDM	transportation demand management
VMT	vehicle miles traveled
WRF	water reclamation facility

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1 INTRODUCTION

This document constitutes Addendum #2 to the Final Environmental Impact Report (EIR) for the California Polytechnic State University, San Luis Obispo (Cal Poly or University) 2035 Campus Master Plan (Campus Master Plan) (State Clearinghouse No. 2016101003), certified by the California State University (CSU) Board of Trustees in May 2020. The Campus Master Plan addresses all aspects of future physical development and land use on the campus to accommodate growth in student enrollment and in fulfillment of Cal Poly's academic mission. This EIR addendum has been prepared to address minor changes to the Campus Master Plan related to the currently proposed Student Housing Program since the certification of the Campus Master Plan EIR in 2020. This section of the EIR addendum describes the purpose of the addendum, presents an overview of the Campus Master Plan and EIR, and provides an updated description of the Student Housing Program (project or proposed revised project), including a discussion of changes that have been made to the project since it was evaluated in the Campus Master Plan EIR.

1.1 OVERVIEW OF THE CAMPUS MASTER PLAN AND EIR

The Campus Master Plan is a long-range planning document that guides the development and use of the University's main campus – the 1,321 acres adjacent to the City of San Luis Obispo that include most of the University's academic, administrative, and support facilities (Figures 1-1a, 1-1b, and 1-1c, Cal Poly Master Plan Map). As described in the Campus Master Plan, during the next two decades, the University anticipates developing new and replacement academic buildings, additional student and faculty/staff housing on-campus, additional recreation, event spaces, and other support facilities to accommodate enrollment growth and emerging requirements for a supportive learning environment. The Campus Master Plan was initiated in 2019 to serve as a roadmap for this expansion and was approved by the CSU Board of Trustees in May 2020. The Campus Master Plan includes a series of planning principles and objectives tailored to the Cal Poly mission, culture, and campus. These planning principles serve the dual purpose of providing a practical framework for implementation of the Campus Master Plan and providing benchmarks that allow for an evaluation of whether proposed campus projects fulfill Campus Master Plan goals.

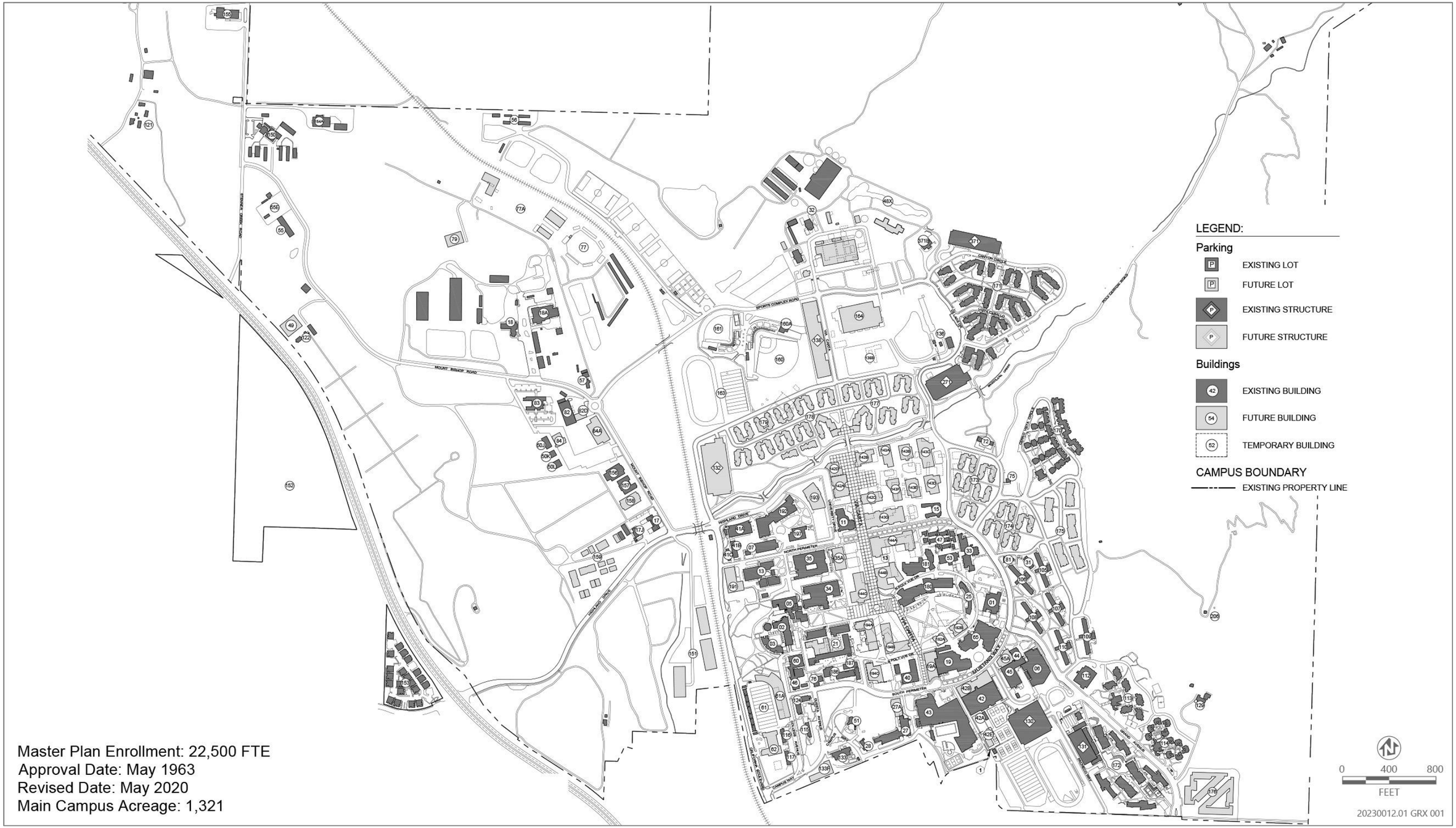
Within the Campus Master Plan and as evaluated in the Campus Master Plan EIR (see Figures 1-1a through 1-1c), the project site was identified and envisioned for development of on-campus student housing for first- and second-year students, who benefit from the on-campus housing experience and are required to live on campus, per Cal Poly policy. The majority of existing and planned student housing is located on the east side of the campus in this general area. As originally proposed in the Campus Master Plan EIR, the project would have removed five smaller student housing buildings that provide less than 70 students beds each and would have constructed nine new on-campus residence halls up to five stories in height each. The project site for the expanded first- and second-year housing is numerically identified as Buildings 174 and 175 in the Master Plan (see Figures 1-1a, -1b, and -1c). The Campus Master Plan anticipated the construction of new student housing units as a near term project (i.e., before 2030), albeit in a different location (Buildings 177 and 178, as shown in Figures 1-1a, -1b, and -1c). The Master Plan included a target of achieving an overall net increase of approximately 2,660 student beds by 2025 and an additional 1,500 beds anticipated to be online by 2027. Overall and as shown in Table 2-9 of the Campus Master Plan EIR, the Campus Master Plan anticipated up to 7,200 net new student beds as part of plan implementation.

In addition and as evaluated in the Campus Master Plan EIR, the existing Red Bricks student housing facilities (Trinity Hall, [Building 105], Muir Hall, [Building 107], Fremont Hall, [Building 109], Tenaya Hall, [Building 110], Sequoia Hall, [Building 108], and Santa Lucia Hall, [Building 106]) would be renovated to provide more modern, efficient student housing accommodations. The existing Hillcrest building (Building 81), which is located adjacent to Trinity Hall and Santa Lucia Hall, and University Housing building (Building 31) provide support services to the campus and were anticipated to remain. Currently, the Red Bricks provide 1,525 student beds and, under the Campus Master Plan, would continue to provide the same number of student beds (1,525) upon completion of the proposed renovations.

Lastly, under the Campus Master Plan, construction staging is generally anticipated to occur within the project site. A portion of the West Campus sub area is identified for short-term temporary parking use and in the longer term, for the future Facilities Operations Complex (Master Plan Map Site 151) as part of the Campus Master Plan.

Source: Cal Poly 2019.

Figure 1-1a Cal Poly Master Plan Map Legend



Source: Cal Poly 2019.

Figure 1-1b Cal Poly Master Plan Map

Source: Cal Poly 2019.

Figure 1-1c Cal Poly Master Plan Map – Academic Core

1.2 PURPOSE OF AN EIR ADDENDUM

Once an EIR or other California Environmental Quality Act (CEQA) document has been prepared and certified/adopted for a project, no additional environmental review is necessary unless certain conditions are met, at which point subsequent review under CEQA may be necessary. Sections 15162–15164 of the State CEQA Guidelines define the following standards for determining the appropriate level of subsequent environmental review, and Section 15164 addresses the specific circumstances requiring the preparation of an addendum to an EIR.

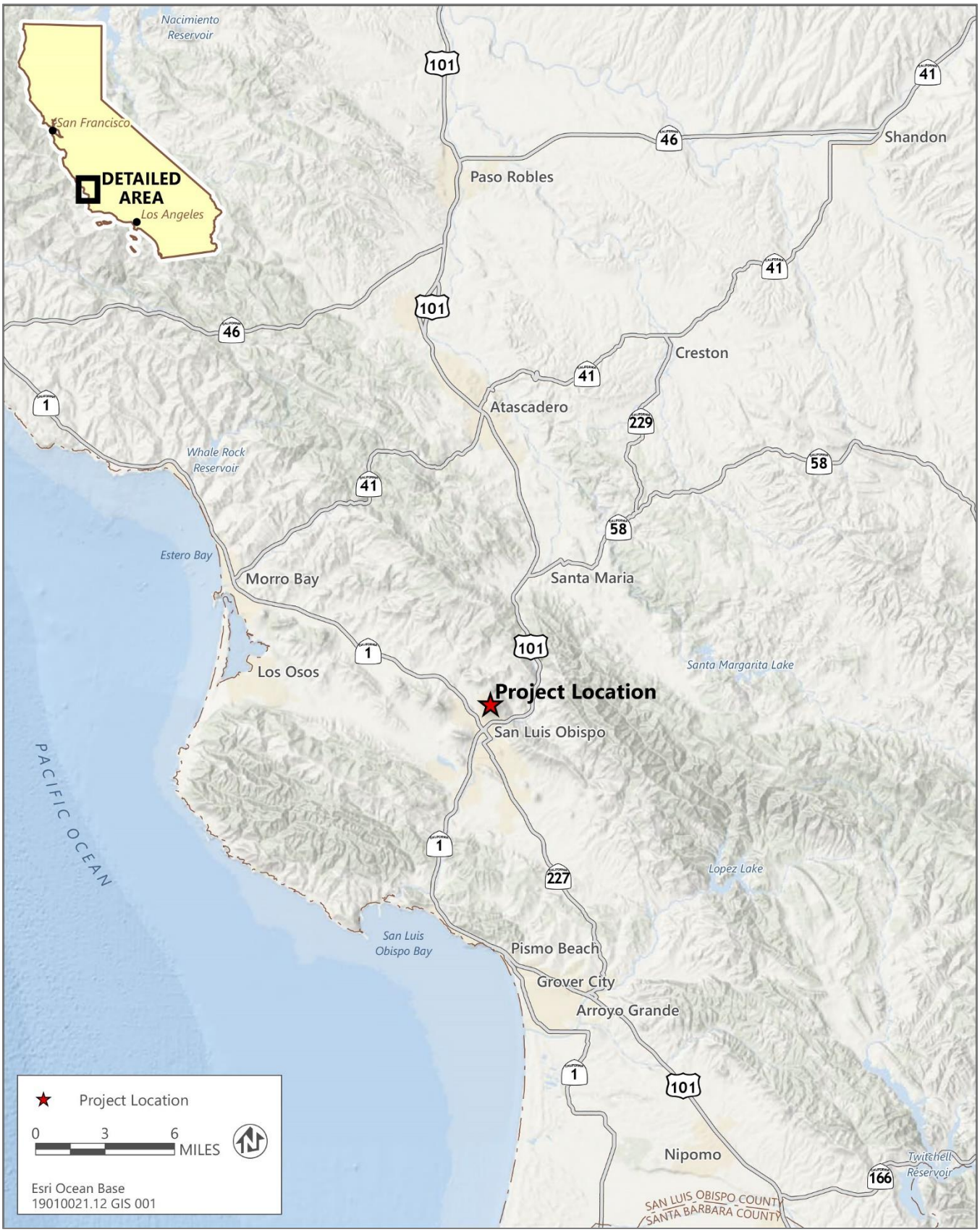
- If changes to an approved project would result in new significant impacts or a substantial increase in the severity of impacts, then preparation and circulation of a Subsequent or Supplemental EIR for additional public review is required per Section 15162 and 15163 of the State CEQA Guidelines.
- If changes to an approved project or circumstances (including new information) surrounding the project would not result in new significant impacts or a substantial increase in the severity of significant impacts identified in the certified EIR, an addendum to the EIR may be prepared in accordance with Section 15164 of the State CEQA Guidelines. Public review of an addendum is not required under CEQA.

As demonstrated in the substantive analysis that follows below, the proposed revised project would not result in new significant impacts or a substantial increase in the severity of significant impacts identified in the Campus Master Plan EIR. Accordingly, an addendum to the Campus Master Plan EIR has been determined to be the appropriate environmental documentation for the project. Faculty/staff housing was contemplated for the project site in the Campus Master Plan and Campus Master Plan EIR; this addendum to the Campus Master Plan EIR, prepared pursuant to CEQA Guidelines Section 15164, addresses minor project changes, changed circumstances, and new information that has become available since the certification of the Campus Master Plan EIR.

1.3 PROJECT LOCATION

The Cal Poly campus, of which the project site is a part, occupies over 6,000 acres of unincorporated San Luis Obispo County, California, adjacent to the City of San Luis Obispo (Figure 1-2). Beyond academic/administrative and housing development, Cal Poly lands include rangelands, agricultural areas, and natural preserves. Of this, the Master Plan Area covers 1,339 acres and is divided into five subareas (Academic Core, North Campus, East Campus, West Campus, and Outer Master Plan Area). The majority of the developed campus is identified as the "Academic Core" subarea and is generally bounded by Highland Drive on the north, California Boulevard on the west, Slack Street on the south, and primarily undeveloped foothills on the east. The East Campus is directly adjacent to the Academic Core and is primarily comprised of housing and supporting services and development.

As shown in Figure 1-3, the project site is approximately 23 acres in size and is located within the East Campus, along its boundary with the Academic Core and North Campus. More specifically, the project site is located directly south of Klamath Road/Village Drive, north of Deer Road/Grand Avenue, east of South Perimeter Road, and west of an existing water storage tank. The project site is currently developed with surface parking lots, the North Mountain Halls (Shasta, Diablo, Palomar, Lassen, and Whitney), the South Mountain Halls (also known as the Red Bricks and include Trinity Hall, Muir, Fremont, Tenaya, Sequoia, and Santa Lucia [Buildings 105 through 110, respectively]), the University Housing building (Building 31), and the Hillcrest building (Building 81). The project site also includes a 3-acre, temporary construction staging area located in the West Campus subarea that is designated for interim temporary parking and the future site of the Facilities Operations Complex (Building 151).



Source: Adapted by Ascent Environmental in 2024.

Figure 1-2 Regional Location

Source: Adapted by Ascent Environmental in 2024.

Figure 1-3 Project Location

1.4 PROJECT DESCRIPTION

The project would provide new and redeveloped student housing to accommodate more students living on campus, consistent with the goals and objectives of the Campus Master Plan as well as the broader CSU Sustainability Policy. The project would provide on-campus student housing within the East Campus for first- and second-year students, who benefit from the on-campus housing experience and are required to live on campus per Cal Poly policy. As currently proposed, the project would remove two surface parking lots (Lots K-1 and K-2) and five smaller student housing halls, known as the North Mountain Halls (Shasta, Diablo, Palomar, Lassen, and Whitney) that provide less than 70 student beds each. In their place, the project would provide more efficient, denser development comprising nine new residence halls of up to nine stories in height (see Figure 1-4). The primary difference between the original project identified in the Campus Master Plan and the proposed project is that new student housing buildings would increase in height from five stories to up to nine stories in height. The nine new residence halls would provide up to 4,500 proposed student beds, for a net increase of 4,155 student beds. The proposed residence halls would provide pedestrian pathways linking the surrounding residential communities, inviting the campus to the site, and enhancing a connection to the academic core.

In addition, the existing South Mountain Halls, also known as the Red Bricks (Buildings 105 through 110), would be renovated as part of the project to provide more modern, efficient student housing accommodations. Currently, the Red Bricks provide 1,525 student beds and would continue to provide the same number of beds (1,525) upon completion of renovations. Development under the project, including renovation of the Red Bricks, would be phased so as to prevent any temporary net decreases in student housing capacity at the campus. Specifically, the Red Bricks would be renovated during the summer months and completed in time for fall enrollment. The University Housing building (Building 31) that is located amidst the existing Red Bricks would remain, while the Hillcrest building (Building 81) that is located along the western edge of the project site would be removed.

As currently envisioned, development under the Housing Program would occur beginning in July 2025 through June 2032. As noted above, the Campus Master Plan anticipates the addition of up to 7,200 new student beds on campus, 4,100 were anticipated to be constructed by 2027 and an additional 1,500 by 2031. Therefore, the contemplated development and renovation of student housing facilities, including the number of new student beds, is consistent with the projections of the Campus Master Plan and the overall on-campus residential growth analyzed in the Campus Master Plan EIR. The primary change from what was contemplated in the Campus Master Plan and EIR is the increased density of freshman and sophomore student housing at the project site (Buildings 175 and 176). The Campus Master Plan would also be amended as shown in Figures 1-5a through 1-5c to reflect the new residential configuration at Buildings 175 and 176, and the removal of the Hillcrest building (Building 81) from the Master Plan.

The currently proposed new residence halls would provide pedestrian pathways linking the surrounding on-campus residential communities, creating a connection with and inviting approach from the campus's academic core. The project would still be designed in a manner consistent with the current Campus Design Guidelines contained in the Campus Master Plan with respect to location, architectural design/features, and colors in order to maintain a consistent and/or complementary aesthetic throughout the Cal Poly campus. It would also provide internal connection space for students to gather and collaborate. It would be developed at a higher density than the adjacent Red Brick dorms, but in a manner that is sensitive to the campus context, including the surrounding terrain and the higher density student housing facilities to the north at the Cerro Vista Apartment Complex (Building 170) and Poly Canyon Village Complex (Building 171).

The primary objectives of the project are to make progress toward the goal of housing 100 percent of the first- and second-year students on campus; continue to enrich and develop the residential communities on campus; promote a 24/7 residential campus living-learning mode; advance innovation in campus housing through technology and space enhancement; and cultivate an environment of equity and wellbeing.

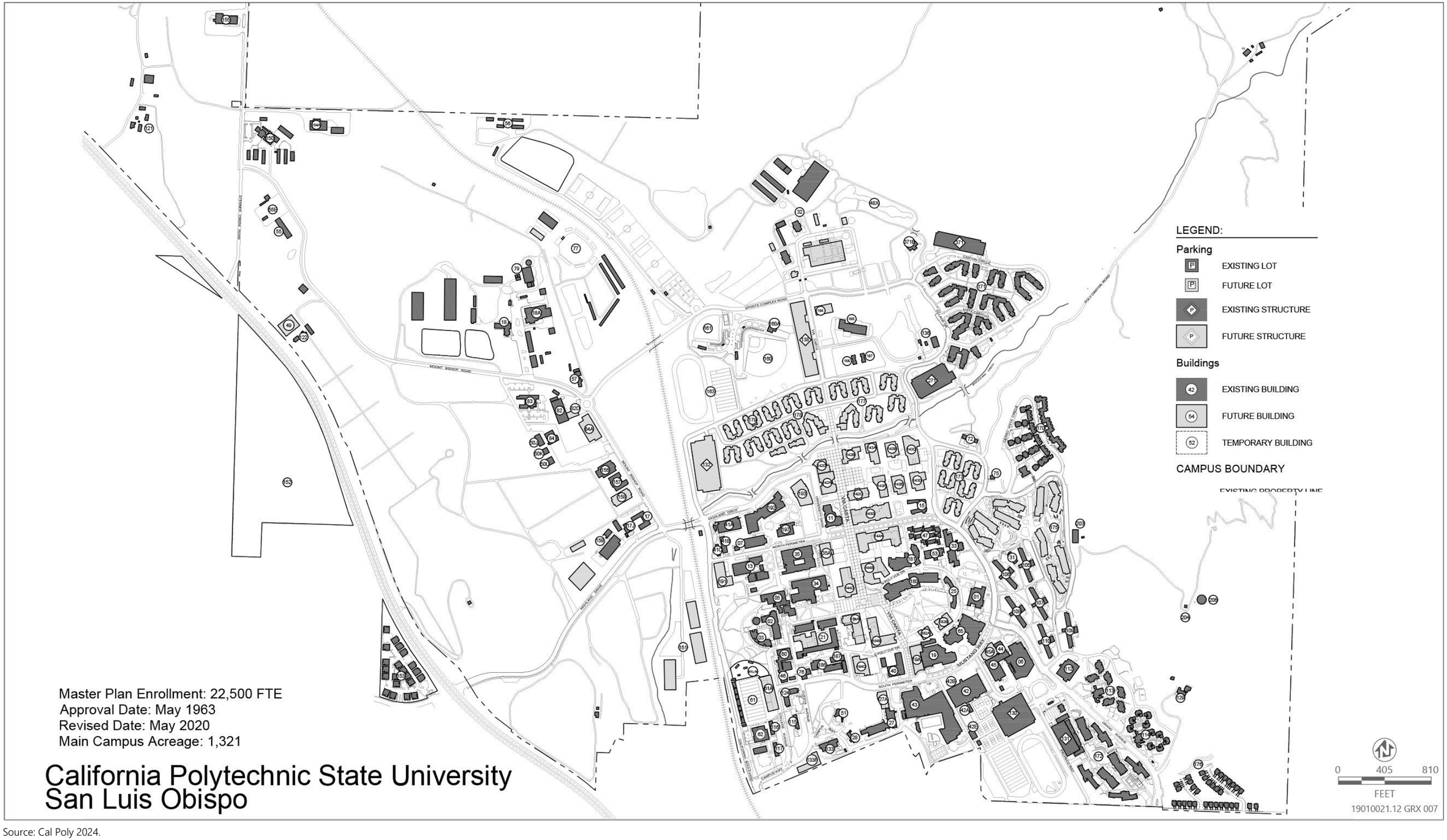
All applicable mitigation measures identified in the Campus Master Plan EIR and included in the adopted Mitigation Monitoring and Reporting Program are part of the project and are listed in Appendix A of this addendum.

Source: Image provided by Steinberg Hart in 2024; adapted by Ascent in 2024.

Figure 1-4 Site Plan

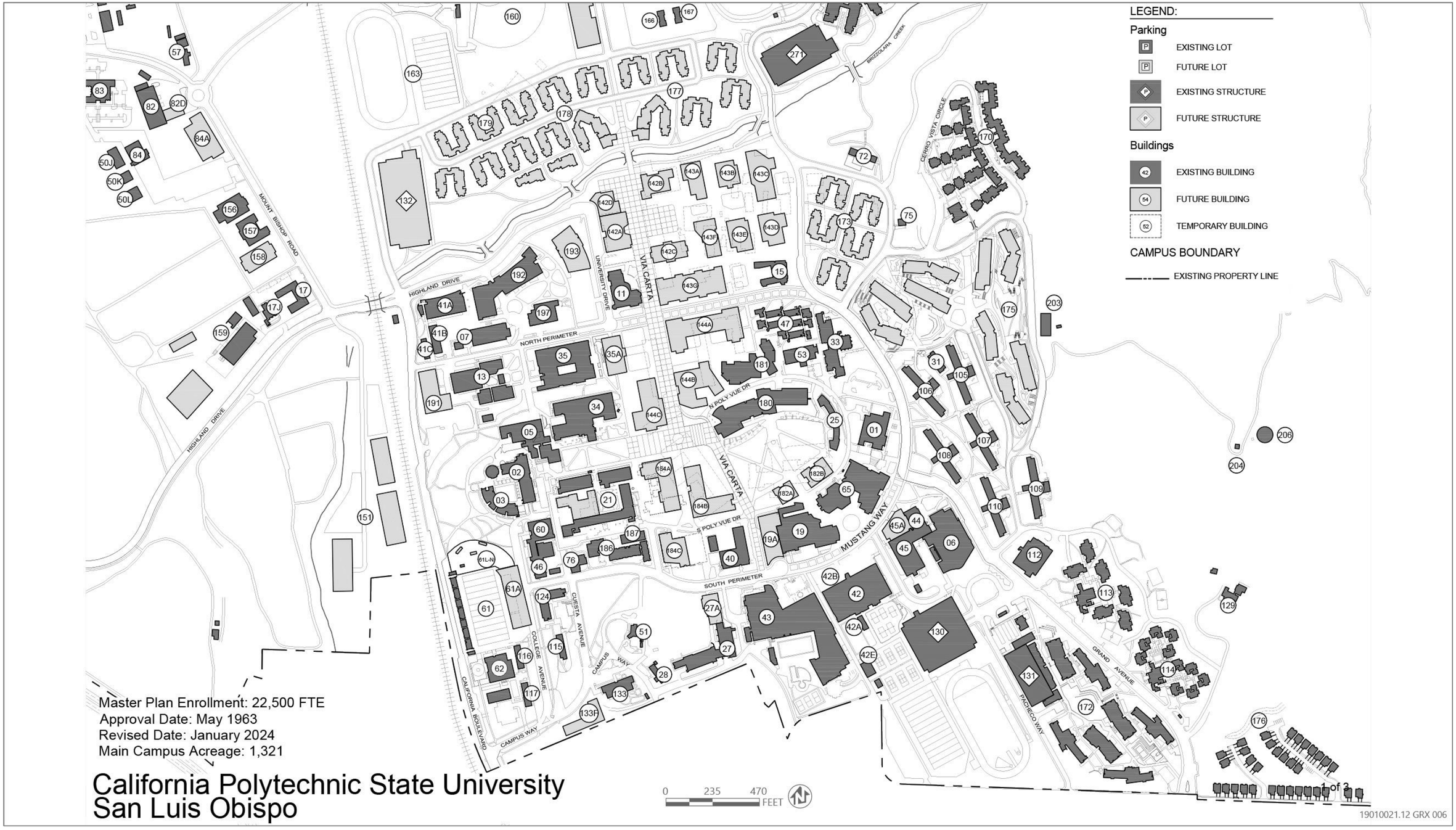
Source: Cal Poly 2024.

Figure 1-5a Cal Poly Master Plan Map Legend – Proposed Update



Source: Cal Poly 2024.

Figure 1-5b Cal Poly Master Plan Map –Proposed Update



Source: Cal Poly 2024.

Figure 1-5c Cal Poly Master Plan Map – Academic Core Proposed Update

1.4.1 New Student Housing

Within the area currently occupied by the North Mountain Halls and a portion of Parking Lots K-1 and K-2, Cal Poly is proposing the demolition and removal of five existing small-scale student residential halls (Shasta, Diablo, Palomar, Lassen, and Whitney) and surface parking lots and the construction and operation of nine new residence halls with a design capacity of up to 4,500 student beds (a net increase of 4,155 student beds). The nine proposed residence halls would be up to nine stories in height with either a concrete podium and light metal framing or a concrete/steel-frame structure. The buildings would be designed and constructed in a manner consistent with the current Campus Design Guidelines pertaining to architectural features, building form, and colors. It would also be developed at an increased density comparable to the adjacent South Mountain Halls but in a manner complimentary to the nearby higher density Cerro Vista Apartment Complex and Poly Canyon Village Complex. The vision of the project is to provide sufficient beds to meet demand for freshman and sophomore housing by offering a positive and consistent resident experience, and to reduce student commutes (i.e., vehicle miles traveled or VMT), associated greenhouse gas emissions, and impacts to neighborhood traffic.

Rooms would be developed as a "semi-suite" style of unit and designed to allow flexibility and occupancy of the suite at 300 gsf per bed. The 300 gsf per bed includes more "out of the unit" space (commons/living room, study/social space, laundry and potential wellness/yoga space) than the existing campus housing inventory. A variety of room types will be utilized to offer single-bedroom and multi-bedroom semi-suites.

Each structure would include ground floor communal/shared space intended to serve a variety of purposes and functions, some of which would serve the entire Cal Poly campus community. This may include a central lobby, cafes, lounges, shared study spaces, etc. Additionally, the ground floor would provide support space for building management, storage, maintenance, custodial supply space, and mechanical, electrical, and data system space.

Each residential floor (i.e., Floor 2 and above) of the proposed buildings would contain both amenity and support spaces outside of the residential units. These spaces would include a community kitchen and one small and one medium sized lounge/study areas on each floor to encourage students to study, relax, and build community in the residence hall outside of their units. The communal kitchen would contain a sink, microwave, full range, and refrigerator.

Community design is based on a "beds per Resident Advisor (RA) ratio". The design strives to achieve a 1 RA to 30/40 student ratio, with two Resident Directors per building. RA staff may also use the lounges on each floor to hold residential floor meetings and other programs. As part of the project, a community laundry room, custodial closet mechanical/electrical rooms, and data/telecommunications space would also be provided as appropriate.

Construction of the proposed new student housing development would occur in five phases. With the exception of the second phase, the project would involve the construction of two buildings and up to 1,000 beds per phase each year beginning in 2026. Phase 2 would involve the construction of up to 500 beds that would be available in 2027.

1.4.2 South Mountain Halls (Red Bricks) Student Housing Renovations

The project would also involve the renovation of the six South Mountain Halls, aka the Red Bricks residence halls (Trinity, Muir, Fremont, Tenaya, Sequoia, and Santa Lucia). As currently envisioned, renovation would occur within one of the six halls each year during the summer months when students are not present to prevent a net loss in on-campus housing availability. Renovation would largely consist of interior modifications of the existing buildings but may include external modifications in order to provide appropriate programming and site accessibility, security, and sustainability features. For example, elevators could be added to each residence hall for accessibility purposes. Where feasible, these would be located within the interior of the structure, but depending on spacing requirements, elevators may be added to the exterior of the structure in a manner consistent with the current Campus Design Guidelines pertaining to architectural features, building form, and colors.

1.4.3 Open Space and Landscaping

As noted above, on-site recreational amenities would be provided as part of the project and may include walking trails, outdoor communal areas, and fitness rooms. Additionally, existing landscaping and trees along the periphery of the site would be retained to the extent feasible and enhanced with additional landscaping from the Cal Poly landscape palette.

1.4.4 Sustainability

Cal Poly, as part of the CSU system, aims to exceed the energy efficiency and sustainability requirements of both the California Green Building Standards Code (CALGreen) and the California Energy Code. The proposed development as a whole would achieve a minimum of Leadership in Energy and Environmental Design (LEED) Silver for Building Design and Construction, with a goal of LEED Gold. Proposed project sustainability features would include high-efficiency irrigation for landscaping; water-efficient plumbing; energy-efficient and CALGreen-compliant lighting and appliances; and durable exterior building materials, such as concrete/masonry walls.

1.4.5 Circulation

The proposed circulation network for the project site would be intended to limit changes to the existing circulation patterns in the area and minimize the potential for project-related vehicular traffic to affect campus roadways, including North Perimeter Road, Grand Avenue, Village Drive, Klamath Road, Deer Road, and Mountain Lane (which bisects the site). On-site circulation would also include a series of interconnected pedestrian and bicycle paths throughout the development to promote multimodal transportation choices and direct on-site residents south to existing crossing opportunities along South Perimeter Road and Grand Avenue. On-site driveways and internal circulation would be one lane in each direction around the site, with limited ingress/egress points for passenger vehicles via South Perimeter Road, Grand Avenue, Klamath Road, and Mountain Road. Adequate emergency access would be provided at each of the proposed driveways. The circulation framework for the project would integrate various transportation demand management strategies that reduce vehicle miles traveled from single-occupant automobile trips, such as:

- provide safe bicycle parking areas near building entrances for visitors, and
- design and incorporate traffic-calming features within the development.

Consistent with Campus Master Plan Guiding Principles related to the creation of residential neighborhoods and location of parking along the periphery of campus development to enhance bicycle/pedestrian opportunities, the project would remove approximately 750 surface parking spaces within the project site. Consistent with the Master Plan's Implementation Program, campus is actively and adaptively managing parking at the campus to reduce the need for on-campus parking, As a result, no additional or replacement parking would be provided on-site and existing vehicles would be expected to utilize the Village Drive Parking Structure (approximately 1,000 spaces), Canyon Circle Parking Structure (approximately 970 spaces), or nearby available surface parking lots. Additionally, current campus policy is to disallow Freshmen/Sophomores to have cars on campus, which reduces the need for on-campus parking spaces.

1.4.6 Construction

Construction Timeline. As noted above, new student housing would occur in five phases over a six-year period as follows:

- Phase 1 – Construction of two buildings (A and B) with up to 1,000 new student beds within a portion of Parking Lots K-1 and K-2: August 2024 through June 2026;
- Phase 2 – Construction of one building (C) with up to 500 new student beds within a portion of Parking Lots K-1 and K-2: August 2025 through June 2027;

- Phase 3 – Construction of two buildings (D and E) with up to 1,000 new student beds within the remaining portions of Parking Lots K-1 and K-2: August 2026 through June 2028;
- Phase 4 – Replacement of Shasta, Lassen, and Diablo Halls with two buildings (F and G) and up to 1,000 new student beds: August 2027 through June 2029; and
- Phase 3 – Replacement of Palomar and Whitney Halls with two buildings (H and I) and up to 1,000 new student beds: August 2028 through June 2030.

Additionally, renovation of the existing Red Bricks would occur during the summer months as follows:

- Santa Lucia Hall: May 2027 through August 2027;
- Trinity Hall: May 2028 through August 2028;
- Muir Hall: May 2029 through August 2029;
- Tenaya Hall: May 2030 through August 2030;
- Fremont Hall: May 2031 through August 2031; and
- Sequoia Hall: May 2032 through August 2032.

Construction would generally occur Monday through Friday between the hours of 7:00 a.m. and 7:00 p.m., with the potential for weekend construction on Saturday between 7:00 a.m. and 7:00 p.m. No construction would occur on Sundays or holidays.

Construction Activities. Construction activities associated with new construction would include site grading and excavation, utility trenching, building foundation pouring, and building construction. Building erection would consist of modular units transported to and assembled at the project site. The following construction equipment is anticipated to be used during construction of the project:

- bobcat
- boom lift
- compressor
- concrete pump trucks
- concrete trucks
- concrete/industrial saw
- construction elevator
- crane
- drill rig
- excavators
- forklift
- generator set
- grader
- haul trucks
- man-lift
- off-highway trucks
- painting equipment
- roller/compactor
- rubber-tired or track dozer
- scissor lift
- scraper
- tower crane
- tractors/loaders/backhoe
- welding machine

Renovation-related construction work would largely involve the use of hand tools and equipment, although some minor equipment (e.g., a bobcat, forklift, man-lift, and/or loader) may be necessary at certain points during the renovation of a particular building. Diesel construction equipment would be powered by Tier 4 engines as required by the California Air Resources Board and U.S. Environmental Protection Agency.

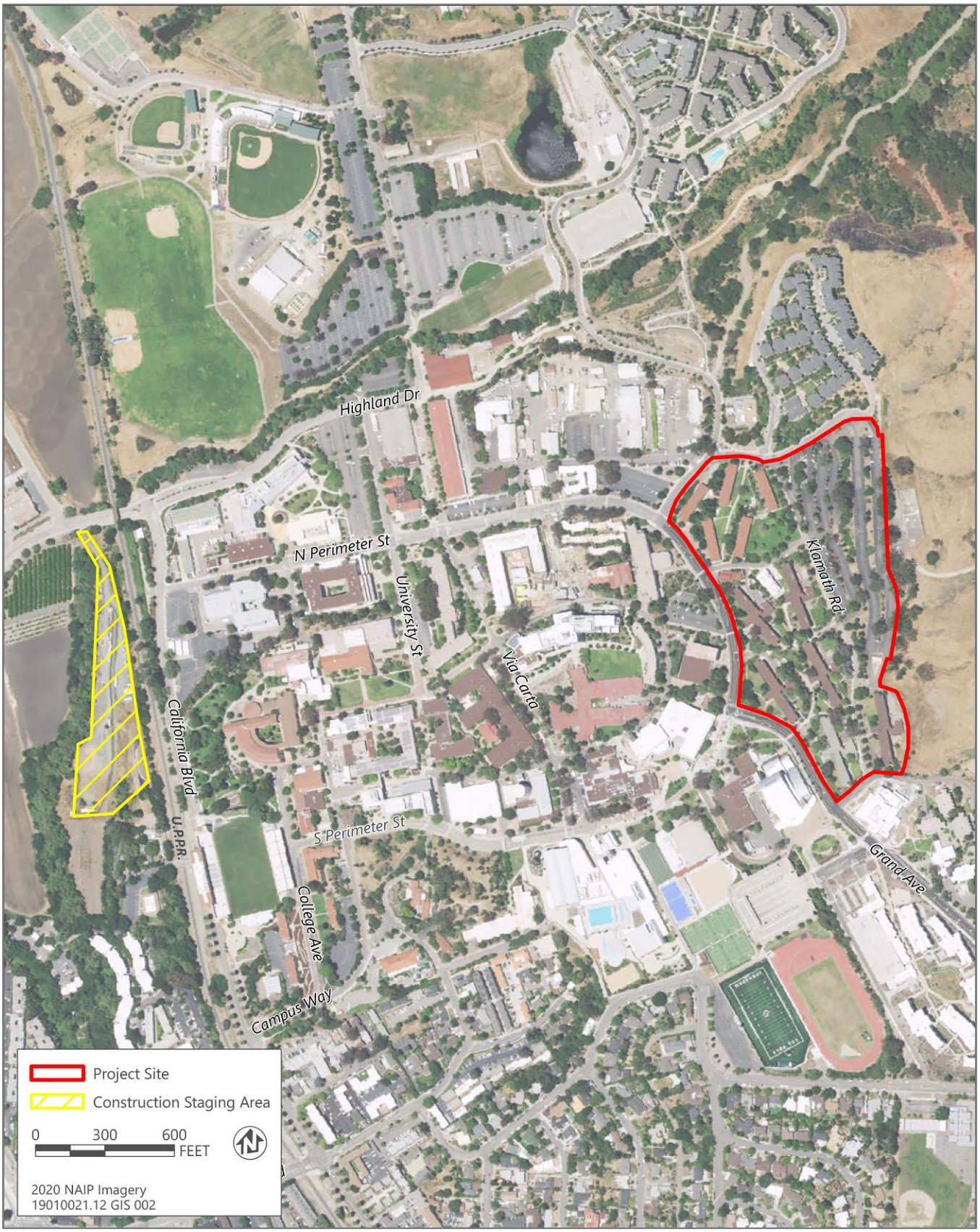
Before construction activities begin on any project component (including renovation), temporary fencing would be installed around the active construction area and other security measures such as lighting would be installed to prevent unauthorized access and promote site safety. Construction staging would occur on-site and within a portion of the area identified for temporary parking use as part of the Campus Master Plan and Campus Master Plan EIR.

With regard to the construction staging area and as stated on page 2-46 of the Campus Master Plan EIR, the long-term vision for this site is for the Facilities Operations Complex. Per the Campus Master Plan EIR, the site would be used in the interim as a temporary surface parking lot to accommodate existing campus parking that would be displaced as a result of development of this proposed student housing. In the interest of providing parking closer to student residences (e.g., Village Drive and Canyon Circle Parking Structures) and reducing disruption to on-campus uses associated with cross-campus parking for on-site residents, this area would be used as a construction staging area, as shown in Figure 1-6, which would reduce the number of daily trips between the two areas during construction.

Additionally, because the project would disturb more than 1 acre of land, the project would be required to obtain coverage under the State Water Resources Control Board Construction General Permit, which requires development of a stormwater pollution prevention plan (SWPPP). During project construction activities, SWPPP best management practices (e.g., erosion control, site stabilization, etc.) would be implemented at the site to prevent construction-related silt or debris from affecting areas outside the site boundary.

Construction Waste Management. The project would generate construction debris during on-site clearing and demolition activities. In accordance with Section 5.408 of CALGreen, the project would implement a construction waste management plan for recycling and/or salvaging for reuse of at least 65 percent of nonhazardous construction/demolition debris. Additionally, the revised project would be required to meet Leadership in Energy and Environmental Design (LEED) v4 requirements for waste reduction during construction.

Construction Traffic Control. As part of the project, Cal Poly would prepare a construction traffic control plan that illustrates the location of the proposed work area; identifies the location of areas where the public right-of-way would be closed or obstructed, and the placement of traffic control devices necessary to perform the work; shows the proposed phases of traffic control; and identifies the periods when the traffic control would be in effect. The traffic control plan would also provide information on access for emergency vehicles to prevent interference with emergency response and haul routes to be used between the staging area and active construction within the campus.



Source: Adapted by Ascent Environmental in 2023.

Figure 1-6 Project Site and Construction Staging Area

1.4.7 Consistency with Campus Master Plan

The project, as noted above, would provide a net increase of 4,155 new beds on-campus for first- and second-year students within the Master Plan Area and is considered to be generally consistent with the Campus Master Plan—more specifically, Guiding Principles (GPs) 04, 07, 08, 10, 11, 14, 16, 17, and 18, which state:

- **GP 04:** The percentage of students living in on-campus housing should be increased and Cal Poly should continue to develop into a livable residential campus, where academic facilities, housing, recreation, social places, and other support facilities and activities are integrated.
- **GP 07:** Land uses should be suitable to their locations considering the environmental features of the proposed sites.
- **GP 08:** The siting of new land uses and buildings should always be considered within the context of the greater campus. Functional connections among related activities should be considered, including the nature of activities, "adjacencies" and paths of travel.
- **GP 10:** Campus buildings should incorporate the best design elements regarding massing, human scale, materials, articulation, architectural interest, sustainability and connections with surrounding buildings and spaces. Design should reflect authenticity and attention to details in materials, historical context and architectural style.
- **GP 11:** Cal Poly should be sustainable with its land and resource planning, as well as site and building design, and operations. Cal Poly should meet or exceed all state and system-wide sustainability policies.
- **GP 14:** Cal Poly should evaluate both past investment and the need for future expansion when planning for new and redeveloped facilities.
- **GP 16:** Cal Poly should consider potential impacts – including but not limited to traffic, parking, noise, and glare – on surrounding areas, especially nearby single-family residential neighborhoods, in its land use planning, building and site design, and operations.
- **GP 17:** Cal Poly should inform local agencies and the community prior to amending the Master Plan or developing major new projects and provide opportunities for comments.
- **GP 18:** Cal Poly should maintain open communication with neighbors, stakeholders, and local public agencies, respecting the community context and potential impacts of campus development.

The project would help Cal Poly fulfill the following Master Plan objectives (as provided on page 2-21 of the Campus Master Plan EIR):

- Support and advance the University's educational mission by guiding the physical development of the campus to accommodate gradual student enrollment growth up to a future enrollment of 22,500 Full-Time Equivalent Students (FTES) by year 2035 while preserving and enhancing the quality of campus life.
- Expand campus programs, services, facilities, and housing to support and enhance the diversity of students, faculty, and staff.
- Site campus facilities and housing to strengthen the campus's compact Academic Core and promote cross-disciplinary synergies between complementary academic, student/faculty support, and housing programs.
- Provide and enhance campus facilities to create a more vibrant evening and weekend environment.
- Attain a modal shift from vehicles to more pedestrian, bicycle, and transit use.
- Advance campus-wide environmental sustainability and make progress toward goals of carbon neutrality and climate resilience.
- Consider the interface between Cal Poly and the surrounding communities with respect to shared economic health, housing, multimodal transportation, open space and agricultural resources, diversity, and public services.

1.4.8 Summary of Project Modifications

The following list summarizes the proposed changes to the development of faculty/staff housing at the project site compared to the approved Campus Master Plan:

- Increased density of student housing development within the East Campus through an increase in height of the nine planned residence halls from five stories with approximately 250 beds per building to up to nine stories, with 500 student beds per building. This would allow for the addition of 4,500 student beds (4,155 net) instead of the approximate 1,250 student beds contemplated in the Campus Master Plan;
- Transition construction of near-term student housing projects from Buildings 177 and 178 to Buildings 174 and 175; and
- Temporary use of the future Facilities Operations Complex for construction staging instead of temporary student parking.

1.5 PROJECT APPROVALS

This section identifies the discretionary actions required for project approval by state and regional agencies (Table 1-1). Discretionary approval would include, but would not be limited to, approval of the schematic designs for the project by the CSU Board of Trustees (Table 1-1).

Table 1-1 Project Approvals

Authorizing Jurisdiction or Agency	Action
CSU Board of Trustees	
Schematic plans for the project and other related actions and approvals, as necessary	Approval
Division of the State Architect	
Accessibility compliance	Approval
State Fire Marshal	
Facility fire and life safety compliance	Approval
Regional Water Quality Control Board	
National Pollutant Discharge Elimination System Permit (NPDES) – storm water pollution prevention plan and Notice of Intent to Comply with NPDES Construction Permit	Approval/Enforcement

Note: Compiled by Ascent Environmental in 2024.

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2 ENVIRONMENTAL ANALYSIS

This addendum to the Campus Master Plan EIR was prepared pursuant to CEQA Guidelines Section 15164 to address minor project changes, changed circumstances, and new information that has become available since the approval of the Campus Master Plan and certification of the Campus Master Plan EIR.

This chapter evaluates the environmental impacts of the revised Student Housing Program. As demonstrated in each resource topic discussed below in Sections 2.1 through 2., this chapter concludes that the changed circumstances, new information, and current project changes would not result in new significant impacts or substantial increases in the severity of impacts previously identified in the Campus Master Plan EIR. Overall, the revised Student Housing Program (project) is well within the scope of the student housing project analyzed in the Campus Master Plan EIR, and a Subsequent or Supplemental EIR is not required.

Each environmental resource area that was analyzed in the Campus Master Plan EIR is discussed in further detail below.

2.1 AESTHETICS

The Campus Master Plan EIR analyzed aesthetics in Section 3.1. The Campus Master Plan EIR concluded that implementation of certain Master Plan projects would result in significant and unavoidable impacts on scenic vistas, scenic highways, visual character, and lighting and glare despite adherence to the Campus Master Plan's architectural guidelines and design principles. The project site is located in the East Campus area where no designated scenic vistas have been identified; however, views of the surrounding hillsides, the Morros, and the Santa Lucia Mountains, are visible throughout this subarea. The EIR concluded that development in the East Campus subarea associated with faculty/staff housing at the intersection of Slack Street and Grand Avenue would have an adverse impact on visual character of the adjacent single-family neighborhood located in the City of San Luis Obispo. The EIR identified Mitigation Measure 3.1-1 to reduce perceived massing of the faculty/staff housing project, but impacts were nonetheless determined to be significant and unavoidable. In 2023/2024, Cal Poly revised the faculty/staff housing project to reduce its size and scale to be more compatible with adjacent single-family neighborhood located in the City of San Luis Obispo. The changes to the Slack and Grand Faculty Housing are documented in Addendum #1 to the EIR. Addendum #1 concluded that based on the reduction in scale of the housing development and with incorporation of applicable mitigation measures, the impacts to the visual character of this area would be reduced to a less-than-significant level.

The project site is located along the western border of the East Campus area and Academic Core, away from the campus boundary with the City of San Luis Obispo and the single-family neighborhood. The Campus Master Plan EIR stated that the East Campus Subarea is located at the base of the Santa Lucia Mountains and student housing would extend up the hillside, increasing visibility of development. In accordance with Master Plan Principle GP 09, the siting and design of campus buildings and other features should reflect and enhance visual and physical connections to the surrounding natural environment and outdoor spaces on-campus, and should maintain, enhance, or create aesthetically pleasing views and vistas.

The Campus Master Plan EIR also evaluated Master Plan lighting impacts that could be a prominent source of nighttime lighting or glare and included Mitigation Measures 3.1a through 3.1d to reduce this potentially significant impact to a less than significant level. The Campus Master Plan EIR also evaluated visual impacts to scenic resources along a state scenic highway, where impacts were determined to be significant and unavoidable due to the campus' proximity (primarily the West Campus) to scenic highway State Route (SR) 1.

2.1.1 Scenic Vistas and Visual Character

In terms of potential project impacts to scenic vistas, the project would be up to nine stories in height compared to the five stories in height original project that was analyzed in the Campus Master Plan EIR. To remain compatible with development within surrounding areas of East Campus and the Academic Core, landscaping would be installed for visual screening purposes between existing uses and along Grand Avenue, South Perimeter Road, and Klamath Road. Construction of the project on the project site would not result in new or substantially more severe impacts on scenic vistas. The project site was previously identified and evaluated in the Campus Master Plan EIR for higher density student residence halls and is not considered an area of high viewer sensitivity. The EIR concluded this component of the Campus Master Plan would be compatible with the existing visual character and quality of the surrounding sites and would not have a significant impact on scenic vistas or visual character. Although the project now proposes an increase in the original height of the residence halls from five stories to up to nine stories in height, the project site is largely hidden from near-distance views due to intervening topography, campus buildings and landscaping. In addition, the project would implement the design review standards under CSU and Cal Poly requirements to ensure the buildings are compatible with surrounding buildings and other features.

Further, long distance views of the project site were evaluated to determine whether substantive changes in such views would occur with implementation of the project, with particular focus on the increased building height. Figure 2-1 identifies three viewpoints of the Cal Poly campus that were selected. Figures 2-2 through 2-4 provide renderings that identify the extent to which the project would be visible from publicly accessible viewpoints and whether long-distance views of the area might change. As shown in the aforementioned figures, the proposed student housing would be largely obscured from long-distance views by existing landscaping and topography. The proposed buildings are partially visible within Figures 2-2 and 2-3, although primarily from Viewpoint 1, which is 1.25 miles from the project site. These figures show negligible changes to the long-distance viewsheds, with the residence halls representing a continuation of campus buildings and infrastructure. As such, the project would not preclude long-distance views through the area. Therefore, no new or substantially more severe impacts would occur. Mitigation Measure 3.1-1 of the Campus Master Plan EIR would not apply to the project, and no additional mitigation would be required.

In terms of visual character, as contemplated in the Campus Master Plan EIR, the original project would alter the visual character of the existing North Mountain low-density residence halls due to the demolition of these older halls and replacement with nine, higher density residence halls. Within the area of the South Mountain residence halls, the visual character of this area would be altered through the removal of the Hillcrest building. Compared to the original project analyzed in the Campus Master Plan EIR, the project as currently proposed would increase the height of the North Mountain residence halls to up to nine stories but is otherwise consistent with what was analyzed in the Campus Master Plan EIR. As part of the Cal Poly design review process and in accordance with the Cal Poly Construction Standards, the current project would still be required to provide landscaping and other features to soften the visual interface between the proposed development and existing development, including on-campus structures. Compliance with the Cal Poly Construction Standards would ensure that the potential changes in visual conditions on-site would not substantially degrade the visual character of the surrounding areas in comparison to what was previously evaluated as part of the Campus Master Plan EIR. Furthermore, the land use designation (Residential East Campus) of the project site would not change under the current project. Therefore, no new or substantially more severe impacts would occur. Mitigation Measure 3.1-1 of the Campus Master Plan EIR would not apply to the project, and no additional mitigation would be required.

Therefore, the project would not result in new or more severe impacts to scenic vistas or visual character compared to the original project previously evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions in the Campus Master Plan EIR.

Source: CPSHP View Shed Study 2024.

Figure 2-1 Viewpoint Locations

Existing Conditions

Source: CPSHP View Shed Study 2024.

Figure 2-2 Renderings of Project from Viewpoint 1

Existing Conditions

Source: CPSHP View Shed Study 2024.

Figure 2-3 Renderings of Project from Viewpoint 2

Existing Conditions

Source: CPSHP View Shed Study 2024.

Figure 2-4 Renderings of Project from Viewpoint 3

2.1.2 Scenic Resources within a State Scenic Highway

Although Cal Poly is not subject to local regulations, it is worth noting that Grand Avenue, which serves as a primary gateway to campus, is identified as a scenic roadway in the City of San Luis Obispo General Plan Land Use and Circulation Element (applicable only to the portion of Grand Avenue located within City limits). Three of the Red Bricks (Tenaya Hall, Sequoia Hall, and Santa Lucia Hall) borders Grand Avenue, however, this section of Grand Avenue is located 0.3 mile from the City limits and is not identified as scenic roadway. In addition, this portion of the project calls for the renovation of these existing residence halls and with this renovation there would not be a material change in the visual appearance of the residence halls. The new North Mountain residence halls would be constructed behind and would be obscured by the Red Bricks from this segment of Grand Avenue. The project site is not visible from the section of Grand Avenue that is identified as scenic by the City of San Luis Obispo. As development of the project site would not occur in an area that is visible from or along the segment of Grand Avenue that is identified as a scenic roadway within the City, no significant impacts to scenic resources along this local roadway would occur.

State Route (SR) 1, located approximately 1.15 miles west of the project site, is the only designated state scenic highway in the vicinity of the Cal Poly campus (Caltrans 2024). As noted above and shown in Figures 2-1 through 2-4, renderings of changes in views from SR 1 were prepared by Cal Poly to better assess the extent to which visual conditions would change along SR 1. As noted above, the project would only be partially visible from one viewpoint (Viewpoint 1) along SR 1. SR 1 derives its scenic highway designation from the natural, scenic views when in motion, driving north or south along the roadway. Since the project site is stationary and would not include development extending further up the adjacent hillside than what was contemplated in the Campus Master Plan EIR, a vast majority of the scenic viewshed of the hills and hillsides when passing the project site's location would be preserved and there would be a negligible difference in the views extending from SR 1 up through to the eastern edge of the Cal Poly campus. Further, development within the East Campus where the project site is located would not occur along SR 1. Due to this distance (as well as intervening topography, development, and landscaping) between the project site and SR 1, the project would not significantly affect scenic resources within a state scenic highway. As such, this impact would be less than significant. No new or substantially more severe impacts would occur, and no mitigation would be required.

Therefore, the project would not result in new or more severe impacts to scenic resources within a State scenic highway compared to the original project evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions in the Campus Master Plan EIR.

2.1.3 Light and Glare

The project would result in the construction, use, and maintenance of nine new residence halls with exterior lighting that could contribute to indirect lighting/glare on adjacent land uses, as well as the renovation of the existing Red Brick student housing halls. Construction of the project would include the use of the construction staging areas both on-site and along California Boulevard, which would include construction worker vehicles that have headlights. However, construction activities would occur Monday through Friday, between the hours of 7:00 a.m. and 7:00 pm., with the potential for weekend construction on Saturday, between 7:00 a.m. and 7:00 p.m. No construction would occur on Sundays or holidays. No nighttime construction is proposed for the project, and therefore, construction of the project would not include a significant increase in the use of motor vehicle headlights on the construction staging area. Before construction activities begin on any project component, temporary fencing would be installed around the active construction area, and other safety measures, such as security lighting, would be installed; however, these measures would be implemented to prevent unauthorized access and promote site safety and would not introduce new sources of substantial light or glare that were not already previously analyzed in the Campus Master Plan EIR.

The project itself would be subject to the Cal Poly Campus Design Guidelines pertaining to architectural features, building form, and colors, and Cal Poly shall require the use of non-reflective surfaces and require all new outdoor lighting to utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and

upward directed lighting, such that light spillover onto adjacent land uses does not occur. Therefore, no new or substantially more severe impacts would occur. Mitigation Measures 3.1-3a and 3.1-3c, which pertain to the use of nonreflective materials and direction lighting for all development, would still apply to the current project. Mitigation Measure 3.1-3b and 3.1-3d, which respectively pertain to three other specific Campus Master Plan projects and high-intensity lighting for recreational facilities, would not be applicable. The project's compliance with Campus Design Guidelines would further ensure the project would not create a new significant source of glare. The proposed changes to the height of the nine residence halls from five stories originally analyzed in the Campus Master Plan EIR to up to nine stories currently proposed would not result in new or more severe impacts related to light and glare, and no additional mitigation would be required.

Therefore, construction and operation of the project would not result in new or more severe impacts to light and glare compared to the original project evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions in the Campus Master Plan EIR.

2.2 AGRICULTURE AND FORESTRY RESOURCES

As described in Section 3.2, "Agriculture and Forestry Resources," of the Campus Master Plan EIR, implementation of the Campus Master Plan largely avoids impacts to designated Important Farmland (e.g., Prime, Unique, or Farmland of Statewide Importance); however, development within the West Campus, specifically, the proposed Facilities Operations Complex site, would be located on land designated as Prime Farmland. Development of this site would result in the conversion of up to 10 acres of Important Farmland to nonagricultural use, which the Campus Master Plan EIR identified a significant impact and required implementation of Mitigation Measure 3.2-1, which requires the preservation of other campus agricultural land. However, as implementation of this mitigation measure would only prevent future loss of an equivalent acreage of Important Farmland and would not replace Important Farmland converted to development under the Campus Master Plan, the EIR concluded this impact would remain significant and unavoidable.

The construction staging area for the project would be at the future site for the Facilities Operations Complex, which is designated as Prime Farmland. However, it should be noted that, although designated as Prime Farmland, the existing conditions of this site do not involve agricultural land, agricultural production, or agricultural activities of any kind. Further, the project does not propose to develop or result in the conversion of this site from an agricultural use; the project only proposes to use this site as a temporary construction staging area for the duration of construction activities to develop the project. In addition, the agricultural impacts of developing the proposed Facilities Operations Complex were already analyzed in the previous Campus Master Plan EIR. Mitigation Measure 3.2-1 would apply to the project with respect to the project's use of this site as a temporary staging area, but no additional Important Farmlands would be affected. For these reasons, no new or substantially more severe impacts would occur as a result of using this site as a construction staging area for the project.

As noted on page 3.2-6 of the Campus Master Plan EIR, no forestry resources are located within the Master Plan Area, including the project site, and no impacts on forestry resources would occur as a result of Campus Master Plan implementation. With respect to Williamson Act lands, campus lands are state lands and are not eligible for Williamson Act agreements, nor are they subject to local zoning controls; therefore, this issue is not relevant to the Campus Master Plan or to the project.

Similar to the original project evaluated in the Campus Master Plan EIR, the site for new and renovated student housing would not be located on agricultural lands, forestry resources, or on land enrolled in a Williamson Act contract and would not convert agricultural land to nonagricultural uses, as shown in the California Department of Conservation (DOC) Important Farmland Map; therefore, no new or substantially more severe impacts would occur. Mitigation Measure 3.2-1 would not apply to the project area to be used for student housing, and no additional mitigation would be required. Thus, the project would not significantly affect agricultural resources. No new or more severe impacts with respect to agricultural resources would occur, and the impacts associated with the current project would be consistent with the conclusions of the Campus Master Plan EIR.

2.3 AIR QUALITY

Potential impacts on air quality resulting from construction, implementation and long-term operation of the Campus Master Plan were analyzed in Section 3.3 of the Campus Master Plan EIR. The Master Plan Area, including the project site, is located within the jurisdiction of the San Luis Obispo County Air Pollution Control District (SLOAPCD), which is the primary agency responsible for planning to meet National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) in San Luis Obispo County. Consistent with state law, SLOAPCD adopted a Clean Air Plan for San Luis Obispo County in 2001 (2001 Clean Air Plan) to address attainment of state ozone and particulate matter standards. The 2001 Clean Air Plan outlines SLOAPCD's strategies to reduce emissions from a wide variety of stationary and mobile sources, and a triennial report regularly documents the county's progress toward attainment. The county is currently designated as a nonattainment area for ozone with respect to the CAAQS and a nonattainment area for particulate matter with diameters generally 10 micrometers and smaller (PM_{10}) with respect to the NAAQS and CAAQS. For the purpose of this analysis, criteria air pollutant and ozone precursor emissions resulting from construction and operation of the project are compared to SLOAPCD's mass emission thresholds, which are provided in Table 2.3-1, below.

The Campus Master Plan EIR concluded that implementation of the Campus Master Plan would result in significant and unavoidable impacts related to criteria air pollutant emissions because emissions associated with both construction and operation of the Campus Master Plan could exceed SLOAPCD thresholds. The Campus Master Plan EIR included a conservative quantitative analysis of construction related emissions of reactive organic gases (ROG), nitrous oxides (NOx), PM_{10}, and particulate matter with an aerodynamic diameter of 2.5 microns or smaller ($PM_{2.5}$) if multiple Campus Master Plan projects were to be constructed at the same time. While the Campus Master Plan EIR determined the Campus Master Plan was overall consistent with the 2001 Clean Air Plan goals and objectives, the Campus Master Plan EIR concluded that if multiple projects were developed at the same time, the Campus Master Plan could exceed SLOAPCD individual project-level thresholds. These impacts were determined to remain significant and unavoidable following the implementation of mitigation measures (Mitigation Measures 3.3-2, 3.3-3a, and 3.3-3b) that require implementation of site-specific measures where feasible to reduce criteria pollutant and fugitive dust emissions, including the potential use of emulsified diesel fuel in all on-road and off-road construction equipment, the incorporation of additional shading at on-site parking spaces, and electrification of landscaping equipment. It is important to note that Mitigation Measure 3.3-2 includes a list of emission reduction measures applicable to all Campus Master Plan projects plus additional emission reduction measures for individual Campus Master Plan projects that would individually exceed SLOAPCD thresholds. The following discussion applies to both daily/annual emissions thresholds and the potential for the project to conflict with or obstruct implementation of an applicable air quality plan.

Regarding construction-generated emissions of criteria air pollutants and precursors, the Campus Master Plan EIR Impact 3.3-2 disclosed that demolition and construction activities under the Campus Master Plan would result in emissions of ROG, NO_X, and PM_{10} that would exceed SLOAPCD thresholds starting in 2021. Project construction activities would result in emissions of criteria air pollutants and ozone precursors from site preparation (e.g., grading and clearing), trenching, heavy-duty construction equipment, debris hauling, pipeline installation, building construction, construction worker commute exhaust emissions, and asphalt paving. Fugitive dust emissions, including PM_{10} and $PM_{2.5}$, would be generated during construction activities and vary as a function of soil silt content, soil moisture, wind speed, and area of disturbance. Exhaust emissions of PM_{10} and $PM_{2.5}$ would result from combustion of fuels. Ozone precursor emissions would primarily be associated with exhaust from construction equipment, haul truck trips, and worker trips. Emissions of ROG as a result of construction would be minimal and temporary in nature during periods of primarily painting and paving activities.

The Campus Master Plan EIR documented the overall expected construction emissions from activities within the Campus Master Plan implementation and identified, on an annual basis, that aggregated campus-wide construction activities starting in 2021 could result in significant impacts regarding criteria air pollutants. The Campus Master Plan EIR evaluated the potential air quality emissions associated with construction of the total projected development (i.e., building square footage) and land use types (e.g., residential, academic, and recreational) of the Campus Master Plan over a 15-year planning horizon, with the short-term projects (including the proposed project) distributed over the first 9 years and the long-term projects over the remaining 6 years. Therefore, construction of the project, which would be

consistent with the number of student beds projected in the near term (as noted above), would generate temporary emissions that would contribute to the overall Campus Master Plan's construction-related emissions as evaluated in the Campus Master Plan EIR, but no new or substantially more severe impacts would result from project implementation. Further, and as shown below in Table 2.3-1, the project would not exceed applicable SLOAPCD thresholds.

Table 2.3-1 Summary of Unmitigated Construction Criteria Pollutant Emissions

	ROG + NO_X Combined (lb/day)	ROG + NO_X Combined (tons/quarter)	Diesel PM (lb/day)	Diesel PM_{10} (tons/quarter)	Fugitive PM_{10} (tons/quarter)
Project Construction	131	0.8	2.5	0.02	0.1
SLOAPCD CEQA Thresholds	137	2.5	7	0.13	2.5
Exceeds CEQA Thresholds?	No	No	No	No	No

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter with diameters generally 10 micrometers and smaller; lb/day = pounds per day; SLOAPCD = San Luis Obispo County Air Pollution Control District.

Emissions of volatile organic compounds were amended using off-model calculations to account for phasing assumptions in CalEEMod.

Source: Modeled by Ascent in 2024.

The project represents a spreading of the construction period for student housing assumed in the Master Plan EIR, such that annual emissions may be less (but not greater) than what was identified in Impact 3.3-1 (see pages 3.3-19 through 3.3-24 of the Master Plan EIR).

As required by Campus Master Plan EIR Mitigation Measure 3.3-2, Cal Poly would reduce construction emissions of ROG, NO_X, and PM_{10} by requiring implementation of emissions reduction measures. At the program level, the Campus Master Plan EIR Impact 3.3-2 determined that construction under the Campus Master Plan EIR, with implementation of Mitigation Measure 3.3-2, could generate construction-related emissions that exceed SLOAPCD significance criteria, and impacts would be significant and unavoidable at the program level. This impact was addressed in the Findings and Statement of Overriding Considerations adopted by the Trustees in connection with its approval of the Campus Master Plan. No additional mitigation is necessary to reduce the project's contribution to these impacts.

Regarding long-term operational emissions of criteria air pollutants and precursors, the Campus Master Plan EIR Impact 3.3-3 determined that long-term operational emissions related to the overall Campus Master Plan could exceed SLOAPCD significance thresholds for combined ROG and NO_X emissions, as well as the applicable thresholds for PM_{10}. Thus, long-term operational emissions could conflict with the air quality planning efforts and contribute substantially to the nonattainment status of San Luis Obispo County with respect to the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for ozone and particular matter. Because of the potential for a larger individual project to exceed SLOAPCD thresholds even with implementation of Mitigation Measures 3.3-3a and 3.3-3b, this impact was determined to be significant and unavoidable at the program level. This impact was addressed in the Findings and Statement of Overriding Considerations adopted by the Trustees in connection with its approval of the Campus Master Plan.

With respect to the project, project-specific modeling of potential criteria pollutant emissions was estimated, consistent with the mitigation measures of the Master Plan EIR and is provided below in Table 2.3-2. Operational vehicle trips and operational maintenance activities are already occurring with respect to the existing Red Brick residence halls. With project implementation, current Cal Poly enrollment students would be afforded residency on campus, which would reduce operational emissions associated with daily vehicle commutes. As a result, minimal additional mobile source emissions beyond those occurring at the campus currently are anticipated beyond what was analyzed in the Campus Master Plan EIR. However, as shown in Table 2.3-2, additional energy consumption and area source (i.e., cleaning and vegetation-management-related emissions) associated with the new on-site structures could contribute to the overall Campus Master Plan operational emissions of criteria air pollutants and precursor emissions. Consistent with the Campus Master Plan, the project would implement the CSU Sustainability Policy and the Cal Poly Administrative Policy related to sustainable practices (including water conservation, energy conservation,

alternative transportation, and new building construction). In addition, Campus Master Plan EIR Mitigation Measure 3.3-3a and 3.3-3b would apply to the project and require incorporation of sustainability features and energy efficient fixtures to the proposed structure to reduce overall energy demand, including shading for the proposed project through either existing or proposed structures and vegetation (e.g., trees). Therefore, no new or substantially more severe impacts would occur and no additional mitigation would be required.

Table 2.3-2 Summary of Unmitigated Operational Criteria Pollutant Emissions

	ROG + NO_X Combined (lb/day)	ROG + NO_X Combined (tons/year)	CO (lb/day)	Diesel PM_{10} (tons/year)	Fugitive PM_{10} (lb/day)	Fugitive PM_{10} (tons/year)
Mobile	2	0.4	9.9	0.00	3.0	0.5
Area	29	5.3	0.0	0.00	0	0
Energy	0	0.0	0.0	0.00	0	0
Total	**31**	**5.6**	**9.9**	**0.00**	**3.0**	**0.5**
SLOAPCD CEQA Thresholds	25	25	550	1.25	25	25
Exceeds CEQA Thresholds?	Yes	No	No	No	No	No

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter with diameters generally 10 micrometers and smaller; lb/day = pounds per day; SLOAPCD = San Luis Obispo County Air Pollution Control District.

Source: Modeled by Ascent in 2024.

The Campus Master Plan EIR also examined the potential for future development of the campus to result in substantial pollutant concentrations from mobile source carbon monoxide concentrations. The Campus Master Plan EIR Impact 3.3-4 determined that short- and long-term localized emissions of carbon monoxide (CO) generated by Campus Master Plan development would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. With respect to traffic volumes, the Campus Master Plan EIR, inclusive of the project, would generate up to 7,495 daily trips (Rubins, pers. comm., 2019). Based on modeling conducted for the Campus Master Plan, this would result in maximum daily CO emissions of 154 pounds per day (lb/day), which is below the APCD's threshold of 550 lb/day above which would indicate a potential CO hotspot. As described above, the project would not add students or staff to Cal Poly and would not substantially alter the on-campus population beyond what was analyzed in the Campus Master Plan EIR. As a result, project-generated, long-term operation-related local mobile-source emissions of CO would not increase and would not result in any new or substantially more severe impacts. Further, as noted in the Master Plan EIR, no mitigation would be required for CO emissions.

Regarding toxic air contaminant emissions (TACs), the Campus Master Plan EIR Impact 3.3-4 determined that Campus Master Plan implementation would not result in the construction or operation of new stationary sources of TACs. Thus, project-generated TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million for construction and 89 in 1 million for operation. Specific to construction, any construction or demolition of on-site structures that may contain asbestos or lead-based paint would be required to adhere to the National Emission Standard for Hazardous Air Pollutants (40 CFR 61[M]). These requirements include but are not limited to notification to the APCD, an asbestos survey conducted by a Certified Asbestos Inspector, and applicable removal and disposal requirements (APCD 2012: 2-4). Prior to and during construction of the project (and as stipulated in the Campus Master Plan EIR), Cal Poly would adhere to the requirements identified above. Therefore, no new or substantially more severe impacts with respect to TACs would occur, and no additional mitigation is required.

Regarding odors, as discussed in Campus Master Plan EIR Impact 3.3-6, implementation of the Campus Master Plan would result in temporary construction odors over approximately 15 years in different areas of the Cal Poly campus; as well as new operational odors sources such as diesel-fueled delivery trucks and a water reclamation facility (WRF). Mitigation within the Campus Master Plan EIR was provided and adopted as it relates to potential odors associated

with operation of the WRF, including preparation of an Odor Control Plan (Mitigation Measure 3.3-6). The project would result in minimal and temporary odors in and around each phase of development during active construction, but as discussed in the EIR, these odor sources are temporary and intermittent and would not rise to the level of a significant odor-related impact during the construction phase of the project. Additionally, the potential for temporary construction odors associated with the proposed renovation of the Red Bricks would be less due to the lesser degree of construction activities required for the renovation of these halls. Operational activities from the project would not represent substantial odor sources given the intended residential uses. To the extent any chemicals are used in project cleaning or maintenance activities, those would be utilized in accordance with applicable regulations, and would be properly stored and contained, thereby limiting potential odors. Therefore, no new or substantially more severe impacts would occur. Mitigation Measure 3.3-6 would not apply to the project, and no additional mitigation would be required.

2.4 ARCHAEOLOGICAL, HISTORICAL AND TRIBAL CULTURAL RESOURCES

The impacts on archaeological, historical and tribal cultural resources associated with implementation of the Campus Master Plan were analyzed in Section 3.4 of the Campus Master Plan EIR. The Campus Master Plan EIR determined that implementation of the Campus Master Plan could result in significant impacts on both archaeological and historical resources in the Master Plan Area.

Regarding potential impacts to historic resources, as noted in the Campus Master Plan EIR, certain structures within the main campus either are considered historical or could be eligible for listing as a historical resource during implementation of the Master Plan. Redevelopment or renovation of such structures could result in damage to or destruction of historical buildings and structures, thereby resulting in a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5. Mitigation Measure 3.4-1 was adopted and requires project-specific surveys and appropriate treatment (including preservation where possible) of historical structures. Nonetheless, because the potential for permanent loss of a historical resource or its integrity could not be feasibly avoided with the implementation of the Campus Master Plan, impacts on historical resources were determined to be significant and unavoidable.

With respect to archaeological resources, the Campus Master Plan EIR found that future development associated with the implementation of the Campus Master Plan could be located in areas that contain known or unknown archaeological resources, and ground-disturbing activities could result in discovery of or damage to as-yet-undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. With implementation of Mitigation Measures 3.4-2a through 3.4-2c, which require site-specific surveys, documentation, and protection of archaeological resources (where possible), archaeological impacts associated with the implementation of the Campus Master Plan would be reduced to a less than significant level.

Regarding potential impacts to tribal cultural resources, no tribal cultural resources meeting the regulatory criteria (Public Resources code Section 5024.1(c)) were identified in the Master Plan Area as part of the Campus Master Plan EIR. Nonetheless, it is possible that tribal cultural resources could be identified as Campus Master Plan projects are implemented. Through compliance with Public Resources Code and Health and Safety Code requirements, impacts on tribal cultural resources and human remains associated with Campus Master Plan implementation were determined to be less than significant.

2.4.1 Historical and Archaeological Resources

In 2019, as part of the Campus Master Plan EIR analysis, a cultural resources records search was conducted to evaluate and determine known historical and archaeological resources in the Campus Master Plan area, including the project site, in accordance with Mitigation Measure 3.4-1. As part of this analysis, no historic or archaeological resources were identified within the bounds of the project site.

With respect to historic resources, several structures located within the project site are greater than 50 years old. More specifically, the project contemplates the demolition of the North Mountain Halls and Hillcrest building, as well as the renovation of the South Mountain Halls (Red Bricks). Because these buildings are greater than 50 years old, consistent with Mitigation Measure 3.4-1, a qualified architectural historian, Page & Turnbull, evaluated the historic significance of the structures proposed to be demolished or renovated. Page & Turnbull's analysis determined that the on-site buildings do not meet the CEQA historical resource criteria and are not eligible for listing as historic buildings/structures (Page & Turnbull 2023, 2024). As a result, the project would not result in adverse impacts to historical resources, and no new or substantially more severe impacts would occur. Compliance with Mitigation Measure 3.4-1 of the Campus Master Plan EIR was achieved through evaluation of the on-site structures, and since the structures were determined not to be historic or otherwise eligible for listing as a historic resource, no additional mitigation would be required.

With respect to archeological resources, the developed portion of the project site is not located within an area of sensitivity for cultural resources, per Figure 3.4-1 of the Campus Master Plan EIR. As discussed further below, the temporary construction area in the West Campus is located in an area of sensitivity for cultural resources per Figure 3.4-1. For the area where the nine new residence halls would be located, the depth of excavation could result in the disturbance of native soils and the discovery or damage of previously unknown or undiscovered archaeological resources, as defined in CEQA Guidelines Section 15064.5. In compliance with Mitigation Measures 3.4-2a, 3.4-2b, and 3.4-2c of the Campus Master Plan EIR, a pre-construction survey and training of construction personnel shall be conducted. If resources are encountered, the project would be required to protect, identify, and assess any archaeological material uncovered, in compliance with the adopted mitigation measures of the Campus Master Plan EIR. For the South Mountain Halls (the Red Bricks), the project calls for the renovation of these residence halls, however some ground disturbance may occur during installation of pathways, internal roadways, and landscaping. Adherence to the aforementioned mitigation measures (Mitigation Measures 3.4-2a, 3.4-2b, and 3.4-2c of the Campus Master Plan EIR) would ensure that impacts remain less than significant.

The West Campus temporary construction staging area along California Boulevard is located in a Zone of Cultural Sensitivity according to Campus Master Plan EIR Figure 3.4-1. This area does not contain any structures and is already utilized as a temporary construction area. No additional excavation, grading, or other earthwork activities that would otherwise have the potential for inadvertent archeological or other tribal or cultural discovery are proposed in relation to the project. Therefore, utilizing this area of the project site solely for construction staging would not have the potential to substantially change the significance of a historic resource, archaeological resource, tribal cultural resource or disturb human remains. Therefore, with implementation of these previously adopted mitigation measures, currently undiscovered archaeological resources would be avoided, recorded, or otherwise treated appropriately and with proper care, in accordance with applicable laws and regulations. Therefore, no new or substantially more severe impacts would occur, and no additional mitigation would be required.

No human remains are known to occur within the boundaries of the project site. Nevertheless, the potential for the project to disturb human remains, including those interred outside of formal cemeteries, during construction of the proposed new residence buildings cannot be precluded. As noted in the Campus Master Plan EIR, any such discovery and subsequent treatment would be performed in compliance with California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097, which prescribe procedures to avoid or minimize the disturbance of discovered human remains and to appropriately treat any remains. Therefore, no new or substantially more severe impacts would occur, and no mitigation would be required.

2.4.2 Tribal Cultural Resources

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) established a formal consultation process for California Native American tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts (CEQA Section 21084.2). AB 52 consultation requirements went into effect on July 1, 2015, for all projects that had not already published a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration, or published a Notice of Preparation of an Environmental Impact Report prior to that date (Section 11[c]).

Specifically, AB 52 requires that "prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, the lead agency shall begin consultation" (21808.3.1 [a]), and that "the lead agency may certify an environmental impact report or adopt a mitigated negative declaration for a project with a significant impact on an identified tribal cultural resource only if" consultation is formally concluded (21082.3[d]).

However, in the case of the current project, the lead agency has prepared this addendum to the previously certified Campus Master Plan EIR, in accordance with Section 15164 of the CEQA Guidelines. An addendum was determined to be the most appropriate document because none of the conditions described in Section 15162, calling for preparation of a subsequent EIR, have occurred. The addendum addresses minor technical changes or additions and confirms that the project is consistent with what was previously analyzed under the Campus Master Plan EIR. The addendum will not result in an additional certification; therefore, the AB 52 procedures specified in CEQA Sections 21080.3. 1(d) and 21080.3.2 do not apply, and no additional tribal consultation under AB 52 is required for this individual Campus Master Plan project.

It should also be noted that the *yak tityu tityu* (a Northern Chumash tribe) and Torres Martinez Desert Cahuilla Indians have historically coordinated and continue to coordinate with Cal Poly regarding on-campus development and potential impacts to tribal cultural resources. Cal Poly will continue to coordinate with both tribes in accordance with CEQA requirements to avoid damaging tribal cultural resources. If Cal Poly determines that a subsequent project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process, new provisions in the PRC describe measures that, if determined by the lead agency to be feasible, could be implemented to reduce potential effects of campus-related development on tribal cultural resources, although none were identified through Assembly Bill (AB) 52 compliance for the Campus Master Plan. Compliance with PRC Section 21080.3.2 and Section 21084.3 (a) and Cal Poly's continuing notification of the aforementioned tribes of all projects would provide an opportunity to avoid or minimize the disturbance of tribal cultural resources, and to appropriately treat any remains that are discovered. Therefore, no new or substantially more severe impacts would occur beyond what was previously identified in the Campus Master Plan EIR, and no mitigation would be required.

For these reasons, no new circumstances have occurred, nor has any new information been found requiring new analysis or verification of potential impacts to archaeological, historical, or tribal cultural resources. The project would not result in new significant impacts or substantially more adverse impacts to archaeological, historical, or tribal cultural resources than those described in the Campus Master Plan EIR, and impacts would remain less than significant.

2.5 BIOLOGICAL RESOURCES

Potential impacts on biological resources that could result from implementation of the Campus Master Plan were analyzed in Section 3.5 of the Campus Master Plan EIR. Implementation of the Campus Master Plan could result in disturbance to, or conversion of, habitat occupied by or suitable for several special-status plant and wildlife species. Disturbance to or loss of this habitat could result in loss of special-status wildlife if they are present, and loss of special-status wildlife or their habitat would be a significant impact. To reduce impacts, several mitigation measures were adopted in conjunction with the Campus Master Plan EIR, including Mitigation Measures 3.5-1a through 3.5-1e and 3.5-2a through 3.5-2x, which require site-specific consideration (depending on habitat type and conditions) of impacts for projects under the Campus Master Plan. Mitigation Measures 3.5-2a and 3.5-2b require surveys to identify and avoid overwintering monarch butterfly (*Danaus plexippus*) sites in the Master Plan Area. Mitigation Measures 3.5-2c through 3.5-2i require Cal Poly to conduct California red-legged frog habitat assessments in undeveloped areas of the campus, coordinate with appropriate resource agencies, and avoid California red-legged frogs during construction.

Mitigation Measures 3.5-2j through 3.5-2n apply to potential construction activities in Stenner and Brizzolara Creeks, as well as their tributaries and associated riparian areas. These mitigation measures require consultation with resource agencies prior to work in these areas of the Master Plan Area, as well as avoidance during construction to ensure that steelhead (*Oncorhynchus mykiss*) that may be present in these creeks are not significantly affected.

Mitigation Measure 3.5-2n, which identifies the preparation of a Trail Management Plan to identify and protect natural resources in the trail system, would also contribute to reducing potential impacts on steelhead to a less than significant level through establishing and managing trails within the Master Plan Area to minimize the number of creek crossings and providing pedestrian bridges to reduce foot traffic through creeks and tributaries.

Trees located in the Master Plan Area's riparian habitat, primarily along the aforementioned creeks, may provide suitable denning habitat for ringtail (*Bassariscus astutus*) and Monterey dusky-footed woodrat (*Neotoma fuscipes annectens*). Mitigation Measures 3.5-2o and 3.5-2p require surveys to identify ringtail dens, buffers and maternity season avoidance around construction/disturbance areas, and environmental monitoring to ensure that mitigation measures are implemented. Implementation of these measures would avoid or minimize adverse effects such that impacts on ringtail would be reduced to a less than significant level. In the vicinity of the proposed University-Based Retirement Community site and the proposed WRF site, Mitigation Measure 3.5-2s requires surveys for American badger (*Taxidea taxus*) to identify active burrows, buffers around active burrows, avoidance during the maternity season, and excavation of inactive burrows to prevent their reuse in construction areas. Implementation of these measures would avoid, minimize, and compensate for adverse effects such that impacts on American badger would be reduced to a less than significant level.

Western pond turtle (*Actinemys marmorata*) and Coast Range newt (*Taricha torosa torosa*) are known to occupy a variety of aquatic habitats in and adjacent to the Campus Master Plan Area, including Brizzolara Creek, Miossi Creek, Camp San Luis Obispo, Dairy Creek, and Stenner Creek. Mitigation Measure 3.5-2t would require surveys for western pond turtle and Coast Range newt to identify occupied aquatic and upland habitat, avoidance of eggs and nests of these species by delaying construction, and relocation of individuals outside of the work areas. Implementation of these measures would avoid, minimize, and compensate for adverse effects such that impacts on western pond turtles and Coast Range newt would be reduced to a less than significant level.

All proposed Campus Master Plan projects that involve removal or disturbance of potentially suitable nesting locations for special-status birds, including demolition of buildings that could support nesting purple martins, during the nesting season (typically February 1 through September 15) have the potential to disturb nesting birds. Mitigation Measures 3.5-2u and 3.5-2v require either avoidance of nesting season or protection of nests in or in the vicinity of project construction. Implementation of these measures would avoid, minimize, and compensate for adverse effects such that impacts on special-status birds would be reduced to a less than significant level.

Mitigation Measures 3.5-2w and 3.5-2x require surveys for bats and, if found, avoidance of roosts and protection from construction activities through the creation of no-disturbance buffers and environmental monitoring. Implementation of this measure would avoid and/or minimize adverse effects such that impacts on bats would be reduced to a less than significant level.

Due to potential impacts on riparian habitat and wildlife corridors, several mitigation measures were adopted as part of the Campus Master Plan EIR to reduce the potential impacts of on-campus development within or in the vicinity of these areas. Implementing Mitigation Measure 3.5-3a would avoid and protect Brizzolara and Stenner Creeks by requiring the incorporation of a 50-foot buffer from the top of bank or outer extent of riparian area. Mitigation Measure 3.5-3b requires the incorporation of Low Impact Development (LID) principles to all projects located within 100 feet of waterways and riparian areas (including Brizzolara and Stenner Creeks.) Mitigation Measure 3.5-3c requires the installation of exclusion fencing for projects that do not require crossing the waterways. Mitigation Measure 3.5-3d requires that all project plans map and protect waterways and riparian areas, including locating project staging areas a minimum of 100 feet outside of the top of bank of the waterways or riparian areas (which may be reduced at the discretion of a qualified biologist). Mitigation Measure 3.5-3e requires the minimization of ground disturbance in sensitive natural community areas. Mitigation Measure 3.5-3f requires compensation for the loss of sensitive natural communities at a ratio sufficient to ensure no net loss of habitat function or acreage. Mitigation Measure 3.5-3g prohibits the planting of invasive plant species under all the Campus Master Plan projects. Mitigation Measure 3.5i requires use of certified weed-free construction materials. Mitigation Measure 3.5-3j requires the treatment of invasive plant infestations in construction areas to prevent the spread of invasive plants. Mitigation Measure 3.5-3k identifies the need to develop the Trail Management Plan to identify and protect natural resources in

the trail system. With implementation of these mitigation measures, impacts on sensitive habitats would be reduced to a less than significant level.

Mitigation Measure 3.5-4, as adopted for the Campus Master Plan, requires that wetlands and other waters of the United States and waters of the state be avoided to the extent feasible and that unavoidable losses of wetlands be compensated for in a manner that results in no net loss of wetland functions and values, thus reducing the significant impacts on state and federally protected wetlands to a less-than-significant level.

By and large, the majority of the biological resources impacts and mitigation measures of the Campus Master Plan and Campus Master Plan EIR are applicable to development along the periphery of the Master Plan Area, especially to the northwest, north, and east, and along Brizzolara and Stenner Creeks. A reconnaissance survey was conducted of the project site in November 2022 to evaluate and/or confirm the potential for sensitive biological resources at the project site compared to what was identified in the Campus Master Plan EIR. The development portion of the project site is located within an entirely developed area of the campus (see Campus Master Plan EIR Figures 3.5-1 and 3.5-2) and is not located on or adjacent to potential habitat for special status species, wetland or riparian habitat, or wildlife movement corridor or nursery site. The project site is dominated by paved areas, including parking lots and existing residence halls, and landscaping, none of which would be considered sensitive with respect to biological resources. No construction, including temporary staging, would be required north of Klamath Road and Cerro Vista Circle at the project site's northern boundary. With regard to the temporary staging area in the West Campus, this area is already highly disturbed, both historically as agricultural staging and materials storage and currently as a temporary staging area. The project would continue this use and would not involve further excavation, grading or modifications to the site, and as a result no further potential impacts to vegetation, habitat, or species would occur through this continued use. No demolition or removal of wetlands, riparian habitat, native trees and vegetation or other potential biological resource would occur as a result of project development, including construction staging. In the event that improvements to existing drainages are required as design and planning continues for the project, Cal Poly would adhere to the requirements of Mitigation Measures 3.5-3j and 3.5-4 to the extent applicable.

Within the landscaped areas of the project site and the portions of the project site proposed for demolition or renovation, however, the potential does exist for nesting birds and roosting bats. Project activities, including building demolition, exterior renovation work, vehicle use, ground disturbing activities, construction crews working within close proximity of nesting trees or roosts, and disturbance to or removal of nesting trees could result in a potentially significant impact on tricolored blackbird, grasshopper sparrow, burrowing owl, western yellow-billed cuckoo, white-tailed kite, least Bell's vireo, loggerhead shrike, purple martin, and other native nesting birds, if present. Therefore, Mitigation Measures 3.5-2u through 3.5-2x would apply to the project and require pre-construction surveys for active nests/roosts within and adjacent to the project site. If nesting birds or roosting bats are identified, appropriate buffers and monitoring protocols would be implemented to ensure that disturbance of an active nest or roost does not occur. With implementation of the biological Mitigation Measures referenced in Appendix A, and specifically Mitigation Measures 3.5-2u through 3.5-2x of the Campus Master Plan EIR, no new or substantially more severe impacts would occur.

For these reasons, the project would not result in new or more severe impacts to biological resources compared to the original project previously evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions in the Campus Master Plan EIR.

2.6 ENERGY

Potential impacts related to energy and energy efficiency resulting from implementation of the Campus Master Plan were analyzed in Section 3.6 of the Campus Master Plan EIR. It was determined that impacts would be less than significant with respect to the consumption of energy and that no conflicts with state or local plans for renewable energy or energy efficiency would occur. More specifically, through adherence to and exceedance of current building code requirements, energy consumption associated with operation of new buildings and facilities under the Campus Master Plan would not result in the wasteful, inefficient, or unnecessary consumption of energy. Transportation-

related energy associated with project implementation would be reduced on a per-service-population basis as compared with existing conditions.

All new buildings associated with the Master Plan, including the currently proposed project, would be constructed in accordance with current building code (i.e., California Energy Code) requirements, which includes energy efficiency requirements. Additionally, all project buildings would be designed to achieve a 30-percent reduction in energy use from compliance with the 2019 CALGreen Code pursuant to Mitigation Measure 3.8-1 in Section 3.8, "Greenhouse Gas Emissions," of the Campus Master Plan EIR, which includes several energy-reducing actions, such as installing energy-efficient appliances, high-efficacy lighting, and electric-powered space and water heating.

For project construction, most energy consumption would result from temporary construction activities, specifically from the operation of off-road construction equipment and on-road vehicle trips associated with commutes by construction workers and haul trucks trips. The idling of on-site equipment during construction would be limited to no more than five minutes in accordance with SLOAPCD requirements. Further, on-site construction equipment may include vehicles using alternative fuels (such as natural gas) where feasible, and the selected construction contractors would use the best available engineering techniques, construction and design practices, and equipment operating procedures. In addition, construction activities would be temporary in nature and would not increase long-term energy or fuel demand. As such and consistent with the conclusions of the Campus Master Plan EIR (Impact 3.6-1), construction of the project would not result in the unnecessary, inefficient, or wasteful use of energy.

As noted above, the project would involve the redevelopment and construction of Cal Poly's existing North Mountain residence halls, as well as the renovation and modernization of the Red Bricks (i.e., South Mountain residence halls). As a result, the project would replace existing, aging facilities with modern residence halls that would provide greater housing opportunities proximate to academic facilities and within the Master Plan Area and with new energy-efficient features and operations that will reduce per-capita energy consumption, decrease reliance on oil and increasing reliance on renewable energy resources. The project would also not increase student or broader campus population beyond the growth that was previously anticipated in the Master Plan EIR (7,200 new student beds within the Cal Poly campus). Therefore, emissions associated with the current project (including resident vehicle use commute, deliveries for the student housing facilities, etc.) were already accounted for in the Campus Master Plan EIR's analysis. As noted in Section 3.6, "Energy" of the Campus Master Plan EIR, all on-campus development under the Campus Master Plan, including the project, would exceed Title 24 Building Energy Efficiency Standards and achieve a minimum of LEED Silver to reduce energy use, which establishes minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building installation and roofing, and lighting. Project adherence to the increasingly stringent building efficiency standards, as well as the Campus Master Plan and Cal Poly's Construction Standards, would reduce the project's energy consumption to be consistent with applicable plans, policies, and regulations adopted for avoiding or mitigating environmental effects related to energy. As a result, no new or substantially more severe impacts would occur, and no mitigation would be required.

According to Appendix F of the State CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on oil, and increasing reliance on renewable energy sources. Project energy consumption for building operation and transportation would support these goals due to the effects of existing state laws and requirements and project design that promotes energy conservation. For example, the project would comply with the minimum energy performance standards of the California Building Code, which decrease per capita energy consumption. The project would also support per capita energy consumption decreases by locating additional students on campus (and associated vehicle emission reductions associated with commuting) and through its uses of grid electricity, which is required by state legislation (e.g., Senate Bill [SB] 100) to source at least 60 percent of its supplies from renewable energy sources by 2030 and 100 percent from carbon-free sources by 2045. The project would not develop uses or involve activities that would conflict with goals of decreasing per capita energy consumption, decreasing reliance on oil (petroleum), increasing uses of renewable energy sources, or that would result in the wasteful, inefficient, or unnecessary consumption of energy. Therefore, no new energy-related impacts or impacts more severe than those described in the Campus Master Plan Draft EIR would occur with implementation of the project, and the use of energy for construction and operation of the project would not be considered wasteful, inefficient, or unnecessary.

2.7 GEOLOGY AND SOILS

The Campus Master Plan EIR analyzed geology and soils in Section 3.7, "Geology and Soils." As noted in the Campus Master Plan EIR, all existing and potential development in the Campus Master Plan Area would be subject to strong ground motion during a significant earthquake along faults in the vicinity of the campus; however, no known active faults pass through or are immediately adjacent to the campus. The campus is not located within any Alquist Priolo Special Studies Zone. Thus, the potential for fault rupture is described as low in the Campus Master Plan EIR. There are, however, tectonically active areas located within 40 miles of campus, including the Hosgri Fault (a right-lateral strand of the San Andreas Fault System (Cal Poly 2020). As a result, seismic activity along these fault zones could subject the entire Campus Master Plan Area, including the project site, to a moderate level of seismic ground shaking and potentially result in damage to structures or injury to people within structures that fail. As noted in the Campus Master Plan EIR, all new buildings, including development at the project site, would be designed and constructed in conformance with CSU Seismic Requirements and the California Building Code. Impacts related to geological hazards identified in the Campus Master Plan EIR were generally determined to be less than significant; however, mitigation was adopted (Mitigation Measure 3.7-3) that requires individual Master Plan projects to prepare and implement the recommendations of a geotechnical analysis specific to a given project site, especially in areas where landslide risks may be present. Mitigation Measure 3.7-3 is applicable to the project site based on mapping provided in Figure 3.7-4 of the Campus Master Plan EIR.

2.7.1 Geotechnical Hazards

The project site is located within a relatively flat, developed portion of campus but is adjacent to areas of relatively high landslide risk, similar to the developed areas in and around the campus and the City of San Luis Obispo. The project itself would not exacerbate existing seismic hazards risks associated within any regional faults, however, as contemplated in the Campus Master Plan, it would result in an increased on-campus residential population and a resulting increased exposure of people to seismic-related risks. In addition to compliance with CSU Seismic Policy requirements and CBC, Mitigation Measure 3.7-3 is applicable to the project, which requires preparation of a site-specific geotechnical evaluation consistent with CBC requirements to determine appropriate soil compaction and building stabilization and other stabilizing measures to be incorporated into project design and implemented with project construction. The site of the temporary construction staging area in the West Campus is located in an area with low landslide risk potential (per EIR Figure 3.7-4) and its use for temporary construction staging would not include any proposed grading, excavation, or other earthwork activities, nor would it include any proposed physical development that would otherwise have the potential to introduce new, permanent population to existing seismic-related risks. Therefore, through compliance with the CBC and CSU Seismic Policy requirements (as noted in Impacts 3.7-1, 3.7-2 and 3.7-3 of the Campus Master Plan EIR) and implementation of Mitigation Measure 3.7-3, no new or substantially more severe impacts related to strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides would occur, and no additional mitigation would be required.

2.7.2 Soil Erosion, Loss of Topsoil, Unstable Soil, Expansive Soil

The Master Plan EIR identified the potential for construction activities within the Master Plan Area (inclusive of the project site) to disturb soils and result in erosion or loss of topsoil. However, campus projects would be required to comply with relevant National Pollutant Discharge Elimination System (NPDES) permits, including the General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) for projects that would result in more than 1 acre of ground disturbance, which require soil erosion control measures. The project is located within an entirely developed site that is predominantly paved and impervious but does have several landscaped areas. The project would also involve ground disturbance for site preparation and building construction, trenching for relocation of a stormwater pipe, and removal of pavement and other paved surfaces (e.g., K-2 Parking Lot) associated with on-site uses. All of these activities have the potential to increase the risk of erosion. However, as with the original project previously analyzed under the Campus Master Plan, the current project would be required to comply with relevant NPDES permits, including the

Construction General Permit and SWPPP requirements. As previously stated, the temporary construction staging areas in the West Campus would solely be utilized for staging of construction equipment, vehicles, and construction-related materials for the duration of project construction activities and would not include any earthwork activities or physical development of structures of any kind that would otherwise have the potential to result in soil erosion. For these reasons, no new or substantially more severe impacts associated with substantial soil erosion or the loss of topsoil would occur as a result of construction and operation of the project, and no mitigation would be required.

As discussed in Campus Master Plan EIR Impact 3.7-5, some soils on campus exhibit characteristics which could make them unstable (resulting in lateral spreading, subsidence, etc.). To ensure that potential impacts associated with unstable soils are minimized and less than significant, campus policy requires compliance with the CBC and the CSU Seismic Requirements. As supported by adopted Mitigation Measure 3.7-3 of the Campus Master Plan EIR, in order to address the potential for liquefaction, lateral spreading, and other types of ground failure, the CBC requires that a geotechnical investigation be performed to provide data for the architect and/or engineer to responsibly design a given project. The recommendations of that site-specific report would then be incorporated into the design and construction of the project and ensure that on-site soils are compacted and/or stabilized appropriately. No development of the West Campus temporary construction staging area is proposed, which would solely be used for the staging of construction equipment, vehicles, and construction-related materials for the duration of construction activities for the project. Therefore, as preparation of the site-specific geotechnical report would be required through implementation of Mitigation Measure 3.7-3 and compliance with CBC and CSU Seismic Requirements, no new or substantially more severe impacts associated with being located on an unstable geologic unit or a geologic unit that would become unstable due to the project would occur, and no additional mitigation would be required.

As discussed in Campus Master Plan EIR Impact 3.7-6, the project site is located within an area considered to have high shrink-swell potential, which would indicates the potential for expansive soils. Campus policy requires compliance with the CBC and the CSU Seismic Requirements. Consistent with adopted Mitigation Measure 3.7-3 of the Campus Master Plan EIR, the CBC requires that a geotechnical investigation that addresses the potential for expansive soils be performed to provide data for the architect and/or engineer to responsibly design a given project. The recommendations of that site-specific report would then be incorporated into the design and construction of the project and ensure that on-site soils are compacted and/or stabilized appropriately. Therefore, as preparation of the site-specific geotechnical report would be required through implementation of Mitigation Measure 3.7-3 and compliance with CBC and CSU Seismic Requirements, no new or substantially or more severe impacts associated with expansive soils would occur, and no additional mitigation would be required.

2.7.3 Septic Tanks, Alternative Wastewater Systems

As discussed in Section 3.7, "Geology and Soils" of the Campus Master Plan EIR, the campus wastewater treatment system serves most of the campus, although a few areas of west campus are served by existing on-site septic disposal systems. Development on the project site would connect to the existing wastewater collection system for the campus and would not involve the use of septic tanks or alternative wastewater disposal systems. This issue is not relevant to the project.

2.7.4 Paleontological Resources

Potential impacts of the Campus Master Plan related to paleontological resources were analyzed in Section 3.7, "Geology and Soils," of the Campus Master Plan EIR. The Campus Master Plan EIR indicates that although the Campus Master Plan Area is underlain by Franciscan Complex (KJf) and young surficial (Qya) deposits, which are not known to host paleontological resources, discoveries of as-yet-unknown paleontological resources during ground-disturbing activities under development of the Campus Master Plan could still occur. Paleontological resources, such as trace fossils, mollusks, and marine reptiles, have been historically documented within the Franciscan Complex. For this reason, although there are no known paleontological resources, unique geologic formations, or sites are located within the Campus Master Plan Area, including the project site, a significant impact on paleontological resources

could result if an inadvertent discovery is made during ground-disturbing activities associated with construction of the Campus Master Plan, including the currently proposed project.

For this reason, Mitigation Measure 3.7-7 was adopted as part of the Campus Master Plan EIR and would apply to the project. Per this mitigation measure and in the event of an accidental discovery during development of the project site, any paleontological resources encountered during construction would be evaluated and treated appropriately in accordance with the recommendations of a qualified paleontologist. In addition, no grading, excavation, or other earthwork activities that might otherwise have the potential for inadvertent discovery would occur within the construction staging area, which would solely be used for the staging of construction equipment, vehicles, and construction-related materials for the duration of project construction activities and would not include physical development of any kind. For these reasons, and with the implementation of Mitigation Measure 3.7-7 from the Campus Master Plan EIR, impacts would be reduced to less than significant, consistent with the Campus Master Plan EIR's conclusions. No new or substantially or more severe impacts associated with paleontological resources would occur, and no additional mitigation would be required.

2.8 GREENHOUSE GAS EMISSIONS

Potential impacts related to GHG emissions resulting from implementation of the Campus Master Plan were analyzed in Section 3.8 of the Campus Master Plan EIR. It was determined that impacts would be significant but mitigable with respect to generation of GHG emissions during construction and operation of development anticipated under the Campus Master Plan. Mitigation Measure 3.8-1 requires energy efficiency measures to be implemented for all new construction projects, such as the current proposed project, to reduce operational emissions associated with future buildings and also requires that systemwide measures be incorporated to reduce overall campus emissions. Taking into consideration statewide reduction targets, including the CSU Sustainability Policy, the Campus Master Plan EIR determined that Campus Master Plan implementation would not conflict with applicable plans and targets related to GHG reduction.

The project would result in increased GHG emissions from construction activities, including the use of construction equipment, on-road vehicle miles traveled (VMT) as equipment is delivered and as construction workers commute to and from the project site, the use of the construction staging area, as well as operational activities, including building energy consumption, water consumption, wastewater consumption, solid waste consumption, and new stationary sources (e.g., emergency generators that would be used in the event of a power loss). Based on the projected phasing of the project and taking into current emissions factors for equipment, up to 674 metric tons of carbon dioxide equivalents (CO_2e) would occur per year as a result of on-site construction activities, including use of the staging area. Emissions would reduce over time due to changes in vehicle types and fuel efficiency.

The previously anticipated development of the project site as identified in the Campus Master Plan involved the demolition of the North Mountain residence halls and the Hillcrest building with nine new five-story residence halls and the renovation of the South Mountain residence halls (also called the Red Bricks). The current project is consistent with the previously anticipated development with the exception that the nine new residence halls would extend up to nine stories in height, instead of five stories in height. While the project would increase the number of contemplated units from approximately 2,250 beds to approximately 4,500 beds, the project's increase in new student beds would remain consistent with the overall growth projections analyzed in the Campus Master Plan EIR, which identifies an increase of 7,200 beds over the course of the Master Plan buildout (see page 2-20 of the Campus Master Plan EIR).

At full buildout and taking into consideration the reduced vehicle travel associated with more students living on campus as a result of the project, the project would result in a net increase of 2,674 metric tons of CO_2e. However, both construction and operation of the project were previously evaluated as part of the overall Campus Master Plan implementation in the Campus Master Plan EIR, which already concluded that development, including the project, would result in an increase in GHG emissions from construction vehicle trips, construction equipment, construction and operational energy use, and operational mobile sources. With implementation of mitigation (Mitigation Measures 3.8-1 [including the development-specific components] and 3.8-2) of the Campus Master Plan EIR, both construction

and operational emissions associated with the current project would be reduced to be consistent with applicable thresholds, including the achievement of Cal Poly, CSU, and state GHG emission reduction targets in 2035, and on a trajectory to achieve 2050 emission reduction targets. This would include achieving a 30-percent or greater reduction in Energy use compared to 2019 Building Code requirements (which was current at the time the Campus Master Plan EIR was written), the use of cool roofs, installation of solar on new buildings (where feasible), EV charging opportunities, and the use of EnergyStar® appliances. In addition, the project would be subject to the most recent federal, state, local, and CSU policies, which dictate the inclusion of various project design features to reduce potential GHG emissions, such as CALGreen-compliant building design features. These policies also encourage the use of alternative means of transportation, such as biking and walking, and renewable energy sources, which the project will incorporate and encourage through providing on-campus housing for students. As such, although the project would result in GHG emissions, both construction and operation of the project would include mandatory design elements that would reduce overall construction and operational GHG emissions. In addition, through initiatives to reduce campus-wide GHG emissions, project emissions related to energy use would be reduced or offset over time. Therefore, no new or substantially more severe impacts associated with the project's construction or operational generation of GHG emissions would occur, and no mitigation would be required.

With respect to conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, the Campus Master Plan was evaluated under the California Air Resources Board 2017 Scoping Plan and found to be consistent with that Plan, including through incorporation of the GHG reducing components of Mitigation Measure 3.8-1. Since the approval of the Campus Master Plan, the California Air Resources Boad has adopted its 2022 Scoping Plan which, like the 2017 Scoping Plan, lays out the framework for achieving the 85-percent reduction in 1990 emissions goal by 2045 and progress toward additional reductions. Appendix D of the 2022 Scoping Plan includes detailed GHG reduction measures and local actions that land use development projects can implement to support the Statewide goal. For CEQA analyses, the 2022 Scoping Plan states that projects should implement feasible mitigation, preferably measures that can be implemented on-site. The project would include many on-site GHG emissions reduction features including energy-efficient lighting and appliances, which would comply with the most recent version of CALGreen and other measures set forth in Mitigation Measure 3.8-1. The project would also include bicycle and pedestrian improvements, and potential installation of EV-ready parking spaces consistent with the requirements of the 2022 CALGreen. Additionally, the project would provide student housing on campus to reduce the need for commuting and therefore reduce transportation-related GHG emissions, aligning with the VMT reduction goals set forth in Appendix D of the 2022 Scoping Plan. The combination of these features would result in GHG emissions levels that would not conflict with the 2022 Scoping Plan. For these reasons, the project would contribute towards the state's GHG reduction goal, and therefore, the project would be considered consistent with the 2022 Scoping Plan.

Additionally, the CSU Sustainability policy aims to reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. This includes the goals of reducing systemwide facility carbon emissions to 40 percent below 1990 levels consistent with SB 32, California's Global Warming Solutions Act of 2006 (Health and Safety Code Section 38566, effective January 1, 2017) (CSU 2024). As a component of further university development within the CSU system, the project would be required to comply with all policies within the CSU Sustainability Plan. While a portion of the total electricity demand would be sourced from the grid at full project buildout, SB 100 requires that all electricity sourced from utilities be carbon-neutral by 2045. Additionally, the project would not involve the use of natural gas on-site. Regarding water usage, the project would be required to include highly efficient, water-saving design and operational features, such as high-efficiency watering features (e.g., drought-tolerant landscaping) and EnergyStar® appliances. Because of the implementation of the strategies and features listed above, the project would be consistent with the CSU Sustainability Plan, similar to the Campus Master Plan.

The project likewise remains consistent with the Second Nature Climate Leadership Commitment and Cal Poly Climate Action Plan (PolyCAP) as described in the Campus Master Plan EIR. These programs establish a goal for Cal Poly to achieve net zero emissions from all sources by 2050. As discussed above, the emissions limit developed for the 2035 Master Plan includes all emission scopes and would reduce the Campus Master Plan related emissions to 49 percent below 2015 levels by 2035. Achievement of this target would put the university on a trajectory toward net zero emissions by 2050. Additionally, many of GHG reduction measures detailed in these plans are included as

project design features or as part of Mitigation Measure 3.8-1. For these reasons, the project would remain consistent with the Second Nature Climate Leadership Commitment and PolyCAP.

Therefore, the current project's construction and operational GHG emissions are still accounted for within the analysis of the Campus Master Plan EIR, which determined a less than significant impact with respect to conflicting with an applicable plan, policy or regulation adopted for the purposes of reducing GHG emissions. In addition, the current project would still be required to implement appropriate site design features consistent with adopted mitigation measures, the CSU Sustainability Policy, and Title 24 that would increase sustainability and reduce GHG emissions consistent with the conclusions and analysis of the Campus Master Plan EIR. No new or substantially more severe impacts associated with an applicable plan, policy, or regulation would occur, and no mitigation would be required.

2.9 HAZARDS AND HAZARDOUS MATERIALS

Potential impacts of the Campus Master Plan related to hazards and hazardous materials were determined not to be potentially significant during scoping of the Campus Master Plan EIR and were addressed as part of the Initial Study prepared for the Campus Master Plan. A number of existing uses and operations on the Cal Poly campus regularly transport, use, and/or dispose of hazardous materials generated by campus operations. All known hazardous materials users, generators, and disposers are inventoried, in compliance with federal and state regulations, by the Cal Poly Environmental Health and Safety (EHS) Office.

As previously discussed, implementation of the project would result in the construction and operation of nine new residence halls, as well as the renovation of six existing residence halls (also called the Red Bricks). Construction activities would likely involve the temporary storage, use, and transport of hazardous materials (e.g., asphalt, fuels, lubricants, paint, solvents, cleaners), as well as the demolition of the existing North Mountain Halls, Hillcrest building, and University House. Transportation of hazardous materials, including potential asbestos-containing materials that may be present in the existing Red Bricks (i.e., South Mountain residence halls) on area roadways is regulated by the California Highway Patrol and Caltrans, whereas use of these materials is regulated by DTSC, as outlined in California Code of Regulations, Title 22. Consistent with existing campus operations, the project would be required to use, store, and transport hazardous materials in compliance with State and federal regulations during construction. A construction staging area, located east of the project site, would be utilized to reduce disruption to on-campus uses. Any disposal of hazardous materials during construction activities would occur in a manner consistent with applicable regulations and at an appropriate off-site disposal facility.

The operation of the project would also involve the use of small amounts of common hazardous materials, such as cleaning solvents, fertilizers, herbicides, and pesticides, during building operation and maintenance purposes. However, this area is already maintained in a manner similar to post-construction conditions and as part of current campus operations. Any storage or use of hazardous materials during operation of the residence halls would be required to comply with appropriate regulatory agency standards designed to avoid releases of hazardous materials. In addition, the EHS Office has prepared and adopted numerous programs, policies, and procedures intended to prevent accidents resulting from the release of hazardous materials. Moreover, as each project is developed and implemented, Cal Poly's EHS Office is required to demonstrate compliance with applicable federal, state, and local regulations governing the transport, use, and disposal of hazardous materials. The EHS Office maintains an inventory of all known hazardous substances present within the Campus Master Plan Area. Compliance with existing regulations and continuation of existing campus procedures would ensure that no significant impacts related to creation of significant hazards to the public through routine transport, use, disposal, and risk of upset would occur. Therefore, construction and operation of the project would not result in new or more severe impacts compared to the original project previously evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions in the Campus Master Plan EIR. No mitigation would be required.

Implementation of the project would involve the removal of the North Mountain residence halls, University House, and Hillcrest building to construct nine new residence halls up to nine stories in height; the renovation of the existing South Mountain residences halls (i.e., Red Bricks); the paving of previously developed areas; and the use of a construction staging area east of the project site. In accordance with state and federal requirements, any hazardous

materials utilized during construction of the project would be appropriately handled, removed, and disposed of at an appropriate landfill in the region, including any asbestos-containing materials or lead-based paint that may be removed from the existing Red Bricks. Further, based on the proposed on-site uses as a student housing program, operation of the project would not introduce new or substantial hazardous materials to campus. Student housing land uses typically do not involve the use of significant quantities of hazardous materials that would create a hazardous condition to the public or environment through accidental release. Typical hazardous materials used in student housing development may include small quantities of cleaning supplies, paints, oil, grease, disinfectants, and fertilizers for day-to-day operation and routine maintenance of the building and grounds. Compliance with regulatory requirements would ensure that construction and operation of the project would not result in a significant impact associated with the accidental release of hazardous materials are anticipated. Therefore, construction and operation of the project would not result in new or more severe impacts compared to the original project previously evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions in the Campus Master Plan EIR. No mitigation would be required.

No schools are located within 0.25 miles of the project site. The closest schools are located south of the project site and are: Teach Elementary (0.26 miles away from the project site and 0.73 miles away from the construction staging area); San Luis Obispo Academy (0.26 miles away from the project site and 0.73 miles away from the construction staging area); and Pacheo Elementary (0.98 miles away from the project site and 0.42 miles away from the construction staging area). Therefore, impacts related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school would not occur. No new or substantially more severe impacts would occur, and no mitigation would be required. Further, based on the proposed on-site uses, the currently proposed project would not introduce new or substantial hazardous materials within proximity to these schools. Operation of the proposed project would include the use of small amounts of janitorial cleaners and landscape chemicals, which would be handled in accordance with established CSU procedures. Therefore, the potential for emitting hazardous materials within 0.25 mile of a school is minimal. Therefore, construction and operation of the project would not result in new or more severe impacts compared to the original project previously evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions in the Campus Master Plan EIR. No mitigation would be required.

The Cal Poly campus, including the project site and construction staging area, is not known to be listed on a hazardous materials site list compiled pursuant to Government Code Section 65962.5 and is not included on the Department of Toxic Substances Control Hazardous Waste and Substance List (Cortese List), or any other list of hazardous materials sites (DTSC 2024). Therefore, implementation of the project would not result in significant impacts related to the disturbance of hazardous materials sites. No new or substantially more severe impacts would occur, and no mitigation would be required.

The project site is located approximately 4 miles north of the San Luis Obispo Regional Airport and is outside of the airport overflight zone (DTSC 2024). No other private airport facilities are within the vicinity of the campus. Neither construction nor operation of the proposed project would conflict with airport operations or result in a safety hazard. Further, the project would not exceed the height of existing structures located nearby. As such, no significant impacts are anticipated, consistent with the findings of the 2035 Master Plan EIR. No mitigation would be required.

With respect to emergency response plans, the project would not involve modification of existing roadways adjacent to the project site, including Grand Avenue or South Perimeter Road. Closure of either roadway is not anticipated as part of project implementation; however, if necessary, appropriate signage and traffic controls would be provided to ensure the safe passage of traffic (including emergency vehicles). Cal Poly's Department of Public Safety and EHS Office would review and update all emergency preparedness recommendations and campus emergency response and evacuation procedures to reflect changes in campus layout through implementation of the Campus Master Plan. For these reasons, the proposed project would not result in an adverse or permanent modification of any emergency evacuation or response routes. Therefore, construction and operation of the project would not result in new or more severe impacts to emergency response compared to the original project evaluated in the Campus Master Plan EIR, and there would be no substantial change from the previous conclusions of the Campus Master Plan EIR. No mitigation would be required.

As stated in the Campus Master Plan EIR, the project site is not located in or near a high or very high fire hazard severity zone established by the California Department of Forestry and Fire Protection (CALFIRE 2009, 2024). Further, the project would not involve development adjacent to natural areas that could otherwise be anticipated to increase wildfire risk. Nevertheless, all new facilities developed pursuant to the Master Plan will include all required fire safety features, including emergency access. This issue is evaluated further in Section 2.19 "Wildfire." As such, no new or substantially more severe impacts would occur as a result of the project, and no mitigation would be required.

2.10 HYDROLOGY AND WATER QUALITY

2.10.1 Water Quality Standards and Waste Discharge Requirements

Potential impacts of the Campus Master Plan related to hydrology and water quality were analyzed in Section 3.9, "Hydrology and Water Quality," of the Campus Master Plan EIR. The Campus Master Plan area is primarily located in an existing developed area, which contains an existing stormwater collection and conveyance systems. The Campus Master Plan EIR found that implementation of the Campus Master Plan would result in an increase in the amount of impervious surfaces on the existing campus, which may increase the amount of stormwater required to be collected and drained into the adjacent storm drains. The uses anticipated within the Campus Master Plan would not create effluent discharges from point sources and, thus, would not violate any waste discharge requirements. Infrastructure systems for the campus would comply with all federal, state, and county requirements for waste discharge. Based on the above, the Campus Master Plan EIR evaluated the potential for development under the Campus Master Plan, including the original project, to violate water quality standards or otherwise substantially degrade surface water quality, and determined that compliance with existing regulations, including NPDES requirements and associated best management practices (BMPs) during construction and operation, would ensure that polluted runoff would not enter existing nearby creeks and groundwater as a result of plan implementation and development.

Consistent with the previously evaluated student housing project under the Campus Master Plan EIR, the currently proposed project would not significantly affect water quality standards and waste discharge requirements. With project implementation, the development and disturbance of acreage would be substantively similar to what was contemplated in the Campus Master Plan EIR (i.e., the Campus Master Plan had identified the entire site would be disturbed and developed with student housing, albeit at a lower density than the current project). The project site is currently paved/developed and as such, substantial modifications in drainage patterns or runoff are not anticipated beyond what was previously evaluated in the Master Plan EIR. Since the current project is greater than one acre in size, it would still be subject to NPDES requirements, such as the Construction General Permit, which requires that the project prepare and implement a SWPPP to specify BMPs to reduce the contribution of sediments, spilled and leaked liquids from construction equipment, and other construction-related pollutants to the existing stormwater infrastructure. Compliance with the statewide NPDES Construction General Permit would ensure that construction activities do not result in stormwater discharges that would violate water quality standards or waste discharge requirements established by the Central Coast Regional Water Quality Control Board or otherwise substantially degrade surface or groundwater quality. In terms of operation, the project would achieve a minimum LEED Silver for Building Design and Construction, with a goal of LEED Gold. Sustainability features pertinent to hydrology and water quality would include high-efficiency irrigation for landscaping and water-efficient plumbing. As such, the project's potential impacts during construction and operation associated with violating water quality standards or waste discharge requirements or degrading surface or groundwater quality would not result in new or substantially more severe impacts compared to what was originally analyzed in the Campus Master Plan EIR, and no mitigation would be required.

2.10.2 Groundwater

The Campus Master Plan EIR found that implementation of new land uses proposed under the Campus Master Plan would not require additional pumping of groundwater to serve the University's potable water needs. However, the Campus Master Plan EIR determined that campus development, inclusive of the original project, could alter/modify

existing drainage and add impervious surfaces, which could reduce stormwater infiltration to the San Luis Obispo Valley Groundwater Basin. Mitigation Measure 3.9-3 was adopted and requires the preparation and implementation of a drainage plan and hydrologic analysis that meets specified performance criteria for future development within the Master Plan area when existing drainage patterns may be modified, including potential increases in impermeable surfaces.

With respect to the current project, the majority of the project site is developed and/or paved, and the project would represent a negligible increase in impermeable surfaces upon completion of construction. The project would involve the demolition of existing lower-density North Mountain residence halls and parking areas and the development of nine new, more modern residence halls in their place, as well as the renovation of six South Mountain (Red Brick) residence halls. The project would be expected to have similar open space and other permeable areas available outside of the proposed structures as those in the original project envisioned under the Campus Master Plan as well as in comparison to existing conditions. No physical development is proposed for the West Campus temporary construction staging area, which would remain in its current condition (i.e., a mix of paved and unpaved surface), similar to existing conditions. Nevertheless, the current project would modify areas of the site such that drainage could incrementally change compared to existing conditions. As such, Mitigation Measure 3.9-3 of the Campus Master Plan EIR is considered applicable to the project and would be implemented as part of the project, which would ensure that changes in on-site drainage do not interfere with groundwater recharge and meets the performance criteria of Mitigation Measure 3.9-3. Therefore, no new or substantially more severe impacts would occur, and no additional mitigation would be required.

2.10.3 Drainage, Erosion, and Runoff

As described in the Campus Master Plan EIR, construction activities associated with development under the Campus Master Plan would include grading, demolition, and vegetation removal, which have the potential to temporarily alter drainage patterns. These activities could expose bare soil to rainfall and stormwater runoff, which could accelerate erosion and result in sedimentation of stormwater and, eventually, water bodies. The removal of vegetation, excavation, grading, stockpiling of soils for new buildings, and building foundations would create soil disturbance that could accelerate erosion, especially during storm events. In addition to erosion and sedimentation, construction materials, such as gasoline, diesel fuel, lubricating oils, grease, solvents, and paint, would be brought on-site. If existing drainage patterns are substantially altered, this could result in an increase in the pollutant load in runoff, and eventually in nearby water bodies. New land use development would also result in increased rates of surface water runoff associated with new impervious surfaces and could promote increased erosion and sedimentation or other storm water contamination, and exceedance of the capacity of existing storm drain systems.

As described in the Campus Master Plan EIR, construction-related impacts would be avoided through preparation and implementation of SWPPP, including storm water runoff monitoring, and implement BMPs in service and construction activities, including construction site runoff control, which would prevent soil and construction wastes from leaving the construction site and entering the storm drain system. All future development under the Campus Master Plan, including the project, would also be required to implement LID techniques that result in hydrologic conditions that mimic the site's predevelopment condition. Such techniques include implementation of detention and retention basins throughout the site, limiting impervious coverage, and other runoff attenuating features such that stormwater runoff rates and volumes do not increase from existing conditions during storm events. As noted above, the project site is largely developed but any incremental increase in impermeable surfaces would be accommodated in on-site landscaping and detention features. In general, Campus Master Plan projects, such as the project evaluated herein, are required to incorporate post-development storm water BMPS to reduce non-point source pollution during operation. Further, the potential for development sites to generate polluted runoff would be minimized through mandatory compliance with the SWRCB 2013 General Permit. Cal Poly would also be required to comply with Non-Traditional Small MS4 Permittee Provisions of the 2013 General Permit. Development under the Campus Master Plan would also be required to comply with SWPPP conditions. In addition, Mitigation Measures 3.9-4a and 3.9-4b were adopted as part of the Campus Master Plan Approval and requires Cal Poly to provide additional on-site consideration, such as on-site detention features and landscaping to increase permeability, for any additional paving

or changes in drainage with future Campus Master Plan projects Therefore, with compliance with the above described permit requirements and mitigation measures, from a campus-wide perspective, future development under the Campus Master Plan would not result in a substantial increase in stormwater runoff or polluted runoff.

Although the project site is currently developed with residence halls and paved parking areas, redevelopment of the project site with the proposed project would represent a minor increase in impermeable surfaces. Based on a review of aerial imagery, approximately 60 percent of the project site is currently paved with the majority of unpaved/pervious areas located in the landscaped areas surrounding the existing residence halls. With implementation of the project, pervious surfaces, taking into account landscaping around structures, would continue to occupy approximately 60 percent of the total site acreage. Nevertheless, Mitigation Measures 3.9-4a and 3.9-4b would apply to the project and would ensure that Cal Poly implements and verifies appropriate BMPs and LID strategies, including additional permeable areas and on-site detention, to ensure that on-site generated stormwater does not exceed existing conditions. Therefore, impacts related to drainage, erosion, and runoff on- or off-site would remain less than significant, and no new or more severe impacts would occur beyond those analyzed in the Campus Master Plan EIR. No new mitigation is required.

2.10.4 Flood Hazards, Tsunami, and Seiche

The Campus Master Plan EIR noted that portions of the Campus Master Plan Area are located within special flood hazard areas subject to inundation in a 100-year flood. According to the Federal Emergency Management Agency (FEMA), areas along Stenner and Brizzolara Creeks are located within special flood hazard areas subject to inundation by the 100-year flood, Zone A (no base flood elevations determined) (FEMA 2024). The 100-year flood hazard area primarily runs along Brizzolara Creek at the northern edge of the Academic Core and East Campus. Near-term projects under the Campus Master Plan within flood zones along Brizzolara Creek includes the Student Housing for Freshmen Students, located approximately 0.5 northwest of the project site, and the project's West Campus temporary construction staging area and future home of the Facilities Operations Complex. Introduction of development within flood hazard zones could result in risk of release of pollutants such as oil, pesticides, herbicides, sediment, trash, bacteria, and metals during a flood event within the Stenner and Brizzolara Creek flood hazard areas. Therefore, the Campus Master Plan EIR noted this impact would be potentially significant. Mitigation Measure 3.9-5 was adopted as part of the Campus Master Plan to avoid development in 100-year flood zones where feasible and incorporate design measures to address release of pollutants when development in this flood zone cannot be avoided. Implementation of this mitigation measure would ensure that the impacts from risks associated with risk of release of pollutants during inundation would be less than significant.

The construction staging area is located within a flood zone; however, this area would solely be used to provide temporary staging for construction equipment and would not include the construction of physical development or structures of any kind. Therefore, the use of the construction staging area would not introduce new physical development which might otherwise increase the risk of release of pollutants due to project inundation. On-site BMPs (as noted above) and compliance with a SWPPP would ensure that during rain events on-site materials are appropriately contained and stored to prevent the off-site transport of materials as a result of runoff. The project site containing the new and renovated residence halls is not located within a special flood hazard area and is not subject to flooding during a 100-year or 500-year storm event (FEMA 2024). No flooding impacts are anticipated, and Mitigation Measure 3.9-5 is not considered applicable to this primary portion of the project site.

In addition, as discussed in Section 3.9, "Hydrology and Water Quality," the Campus Master Plan Area is not located within an identified dam inundation area on the Dam Inundation Map in the Safety Element of the County of San Luis Obispo's General Plan (San Luis Obispo County 1999a). Regarding the potential for seiche to occur on reservoirs, seiche is not considered a significant risk in San Luis Obispo County because existing water bodies are not large enough to generate large waves (San Luis Obispo County 1999b). The Master Plan Area is also sufficiently distant from the Pacific Ocean and sufficiently elevated to avoid hazards from tsunami. For these reasons, impacts related to flood hazards, tsunamis and seiche would be less than significant, and no new or more severe impacts would occur beyond those analyzed in the Campus Master Plan EIR. No new mitigation is required.

2.10.5 Water Quality Control Plan or Sustainable Groundwater Management Plan

Cal Poly would continue to adhere to all applicable plans, permits, and regulations governing water quality, and the Campus Master Plan would not increase Cal Poly's use of groundwater. Therefore, the Campus Master Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Construction and operation of future development under the Campus Master Plan would be required to comply with the SWRCB 2013 General Permit, as well as SWPPP requirements, and implement any associated/necessary BMPs. Further, the use of LID techniques would control storm water flow and discharges and prevent contamination to surface water resources. For these reasons, this impact was considered less than significant.

Likewise, the current project would be required to prepare a SWPPP and implement BMPs during construction and operation to ensure that surface and groundwater quality conditions are not significantly adversely affected by project implementation. As a result, no new or substantially more severe impacts would occur, and no mitigation would be required.

2.11 LAND USE AND PLANNING

Potential impacts of the Campus Master Plan related to land use and planning were analyzed in the Initial Study of the Campus Master Plan. As discussed in the Initial Study, the Campus Master Plan would continue the existing University uses of the campus, and all proposed facilities and improvements are located within the campus and, therefore, would not physically divide an established community. No natural community or habitat conservation plans are applicable to the campus.

Regarding the potential to physically divide an established community, implementation of the Campus Master Plan, inclusive of the project, would not require the acquisition or development of property outside the current Master Plan Area that could result in the physical division of an established community (e.g., development within the City of San Luis Obispo). Further, development of the project site would be staged/phased so as to minimize potential temporary impacts to student residents during the academic year.

Regarding the potential to conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, the currently proposed project is consistent with the proposed residential uses identified for the project site in the Campus Master Plan and Master Plan EIR (refer to Figures 2-4 and 2-5 of the Master Plan EIR). The project furthers Cal Poly's commitment to provide additional student housing on campus, consistent with the project site's student housing land use designation. As detailed above, the primary distinction between the originally proposed project and the current project is an increase the building height and corresponding increase in the number of student beds. However, with the project, the total number of new student beds will remain well within what was contemplated and analyzed in the Campus Master Plan EIR on a campus-wide basis. In addition, the project will be phased to avoid temporary material reductions in available student housing. The project would be constructed entirely on Cal Poly property, and therefore would be under the land use jurisdiction of the CSU Board of Trustees. There are no local ordinances or policies of the City of San Luis Obispo that would apply to the project, as the City does not have jurisdiction over Cal Poly lands. Since the project site is located entirely within the Campus Master Plan Area, the Campus Master Plan is considered the applicable land use plan and the project would be subject to the applicable Campus Master Plan policies and Campus Master Plan EIR mitigation measures (as detailed in Appendix A) Therefore, no new or more severe impacts related to land use and planning would occur with project implementation, and no mitigation would be required.

2.12 MINERAL RESOURCES

Potential impacts of the Campus Master Plan related to mineral resources were analyzed in the Initial Study for the Campus Master Plan. As discussed in the Initial Study, the Campus Master Plan Area, which includes both the project site and construction staging area, is not located within a regionally significant aggregate resources zone (Cal Poly

2016), and implementation of the Campus Master Plan would not result in the loss of a known mineral resource or mineral resource recovery site. Therefore, development of the currently proposed project as well as the utilization of the construction staging area would not result in the substantial loss of known mineral resources that would be of value to the region or state. The project site is entirely developed and is not used for, or considered to be, a locally important mineral resource recovery site. As such, redevelopment of the project site would not result in the loss of a mineral resource recovery site. No significant impacts would occur, and no new or more severe impacts related to mineral resources would occur with project implementation compared to what was previously analyzed in the Campus Master Plan EIR, and no mitigation is required.

2.13 NOISE

The Campus Master Plan EIR analyzed the noise impacts associated with the Campus Master Plan in Section 3.10, "Noise." The Campus Master Plan EIR evaluated short-term construction and long-term operational noise at nearby noise-sensitive receptors at a programmatic level. Because noise is a local issue, affecting the receptors closest to the noise-generating activities, this analysis is based on the anticipated location of project construction, as well as the operational characteristics of the project and site-specific considerations (e.g., vegetation and topography).

Regarding short-term construction noise, impact 3.10-1 of the Campus Master Plan EIR determined that implementation of the Campus Master Plan would result in construction activities that, although would be intermittent and temporary in nature, may still result in noise levels that impact nearby noise sensitive land uses and could disturb people. The Campus Master Plan would necessitate construction activities near adjacent, existing development, including on-campus facilities, and could exceed acceptable noise levels or require nighttime construction. Mitigation Measure 3.10-1, which was adopted as part of the Campus Master Plan approval in 2020, requires the implementation of feasible noise reduction measures; even with mitigation, however, impacts were determined to be significant and unavoidable.

Project-related construction activity would result in temporary noise increases on and near the project site, along the eastern edge of the Academic Core and the northern portion of the East Campus subarea. Construction activity would involve demolition, grading, excavation, material hauling, pipe installation, building construction, and paving, which would result in increased noise levels on and surrounding the project site. Although these noise level increases would be temporary and would vary considerably depending on the construction activity, construction phase, equipment type, duration, distance between the noise sources and receptor, and the presence or absence of barriers between the noise source and receptor, the potential temporary increase could be substantial, although no blasting or pile driving would occur. Based on project characteristics and consistent with the assumptions of Impact 3.10-1 of the Campus Master Plan EIR, the greatest noise levels would occur during site preparation due to the types of construction equipment involved, including a scraper/blade, backhoes, and rollers. Assuming up to three pieces of equipment (2 dozers or cranes and 1 backhoe) could operate simultaneously at the project site at a given time and during a specific phase, noise levels at a reference distance of 50 feet could reach as high as 85 A-weighted decibels (dBA), which is roughly the distance between existing residence halls and the limits of new building construction activities under each phase. This distance is also considered representative of the distance between the different phases of construction at the project site. It should also be noted that renovations of the South Mountain residence halls (aka, the Red Bricks) would occur within each structure and would not require the use of heavy construction equipment. Renovations of the Red Bricks would also occur during the summer months when students are not present.

Mitigation Measure 3.10-1 would apply to the project and require implementation of construction noise minimization measures, including limiting the hours when construction activity can take place (i.e., between 7:00 a.m. and 7:00 p.m. on weekdays), requires the use of noise control technologies (e.g. noise-reduction intake and exhaust mufflers and engine shrouds), and strategies to reduce potential impacts on sensitive receptors (e.g. locating equipment as far as possible from nearby noise-sensitive land uses). With respect to implementation of Mitigation Measure 3.10-1, the project site is not located proximate to off-campus residences, and therefore, notification to off-campus residents would not be required. Based on the aforementioned distance between the off-site receptors and project site, construction noise levels combined with implementation of Mitigation Measure 3.10-1, would reduce potential

construction noise by up to 10 dBA to approximately 75 dBA at a reference distance of 50 feet. Despite the incorporation of these measures, the Campus Master Plan EIR concluded that construction noise impacts would remain significant and unavoidable. However, no new or substantially more severe impacts would occur as a result of project implementation, and no additional mitigation would be required.

The Campus Master Plan EIR evaluated the potential for long-term increases in operational traffic noise on local roadways. Traffic noise levels on a given roadway are directly related to the volume of vehicles that travel along that roadway. In other words, an increase in traffic volume would result in an increase in traffic noise. The number of daily vehicle trips and the daily diurnal travel patterns are driven by specific land use types. Thus, traffic noise modeling that was conducted for the Campus Master Plan EIR accounted for the various land use development (e.g., onsite academic, onsite residential) types and associated trip generation and subsequently traffic noise increases that would occur over the buildout of the Campus Master Plan. As detailed in impacts 3.10-2, the Campus Master Plan EIR determined that implementation of the Campus Master Plan would not substantially increase vehicular traffic such that mobile source noise would represent a substantial increase in ambient noise levels. As discussed above, the project would not result in a change in land use type (residential) contemplated in the Campus Master Plan and Campus Master Plan EIR, but it would increase the density and height of the residential project compared to what was previously evaluated for the project site. Overall, however, the number of new student beds would remain below what was contemplated in the Campus Master Plan and Campus Master Plan EIR. As a result, the project would not result in an increase in daily vehicle trips or associated traffic noise compared to estimated levels from the Campus Master Plan EIR. Therefore, no new or more severe impacts with respect to traffic noise would occur with project implementation.

The Campus Master Plan EIR also evaluated potential impacts due to new stationary sources, and generally found such impacts to be less than significant. The Campus Master Plan EIR, however, concluded that noise related to the expansion of Spanos Stadium (Building 61A), operation of parking structures and building mechanical equipment could result in potentially significant noise impacts, even with implementation of Mitigation Measures 3.10-3a, 3b and 3c. The project evaluated herein involves the construction and redevelopment of nine new residence halls, as well as the modernization of six other residence halls in the East Campus. It does not involve or contribute to the expansion of Spanos Stadium, and as such, Mitigation Measure 3.10-3a would not apply to the project. Further, the project does not involve the operation of a parking structure and, thus, Mitigation Measure 3.10-3b is also not applicable. However, the project will include building mechanical equipment (e.g. HVAC systems) that would result in increased stationary source noise levels in proximity to noise-sensitive receptors. As a result, Mitigation Measure 3.10-3c would apply to the project which requires locating building air conditioning units be located on rooftops or shielded from adjacent noise-sensitive land uses and incorporation of noise-reduction features to reduce noise levels to meet the referenced noise criteria to the extent feasible. Due to the projected height of the on-site structures, additional shielding would likely not be necessary should air conditioning equipment be located on a rooftop due to lack of line of sight between source (air conditioning equipment at a given building) and receptor (a residence). Should equipment be located at the ground level, it would be shielded and screened from view to reduce noise levels, consistent with Mitigation Measure 3.10-3c. The Campus Master Plan EIR nonetheless found that implementation of Mitigation Measure 3.10-3c, may not be sufficient to fully mitigate the associated increase in operational noise levels at all nearby noise-sensitive land uses to levels at or below the identified noise standard. Therefore, although the project may exceed applicable noise standards with implementation of Mitigation Measure 3.10-3c, this impact was disclosed in the Campus Master Plan EIR and approved through a statement of overriding consideration, and thus no new or substantially more severe impacts would occur, and no additional mitigation would be required.

The Campus Master Plan EIR also discussed on page 3.10-19 and Impact 3.10-4 ground vibration associated with, pile driving, blasting, or other substantial vibration-inducing construction equipment or techniques may be necessary, especially in areas with steep slopes. Additionally, due to the presence of older structures within the Academic Core and the potential for nearby construction activities to cause vibrational damage to these structures, pile-driving, blasting and/or use of heavy construction equipment could result in damage to older structures. As a result, Mitigation Measures 3.10-4a and 4.10-4b were adopted and would apply to any construction efforts involving pile driving, blasting or ground-impacting operations within close proximity of residences and other occupied buildings. With respect to the project, construction activities would not involve pile driving, blasting, or other substantial

vibration-inducing construction equipment or techniques. The project would require demolition of the existing residence halls and Hillcrest building, grading and excavation; however, these construction activities are not expected to generate substantial levels of vibration or groundborne noise. Pile-driving or other substantial vibration-generating activities are not proposed as part of the project, however, if such equipment were required, Mitigation Measures 3.10-4a and 3.10-4b would be implemented to ensure that vibration impacts would remain less than significant. Construction-related vibration would not result in any new or more severe impacts than those previously evaluated in the Campus Master Plan EIR.

As noted on page 3.10-19 of the Campus Master Plan EIR, the Master Plan Area, inclusive of the project site, is not located within an airport land use plan, or within 2 miles of a public airport or public use airport/airstrip. San Luis Obispo County Regional Airport is the closest airport and is located approximately 3.5 miles south of the project site. Additionally, the project site is not located within 2 miles of a private airstrip. Therefore, implementation of the project would not affect airport operations or result in the development or relocation of any noise-sensitive land uses in proximity to any airport or airstrip; thus, the project would not result in noise impacts related to the exposure of people residing or working in the project site to excessive aircraft-related noise levels. Therefore, no new or substantially more severe impacts would occur, and no mitigation would be required.

2.14 POPULATION AND HOUSING

The Campus Master Plan EIR found that implementation of the Campus Master Plan would be consistent with San Luis Obispo Council of Governments projections, and the additional housing proposed on campus, as with all components of the Campus Master Plan, would be specifically intended to accommodate projected enrollment increases at Cal Poly through 2035. The student and faculty/staff housing proposed as part of the Campus Master Plan would occur within existing campus boundaries, which constitute an urbanized area with established infrastructure. As urban infill, residential development proposed under the Campus Master Plan would neither encroach on isolated or open space areas nor remove physical impediments to growth. Thus, implementation of the Campus Master Plan, inclusive of the current project, would not directly or indirectly induce substantial growth in an undeveloped area. Campus Master Plan implementation, including the construction of the proposed project through the proposed phasing plan, would also not result in the displacement of existing housing on or off campus.

The current project would provide housing for enrolled students and would involve the construction and redevelopment of nine new residence halls and the modernization/ renovation of the six existing South Mountain residence halls (aka, the Red Bricks), resulting in a total net increase of approximately 4,155 beds. This is an increase in the number of beds originally contemplated at the project site. However, the project would not increase student enrollment or staff at Cal Poly and would not increase on-campus population beyond what was anticipated and accounted for in the Campus Master Plan EIR, which accounted for a planned buildout to reach a total of 15,000 beds (7,238 new student beds). Therefore, the project would not add students to the campus or increase campus population projections beyond what was projected in the Campus Master Plan and analyzed in the Campus Master Plan EIR. Further, the project would assist in Cal Poly achieving its on-campus housing goal, as stated in the Campus Master Plan EIR. As such, the project would not induce substantial population growth or create demand for housing beyond the growth that was previously evaluated and accounted for in the Campus Master Plan EIR, and no mitigation would be required.

Although the project would involve the demolition of the five existing North Mountain residence halls, as well as the Hillcrest building, and their replacement with the nine new residential buildings, the proposed project would be phased so as to maintain existing or greater on-campus student housing capacity such that displacement of students does not occur. For example, the modernization/renovation of the Red Bricks (i.e., South Mountain residence halls) would occur during the summer months of each year when the residence halls are not in use and would be reopened in time for incoming student residents. Additionally, the existing North Mountain residence halls would not be removed until equivalent or greater student beds are available elsewhere within the project site. As a result, project implementation would not result in an on-site reduction in housing capacity within the Master Plan Area that could displace potential on-campus residents or result in the need for construction of replacement housing elsewhere. The

project would provide, rather than result in the need for, additional housing, and impacts would remain less than significant. Therefore, no new or substantially more severe impacts on population and housing would occur with project implementation, and no mitigation would be required.

2.15 PUBLIC SERVICES

Potential impacts of the Campus Master Plan related to public services including libraries, parks, and schools were analyzed in Section 3.12 of the Campus Master Plan EIR. Based on acceptable service ratios, and, taking into consideration the potential increase in on-campus population, no significant public services impacts were identified, and no mitigation measures were deemed necessary or adopted as part of the Campus Master Plan.

Impacts 3.12-1 through 3.12-5 of the Campus Master Plan EIR evaluated potential impacts and the need for additional public services facilities as a result of implementation of the Campus Master Plan. Based on acceptable service ratios and taking into consideration the potential increase in on-campus population, no significant impacts were identified, and no mitigation measures were deemed necessary or adopted as part of the Campus Master Plan.

With respect to the current project, the project would increase the number of proposed student beds by 4,155 total net new beds. However, the current project's proposed increase in student beds would not add students at Cal Poly beyond the projections identified and evaluated in the Campus Master Plan EIR (which Cal Poly had established as just over 15,000 beds [a net increase of 7,238 beds above existing conditions at the time the Campus Master Plan EIR was prepared] planned for complete buildout of the Master Plan) and would not alter the on-campus population beyond 2035 projections, which might otherwise have the potential to increase the need for public services. The construction staging area would not include physical development of any kind and therefore would not introduce new population and thus new demand on public services. Therefore, the project's student population was already accounted for within the analysis and conclusions of the Campus Master Plan EIR. With respect to the building design, in April 2024, Campus Police Chief George Hughes met with City of San Luis Obispo Fire Chief Todd Tuggle to discuss an extension and amendment to the Agreement for Enhanced Emergency Services Agreement between the Cal Poly and the City of San Luis Obispo, the County of San Luis Obispo, and State of California Department of Forestry and Fire Protection (Cal Fire). At this meeting Chief Hughes discussed with Chief Tuggle the project, including the proposed building heights reaching up to nine stories. Chief Hughes confirmed that the City Fire Department would provide fire and emergency service protection to the Project and that the provision of such services would be addressed through a per-student charge consistent with the existing structure of the Enhanced Emergency Services Agreement. Chief Tuggle did not identify a need for any new or physically altered fire protection and emergency service facilities to service the project. For these reasons, the project would not result in the need for additional public services facilities. The proposed development would not result in new or substantially more severe impacts on public services than what was previously analyzed in the Campus Master Plan EIR, and no mitigation would be required.

2.16 RECREATION

Potential impacts of the Campus Master Plan related to recreation were also analyzed in Section 3.12 of the Campus Master Plan EIR. The Campus Master Plan EIR found that the additional demand for recreational resources created as a result of implementation of the Campus Master Plan would be met by existing campus facilities, as well as through the proposed enhancement of on-campus athletic and recreational facilities, construction of new athletic and recreational facilities on campus, open space enhancements, and the provision of passive and active recreational facilities as part of new campus housing projects. As a result, the Campus Master Plan EIR determined that implementation of the Campus Master Plan would not increase the use of neighborhood or regional parks or other recreational facilities; require the construction or expansion of recreational facilities that might have an adverse effect on the environment; or otherwise adversely affect existing recreational opportunities. Thus, impacts on recreational resources were found to be less than significant and no mitigation was required.

As noted previously, the original project was included as part of the Campus Master Plan and evaluated as part of the Campus Master Plan EIR. With respect to the currently proposed project, even though the project density is higher at the project site compared to what was analyzed in the Campus Master Plan EIR, the current project would not add students or staff at Cal Poly beyond the overall projections identified and evaluated in the Campus Master Plan EIR and would not alter the on-campus population beyond 2035 projections which might otherwise increase the need for recreational opportunities. As the current project does not propose an increase in student population beyond what was previously anticipated in the Campus Master Plan and evaluated as part of the Campus Master Plan EIR, and the construction staging area would not include physical development of any kind, the current project would not result in a substantial increase in demand for on-campus recreation facilities such that substantial physical deterioration of the facilities would occur or be accelerated. No new or substantially more severe impacts would occur, and no mitigation would be required.

2.17 TRANSPORTATION

The Campus Master Plan EIR analyzed the potential for new development under the Campus Master Plan to affect transportation (including multi-modal transportation) and conflict with applicable programs, plans, ordinances, or policies related to alternative transportation in Section 3.13, "Transportation." The EIR found that Campus Master Plan buildout would result in significant impacts related to VMT, transit service, and bicycle and pedestrian facilities but that feasible mitigation was available to reduce the impacts of the Campus Master Plan to less than significant. Mitigation Measures 3.13-1 through 3.13-4 were adopted as part of the Campus Master Plan EIR that included requirements to develop and implement a campuswide transportation demand management plan, monitor transit use and provide additional funding for increased service where necessary, and to monitor bicycle- and pedestrian-related conditions within and near the Master Plan Area and provide additional facilities to ensure public safety.

The aforementioned mitigation measures are campuswide requirements and would not be individually applicable to the project. Nevertheless, with respect to plans, ordinances, or policies addressing circulation, existing transit, bicycle, and pedestrian facilities provided along the perimeter of the project site would be maintained. In addition, access through and around the project site would be provided and improved upon compared to existing conditions. For example, the proposed circulation network for the project site would be intended to limit changes to the existing circulation patterns in the area and minimize the potential for project-related vehicular traffic to affect campus roadways, (including South Perimeter Road, Grand Avenue, Klamath Road, Deer Road, and Mountain Lane [which bisects the site]), while also including a series of interconnected pedestrian and bicycle paths throughout the development to promote multimodal transportation choices and direct on-site residents south to existing crossing opportunities along South Perimeter Road and Grand Avenue. As such, the project would enhance upon, not conflict with, current plans or facilities provided for transit, bicycle, or pedestrian facilities. The project would not modify the width or routing of the existing roadway network, including Grand Avenue, Mountain Lane, Klamath Road, and South Perimeter Road. As such, no new impacts beyond those identified in the Campus Master Plan EIR are anticipated. No new or substantially more severe impacts would occur, and no additional mitigation would be required.

The Campus Master Plan EIR found that implementation of the Campus Master Plan would increase on-campus population (faculty, staff, and students) which would increase VMT associated with the campus. The location of a higher percentage of housing on university-owned property would reduce the average VMT per service population compared to existing campus operations. However, it would not reduce VMT per service population to below applicable thresholds (i.e., 15 percent below regional VMT per service population) without implementation of mitigation. Mitigation Measure 3.13-1 was adopted and requires Cal Poly to develop, implement, and adaptively manage a campuswide transportation demand management (TDM) plan. Cal Poly is in the process of developing this TDM plan, which will be implemented campuswide and will take into consideration bicycle, pedestrian, and transit opportunities, as well as parking management strategies.

As noted above, the current project involves the demolition of Cal Poly's five existing North Mountain residence halls, as well as the Hillcrest building, and their replacement with nine new residential buildings resulting in a net increase of 4,155 new student beds, as well as the phased renovation of the six existing South Mountain residence halls. While

the density of the nine new residential buildings exceeds what was originally contemplated in the Campus Master Plan and analyzed in the Campus Master Plan EIR, the project would not add students or staff at Cal Poly and would not exceed the on-campus population beyond what was previously anticipated in the Campus Master Plan and analyzed in the Campus Master Plan EIR (7,238 new student beds). As the project would not result in additional increases in student enrollment or staffing, changes in VMT beyond what was evaluated in the Campus Master Plan EIR would not occur. Indeed, the project will further Cal Poly's VMT reduction strategies by locating student residences on campus and in close proximity to Cal Poly's academic and student support facilities, representing an improvement in VMT compared to existing conditions. Further, Mitigation Measure 3.13-1 is a campuswide requirement and would not be individually applicable to the project. No new or substantially more severe impacts would occur, and no mitigation would be required.

As noted on page 3.13-12 of the Campus Master Plan EIR, the Campus Master Plan does not include new major/primary entrances or modifications to existing campus entrances from the City of San Luis Obispo. However, some modification of existing roadways, including bicycle, pedestrian, and transit improvements, may be necessary as the Campus Master Plan is implemented. Roadway improvements or modifications of facilities, which may require temporary road closures associated with the Campus Master Plan, would be constructed in accordance with all applicable design and safety standards so as to allow for the safe and efficient movement of various modes of travel to, from, and through the campus. Additionally, the vehicle types associated with operation of the land uses proposed in the Campus Master Plan, including the proposed project, are consistent with those currently utilizing the circulation network within the Master Plan Area. Therefore, the project, like the Campus Master Plan, would not increase hazards due to a design feature or incompatible uses. No new or substantially more severe impacts would occur, and no mitigation would be required.

As noted on page 3.13-12 of the Campus Master Plan EIR, the Campus Master Plan would require that site design be compliant with all applicable emergency access requirements, including Uniform Fire Code requirements; thus, emergency access for future projects under the Campus Master Plan would be subject to review by all appropriate responsible emergency service agencies. Additionally, all CSU projects are required to follow the State University Administrative Manual, which requires the State Fire Marshal to review all projects prior to implementation. As a project that would be developed under the Campus Master Plan, the current project would be designed to meet applicable emergency access and design standards, and adequate emergency access would be provided within the project site. No modification of California Boulevard or Campus Way that could affect emergency access would occur as part of the project. No impacts related to roadways hazards or inadequate emergency access are anticipated. Therefore, no new or substantially more severe impacts would occur with project implementation, and no mitigation would be required.

2.18 UTILITIES AND SERVICE SYSTEMS

With respect to other utility infrastructure, no additional mitigation measures were deemed necessary regarding water, stormwater, wastewater, electricity, natural gas, or telecommunications facilities.

The proposed student housing development at the project site would involve redevelopment of Cal Poly's existing North Mountain residence halls and renovation of the South Mountain residence halls to provide a total net increase of 4,155 beds, which remains within the overall growth projections of the Campus Master Plan, and thus, the current project's proposed development is accounted for in the projections of the Campus Master Plan and analysis of the Campus Master Plan EIR. Therefore, no increase in utility demand beyond what was previously evaluated in the Campus Master Plan EIR would occur. The project would require utility connections; however, this is accounted for as part of the overall impact analysis of the Campus Master Plan EIR and this addendum. Therefore, no new or substantially more severe impacts would occur as a result of project implementation, and no mitigation would be required.

2.18.1 Water Supply

Section 3.14 of the Campus Master Plan EIR evaluated water supply and demand, as well as water storage and conveyance infrastructure, and concluded that development of the Campus Master Plan would result in an increased campus population and development of new buildings, which would increase demand for water supply. Under the Campus Master Plan, adequate water supplies would be available to meet full Master Plan buildout upon completion of the Wastewater Reclamation Facility (WRF), the construction of which is discussed in Mitigation Measure 3.14-3 of the Campus Master Plan EIR. Cal Poly issued a Draft EIR for the WRF project in April 2023 and that project was approved in January 2024. Additionally, and irrespective of the WRF, Mitigation Measure 3.14-3 allows Cal Poly to operate new development under the Campus Master Plan, so long as adequate water supplies are available (taking into account changes in campus demand and water consumption behaviors and incorporation of sustainability features). With implementation of Mitigation Measure 3.14-3, the water supply impact of the Campus Master Plan would be reduced to a less than significant level. Since certification of the Campus Master Plan EIR, Cal Poly's water demands have been reduced due to the installation on-campus sustainability features and other on-campus water demand reduction efforts. As shown in Table 3.14-6 of the Campus Master Plan EIR, these measures equate to a more than 90,000 gpd reduction in water demand by 2025.

As noted above, the project would involve the demolition of Cal Poly's existing North Mountain residence halls, the construction of nine new residential buildings, and the renovation of the existing South Mountain residence halls, providing a total net increase of 4,155 beds. Although this would be an increase in student beds at the project site compared to the original project analyzed in the Campus Master Plan, the current project would not increase student enrollment or staffing beyond the overall growth and student housing projections of the Campus Master Plan. Thus, the current project is accounted for as part of the Campus Master Plan's future water demands which were evaluated in the Campus Master Plan EIR. The project would be subject to compliance with Mitigation Measure 3.14-3, which requires that the WRF be operational or that Cal Poly demonstrate that, notwithstanding a delay in WRF operation, that adequate water supplies are available to serve new Master Plan projects. Since 2020, Cal Poly has initiated several water supply sustainability improvements that have reduced water demand campus-wide and has been monitoring wastewater flows generated by the campus which demonstrates consistency with anticipated water demand reduction targets (See Campus Master Plan Table 3.14-6). Further, the WRF was approved in January 2024 and is anticipated to commence operations in 2026, consistent with the opening of the first phase of student housing associated with this project. As noted in Table 3.14-7 on page 3.14-18 of the Master Plan EIR, operation of the WRF would result in additional available (surplus) water supplies to campus (approximately 248,000 gallons per day [gpd] of capacity in 2030 with operation of the WRF). This surplus water supply includes consideration of 4,100 and 5,600 additional student beds by 2027 and 2031, respectively. Accordingly, the projected increase in student beds under the project (4,155 net new student beds) by 2030 would be consistent with these water demand and supply projections, and would not result in a substantial increase in water demand beyond what was evaluated in the Campus Master Plan EIR, and no new or expanded water rights would be required to meet the water supply needs of the currently proposed project. Therefore, impacts associated with the current project would be consistent with the findings of the Campus Master Plan EIR and would remain less than significant for water supply and demand, as well as the construction of new or expanded water infrastructure. The project does not introduce new or substantially more severe impacts than was previously evaluated in the Campus Master Plan EIR. No mitigation would be required.

2.18.2 Wastewater Treatment and Disposal

The Campus Master Plan EIR evaluated the potential for Campus Master Plan implementation to result in the need for new or expanded infrastructure within Impacts 3.14-1 (water infrastructure), 3.14-2 (electricity, natural gas, and telecommunications facilities), and 3.14-4 (wastewater). With respect to wastewater facilities, Cal Poly is pursuing development of a WRF that would provide additional wastewater treatment capacity and sustainable use of treated effluent for Cal Poly's agricultural needs. Mitigation Measures 3.14-4a and 3.14-4b were adopted specific to the WRF, as well as broader sustainability measures to reduce campus wastewater flows. However, neither measure is considered directly applicable to the project. Since 2020, Cal Poly has been monitoring wastewater flows generated

by the campus and has initiated several wastewater infrastructure improvements that have reduced wastewater generation campuswide to ensure compliance with Mitigation Measure 3.14-4a.

Section 3.14 of the Campus Master Plan EIR also evaluated wastewater treatment and conveyance capacity, wastewater treatment facilities, and the potential for exceedance of applicable wastewater treatment requirements. The Campus Master Plan EIR concluded that implementation of the Campus Master Plan (and the associated increased campus population levels) would increase wastewater flows. With incorporation of mitigation, Campus Master Plan implementation would not exceed the capacity of existing and connecting infrastructure to collect and treat the additional flows through 2030. Mitigation Measure 3.14-4a requires operation of the WRF prior to other development on campus or that Cal Poly otherwise reduce wastewater flows such that adequate wastewater capacity is available to serve development that may be constructed prior to initiation of the WRF. This includes the implementation of inflow and infiltration (I/I) reduction projects and additional water conservation measures through the Cal Poly Utility Master Plan and Mitigation Measure 3.14-4b.

As noted above and with respect to Mitigation Measure 3.14-4a, Cal Poly is currently pursuing the development of an on-campus WRF which would increase its wastewater treatment capacity to address potential increases in wastewater flows associated with implementation of the Campus Master Plan that would otherwise be conveyed to the City's wastewater treatment system. The WRF is anticipated to be complete and operational in 2026, which would coincide with initial operation of Phase 1 (up to 1,000 student beds) of the project. Cal Poly has also implemented (and continues to implement) several water conservation actions that would reduce wastewater generation, such as replacing toilets, urinals, faucets, and showerheads with low-flow alternatives. In addition, Cal Poly, in cooperation with the City, has initiated several I/I reduction projects to reduce peak wet weather flows, and these improvements to Cal Poly's collection system are ongoing. Cal Poly has a demonstrated history of collaborating with the City on upgrades to the City's sewer interceptor when it reaches capacity to increase pipe size and capacity as necessary to accommodate Cal Poly flows. Although no such actions are proposed at this time, it is anticipated that similar actions would be taken in the future to reduce the potential for future wet weather flows and avoid exceeding the current 1.2-mgd conveyance capacity agreement between Cal Poly and the City. Similar to potable water supplies and infrastructure, continued implementation of Mitigation Measures 3.14-4a and 3.14-4b by Cal Poly require operation of the WRF before any increase in wastewater generation occurs beyond 2019 conditions and implementation of capital improvements (including reducing I/I within existing pipes) to ensure there remains adequate capacity of the wastewater collection and treatment system. It should be noted that implementation of Mitigation Measure 3.14-4a and Mitigation Measure 3.14-4b as it relates to the WRF are campuswide and related to implementation of the Campus Master Plan, as a whole. Consistent with the requirements of Mitigation Measure 3.14-4a, prior to occupancy of the current project (or a particular phase of the project), Cal Poly would be required to demonstrate that adequate wastewater capacity is available to serve the project phase if operation of the proposed student housing uses is deemed necessary prior to operation of the WRF. As a result, and through compliance with the adopted mitigation measures related to wastewater treatment and disposal, impacts related to construction of new on- and off-site wastewater facilities would be less than significant.

As discussed above, construction of the project would introduce a net total of 4,155 new beds on campus. The Campus Master Plan EIR anticipated 4,100 new beds by 2027, whereas the project would provide 4,155 new beds by 2030, an overage of 55 beds. Although the project would generate more wastewater in 2030 than the original project previously analyzed, the Campus Master Plan EIR anticipates another 1,500 beds would be online starting in 2031. Further, reductions in development elsewhere within campus (e.g., approved near-term development of 33 faculty/staff residential units at the intersection of Slack Street and Grand Avenue compared to the previously anticipated 380 units), implementation of ongoing I/I reduction and other capital improvement projects to reduce wastewater flows at Cal Poly and compliance with Mitigation Measure 3.14-4a and 3.14-4b would ensure that the additional incremental demand associated with 55 student beds between 2030 and 2031 would not result in inadequate wastewater treatment capacity. Overall, development of the project would not add students to the campus beyond what was originally projected in the Campus Master Plan and analyzed in the Campus Master Plan EIR, which planned for up to 7,200 additional beds as part of plan implementation. Therefore, the current project's proposed development is accounted for as part of the Campus Master Plan's future wastewater demands which were evaluated in the Campus Master Plan EIR, and the currently proposed project is consistent with the amount of growth

and utility demand analyzed in the Campus Master Plan EIR. Further and as noted above, the aforementioned mitigation measures related to wastewater facilities are considered campuswide mitigation and would not be individually applicable to the project. No new or more severe impacts would occur, and no mitigation is required.

2.18.3 Solid Waste Disposal

Impact 3.14-5 of the Campus Master Plan EIR evaluated potential solid waste generated during construction and operation of on-campus uses with implementation of the Campus Master Plan, inclusive of the proposed project. While solid waste would be generated during construction and operation of the project, as currently proposed, solid waste would be disposed of at local/regional landfills with adequate capacity and in compliance with the Cal Poly Zero Waste Policy and other applicable federal and state waste reduction goals and requirements. Further, as the current project's proposed development is accounted for in the growth projections of the Campus Master Plan and in the analysis of the Campus Master Plan EIR, the solid waste that would be generated by the project was part of the broader solid waste analysis of the Campus Master Plan EIR and considered to be within the scope of the programmatic analysis. Therefore, no new or substantially more severe impacts would occur as a result of project implementation, and no mitigation would be required.

2.18.4 Energy Facilities

Section 3.14 of the Campus Master Plan EIR also evaluated the potential for Campus Master Plan implementation, inclusive of the project, to require the development of new electrical, natural gas, or telecommunication facilities. The construction of new energy facilities within the Master Plan Area would be limited to electrical connections, modernization of existing facilities, and the provision of energy storage/generation facilities associated with larger development projects identified as part of the Campus Master Plan. Based on analysis of energy demand and supplies, Cal Poly has adequate energy supplies to serve the project as well as the other near term Campus Master Plan projects, without the need to construct new or expanded energy facilities beyond linear new utility lines, which were already contemplated and analyzed in the Campus Master Plan EIR (Cal Poly 2024). The project would connect to existing electrical and telecommunication facilities provided by Cal Poly and would not necessitate the construction or use of separate energy distribution or generation facilities. Of note, the project would not include natural gas connections for sustainability reasons and in accordance with the CSU Sustainability Policy. The potential impacts of required energy facilities and associated project connections were addressed as part of the Campus Master Plan EIR, and no additional impacts beyond those identified within the Campus Master Plan EIR would occur. As a result, no new or more severe impacts would occur, and no mitigation is required.

2.19 WILDFIRE

As stated in the Campus Master Plan EIR and consistent with County of San Luis Obispo Safety Element (San Luis Obispo County 1999b), the project site is not located within a very high fire hazard severity zone established by the California Department of Forestry and Fire Protection (CALFIRE). In December 2023, CALFIRE adopted updates to current wildfire risk zones, but this did not modify the designation of the project site (CALFIRE 2009, 2024). Nonetheless, no areas of the project site are located within a very high fire hazard zone under the currently adopted or proposed revisions to wildfire hazard mapping. Further, based on wildfire history in the area (e.g., within a 10-mile radius of the project site), the majority of wildfires in the area have been associated with equipment/vehicle use and powerlines. Near the project site, wildfires have been limited to areas of California sagebrush scrub, which is not present on the project site nor would it be located within 300 feet of the project site. The project would be designed in accordance with current California Fire Code requirements, including the provision of defensible space and vegetation management. The proposed development would also be subject to the procedures and conditions of the Cal Poly Emergency Operations Plan and Evacuation Annex Plan, as managed by the Cal Poly Department of Emergency Management. Cal Poly is also in the midst of preparing a vegetation management plan/fire fuels reduction plan that would further reduce fire risk, including risks to structures and/or campus population, do not occur. Therefore, no new or more severe impacts are anticipated as a result of project implementation, and no mitigation is required.

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Appendix A

Applicable Mitigation Measures

APPLICABLE MASTER PLAN EIR MITIGATION MEASURES

The mitigation measures identified in the Master Plan EIR which are applicable to and incorporated into the project are listed in Table A-1 below for reference.

Table A-1 Mitigation Measures Identified in the Master Plan EIR that are Applicable to the Project

Mitigation Measures
Aesthetics
3.1-1: Prepare and Implement Landscaping Plans for Farm Shop, University-Based Retirement Community, and Slack and Grand Projects Prior to implementation of the Farm Shop, University-Based Retirement Community Project, and Slack and Grand project, Cal Poly shall prepare site-specific landscaping plans for review and approval by the CSU. The plans shall be prepared by a licensed landscape architect and shall include specifications for plant and tree species, sizes, densities and planting locations that shall be implemented during construction of each project. The objective of the landscaping plans shall be to provide visual screening of the projects from sensitive viewing locations and to reduce the impression of visual mass and structure.
3.1-3a: Use Nonreflective Materials on Building Surfaces Cal Poly shall require the use of nonreflective exterior surfaces and nonreflective (mirrored) glass for all new or redeveloped structures.
3.1-3b: Prepare and Implement Lighting Plans for Farm Shop, University-Based Retirement Community, and Slack and Grand Projects Prior to approval of development plans for the Farm Shop, University-Based Retirement Community Project, or Slack and Grand project, Cal Poly shall prepare comprehensive, and site-specific lighting plans for review and approval by the Division of the State Architect that shall be implemented as part of project construction/implementation. The lighting plans shall be prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA) using guidance and best practices endorsed by the International Dark Sky Association. The lighting plans shall address all aspects of the lighting, including but not limited to all buildings, infrastructure, parking lots, driveways, safety, and signage. The lighting plans shall include the following, as feasible, in conjunction with other measures determined feasible by the illumination engineer: ▶ the point source of exterior lighting shall be shielded from off-site viewing locations; ▶ light trespass from exterior lights shall be minimized by directing light downward and using cutoff fixtures or shields; ▶ illumination from exterior lights shall be the lowest level necessary to provide adequate public safety; ▶ exterior lighting shall be designed to minimize illumination onto exterior walls; and ▶ any signage visible from off-site shall not be internally illuminated.
3.1-3c: Use Directional Lighting for Campus Development Cal Poly shall require all new, permanent outdoor lighting fixtures to utilize directional lighting methods (e.g., shielding and/or cutoff-type light fixtures) to minimize glare and light spillover onto adjacent structures. In addition, light placement and orientation shall also be considered such that light spillover is reduced at nearby land uses, to the extent feasible. Verification of inclusion in project design shall be provided at the time of design review
Air Quality
3.3-2: Implement Dust and Exhaust Emissions Reduction Measures Based on the APCD CEQA Handbook, Cal Poly shall ensure that construction contractors implement the following measures for all 2035 Master Plan development: <u>Standard Construction Emission Reduction Measures for All Projects</u> ▶ Staging and queuing areas or diesel idling associated with equipment used during construction of new/renovated buildings on campus shall not be located within 1,000 feet of sensitive receptors. This distance can be adjusted if it can be demonstrated to Cal Poly by the construction contractor, with substantial evidence, that risk levels at nearby receptors would not exceed an estimated risk of 10 chances in a million. ▶ Off-road diesel equipment shall comply with the 5-minute idling restriction identified in Section 2449(d)(3) of CARB's In-Use Off-Road Diesel regulation. ▶ Signs shall be posted in the designated queuing areas and job sites to remind offroad equipment operators of the 5-minute idling limit. ▶ Reduce the amount of the disturbed area where possible.

Mitigation Measures

- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20 percent opacity for greater than 3 minutes in any 60-minute period. Increasing watering frequency would be required whenever wind speeds exceed 15 miles per hour. Reclaimed (non-potable) water should be used whenever possible. Please note that during drought conditions, water use may be a concern and the contractor or building shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.
- All dirt stockpile areas shall be sprayed daily as needed.
- Permanent dust control measures identified in the approved project revegetation and landscape plans shall be implemented as soon as possible following the completion of any soil disturbing activities.
- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading will be sown with fast germinating, non-invasive grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by APCD.
- All roadways, driveways, sidewalks, etc. to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
- Install wheel washers where vehicles enter and exit unpaved roads onto streets or wash off trucks and equipment leaving the site. "Track-Out" is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in California Vehicle Code Section 23113 and California Water Code 13304. To prevent Track Out, designate access points and require all employees, subcontractors, and others to use them. Install and operate a "trackout prevention device" where vehicles enter and exit unpaved roads onto paved streets. The track-out prevention device can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices require periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified.
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.
- All of these fugitive dust mitigation measures shall be included on grading and building plans.
- Maintain all construction equipment in proper tune according to manufacturer's specifications.
- Fuel all off-road and portable diesel-powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road).
- Electrify equipment when feasible.
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible.
- All architectural coatings (e.g., paint) used in project buildings and parking areas will not exceed a volatile organic compound content of 50 grams per liter.
- Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines and comply with the State Off-Road Regulation.
- Use on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines and comply with the State OnRoad Regulation.
- Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance.
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

For individual projects proposed under the 2035 Master Plan, APCD screening criteria (rather than emissions modeling) shall be applied to determine if emissions from the project would be below the adopted numeric thresholds. If an individual project would exceed the screening criteria, project-specific emissions modeling shall be conducted to determine if APCD's adopted numeric project-level thresholds would be exceeded. If emissions modeling demonstrates that the individual project's operational emissions would exceed the APCD thresholds, the following mitigation measures would apply in addition to the Standard Construction Emission Reduction Measures described above.

Mitigation Measures

Enhanced Construction Emission Reduction Measures for Individual Projects that Exceed APCD Thresholds

- Implement Best Available Control Technologies (BACT) and a Dust Control Management Plan that encompasses all, but is not limited to, dust control measures that were listed above in the "Standard" measures section;
- further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines;
- repowering equipment with the cleanest engines available;
- installing California Verified Diesel Emission Control Strategies, listed at arb.ca.gov/diesel/verdev/vt/cvt.htm; tabulation of on- and off-road construction equipment (age, horsepower, miles, and/or hours of operation);
- schedule of construction truck trips during non-peak hours to reduce peak hour emissions;
- limit the length of the construction work day period, if necessary; and

phase construction activities, if appropriate.

3.3-3a: Implement Mitigation Measure 3.8-1

Cal Poly will incorporate the mitigation listed under Mitigation Measure 3.8-1 of Section 3.8, "Greenhouse Gas Emissions," to reduce operational emissions of criteria air pollutants and ozone precursors to the extent feasible.

3.3-3b: Reduce Operational Emissions

The following measures shall be implemented, where appropriate, to reduce operational emissions of ozone precursors to levels below the APCD-adopted thresholds. This list is not exhaustive and other or alternative emission reduction measures shall be considered and implemented based on new technologies and as APCD operational air quality mitigation measures are further developed over the life of the Master Plan. The following APCD-recommended measures would apply to new land use development within the 2035 Master Plan area:

- All existing landscaping equipment (e.g., lawnmowers, leaf blowers, chainsaws), upon time of replacement, will be replaced with electric ones. All new landscaping equipment purchased will be electric.
- All architectural coatings (e.g., paint) used in project buildings and parking areas will not exceed a volatile organic compound content of 50 grams per liter.
- Exceed CALGreen standards by 25 percent for providing on-site bicycle parking; both short-term racks and long-term lockers, or a locked room with standard racks and access limited to bicyclist only.
- Implement a "No Idling" vehicle program which includes signage, enforcement, etc.
- Provide shade over 50 percent of parking spaces to reduce evaporative emissions from parked vehicles.

For individual projects that are determined to exceed applicable APCD thresholds, after incorporation of all available/applicable onsite measures, the following may be considered:

- Incorporate additional off-site mitigation (e.g., emissions offsets pursuant to APCD rules and regulations).
- Prepare an operational activity management plan that demonstrates how individual project impacts would be reduced to a level of insignificance. Specific measures may include onsite and offsite mitigation strategies, including the scheduling of activities during off-peak hours and the purchase of mitigation offsets.

Archaeological, Historical and Tribal Cultural Resources

3.4-2a: Identify and Protect Unknown Archaeological Resources

During project-specific environmental review of development under the 2035 Master Plan, Cal Poly shall define each project's area of effect for archaeological resources in consultation with a qualified archaeologist, as defined by the Secretary of Interior. The University shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the project. Cal Poly shall determine the level of archaeological investigation that is appropriate for the project site and activity, as follows:

- Minimum: excavation less than 18 inches deep and less than 5,000 square feet of disturbance (e.g., a trench for lawn irrigation, tree planting). Implement Mitigation Measure 3.4-2a(1).
- Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized as sensitive and is not suspected to be a likely location for archaeological resources. Implement Mitigation Measure 3.4-2a(1) and (2).
- Intensive: excavation below 18 inches and/or over a large area on any site that is within the zone of archaeological sensitivity, i.e., within 750 feet, along Brizzolara Creek or Stenner/Old Garden Creek (as shown in Figure 3.4-1) or that is adjacent to a recorded archaeological site. Implement Mitigation Measure 3.4-2a(1), (2), and (3).

Mitigation Measures

Cal Poly shall implement the following steps to identify and protect archaeological resources that may be present in the project's area of effects:

1. For project sites at all levels of investigation, contractor crews shall be required to attend a training session before the start of earth moving, regarding how to recognize archaeological sites and artifacts and what steps shall be taken to avoid impacts to those sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Before disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify Cal Poly Facilities Management and Development if any are found. A qualified archeologist would be present onsite during earth-moving activities to provide oversight to contractor crew and campus employees. In the event of a find, Cal Poly shall implement item (5), below.
2. For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist once the area of ground disturbance has been identified and before soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation shall be implemented, as per item (3), below. Irrespective of findings, the qualified archaeologist shall, in consultation with Cal Poly Facilities Management and Development, develop an archaeological monitoring plan to be implemented during the construction phase of the project. If the project site is located within a zone of archaeological sensitivity (i.e., within 750 feet of Brizzolara Creek, Stenner Creek, or Old Garden Creek) or it is recommended by the archaeologists, Cal Poly shall notify the appropriate Native American tribe and extend an invitation for monitoring. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of construction activities, and results during the monitoring period. A written report of the results of the monitoring shall be prepared and filed with the appropriate Information Center of the California Historical Resources Information System. In the event of a discovery, Cal Poly shall implement item (5), below.
3. For project sites requiring intensive investigation, irrespective of subsurface finds, Cal Poly shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project's area of effects. If an archaeological deposit is discovered, the archaeologist shall prepare a site record and a written report of the results of investigations and filed with the appropriate Information Center of the California Historical Resources Information System.
4. If it is determined that the resource extends into the project's area of effects, the resource shall be evaluated by a qualified archaeologist, who shall determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of State CEQA Guidelines Section 15064.5. If the resource does not qualify, or if no resource is present within the project's area of effects, this shall be noted in the environmental document and no further mitigation is required unless there is a discovery during construction. In the event of a discovery item (5), below shall be implemented.
5. If archaeological material within the project's area of effects is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), Cal Poly Facilities Management and Development shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that shall permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, Cal Poly shall implement Mitigation Measure 3.4-2b. 6) If archaeological material is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. Cal Poly Facilities Management and Development shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. Mitigation Measure 3.4-2a (3) and (4) shall be implemented.

3.4-2b: Protect Known Unique Archaeological Resources

For an archaeological site that has been determined by a qualified archaeologist to qualify as a unique archaeological resource through the process set forth under Mitigation Measure 3.4-2a, and where it has been determined under Mitigation Measure 3.4-2a that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with Cal Poly Facilities Management and Development, and Native American tribes as applicable, shall:

1. Prepare a research design and archaeological data recovery plan for the recovery that shall capture those categories of data for which the site is significant and implement the data recovery plan before or during development of the site.
2. Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials.
3. If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, Cal Poly Facilities Management and Development shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, Cal Poly shall implement Mitigation Measure 3.4-2c.

Mitigation Measures
Biological Resources
3.5-2c: Prepare Project-Specific California Red-Legged Frog Habitat Assessments Future development that would directly affect reservoirs, ponds, or drainages or that would result in land disturbance within 1.6 kilometers of these features shall be subject to project-specific California Red-legged Frog Habitat Assessments. The assessments shall be prepared in coordination with, and submitted for review by, USFWS. The California red-legged frog habitat assessments shall be prepared and processed in accordance with the USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog (USFWS 2005), or the most recent applicable guidance. The assessments shall specifically evaluate the reservoirs, ponds, and drainages and their upland areas that may be disturbed by Master Plan Area projects and be submitted to USFWS for review/approval. Alternatively, Cal Poly can conduct a campus-wide habitat assessment to identify California red-legged frog aquatic and upland habitat. If prepared, the campus-wide assessment shall also be submitted to USFWS for review/approval and can be used to screen out projects that do not require consultation within the Master Plan Area.
3.5-2d: Conduct California Red-Legged Frog Consultation For 2035 Master Plan projects that would affect jurisdictional water features and would also affect California red-legged frog and/or California red-legged frog Critical Habitat as determined from Mitigation Measure 3.5-2c, Cal Poly shall coordinate with USACE during the CWA Section 404 permitting process to consult with USFWS regarding the potential for these activities to result in take of California red-legged frog and/or California red-legged frog critical habitat. If USACE in consultation with USFWS determines that the proposed projects may affect or result in take of California red-legged frog, USFWS may issue a Biological Opinion with an Incidental Take Statement for the project. Cal Poly shall comply with all measures included in the Biological Opinion, which may include compensatory mitigation for permanent and/or temporary loss of habitat, construction monitoring, salvaging of California red-legged frog, and installation of exclusion fencing between the project site and adjacent habitats. If USACE declines to take jurisdiction over the project, thus removing a federal nexus from the project, Cal Poly shall consult directly with the USFWS pursuant to Section 10 of the ESA. If USFWS determines that the project may affect or result in take of California red-legged frog or detrimental modification of critical habitat, it may ask Cal Poly to prepare an HCP and obtain an ITP. Cal Poly shall comply with all measures included in the ITP. A permitting strategy (i.e., programmatic versus individual project consultations) shall be determined between Cal Poly and USFWS as Cal Poly commences implementation of the 2035 Master Plan.
3.5-2e: Avoid California Red-Legged Frog during the Wet Season To avoid the potential for take of California red-legged frogs, unless otherwise authorized by the Biological Opinion and/or Incidental Take Permit per Mitigation Measure 3.5-2.d, the initial ground-disturbing activities associated with 2035 Master Plan projects that would affect California red-legged frog and/or California red legged frog Critical Habitat as determined from Mitigation Measure 3.5-2c shall be completed in the dry season (between June 1 and the first fall rains). Regardless of the seasonal rain patterns, no ground-disturbing activities may occur on these sites between first fall rains and May 31 of any year without prior authorization or concurrence from USFWS and CDFW.
3.5-2f: Conduct Preconstruction Surveys for California Red-Legged Frog Prior to construction of future Master Plan development projects that would affect California red-legged frog and/or California red-legged frog Critical Habitat as determined from Mitigation Measure 3.5-2c, Cal Poly shall retain a qualified biologist with demonstrated experience surveying for California red-legged frog. The biologist shall conduct preconstruction surveys for California red-legged frog. The survey(s) must be conducted within 48 hours before the site disturbance and encompass the entire project disturbance area and a 100-foot buffer of the disturbance area(s). If California red-legged frog(s) are observed during the survey, the biologist shall immediately contact Cal Poly and inform them of the survey findings. Cal Poly shall delay the project activities that were planned to occur in the area until Cal Poly consults with USFWS and secures any necessary approvals, including a Biological Opinion or an Incidental Take Permit (if not already secured) as may be applicable, to move forward with the Master Plan project. In absence of USFWS approval, the surveying biologist shall not capture, handle, or otherwise harass California red-legged frog. Cal Poly and its contractors shall comply with all measures within any Biological Opinion or Incidental Take Permit.
3.5-2g: Implement Waterway Protection Measures Prior to construction of future development that would directly affect reservoirs, ponds, or drainages or that would result in land disturbance within California red-legged frog habitat as defined by Mitigation Measure 3.5-2c, implement Mitigation Measures 3.5-3a through 3.5-3d, described below.

Mitigation Measures
3.5-2h: Conduct Environmental Monitoring For projects and locations where mitigation measures are required to protect biological resources during construction activities, Cal Poly shall retain an environmental monitor to ensure compliance with the EIR mitigation measures. The monitor shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; (2) establishing lines of communication and reporting methods; (3) conducting compliance reporting; (4) conducting construction crew training regarding environmentally sensitive areas and/or special-status species; (5) maintaining authority to stop work; and (6) outlining actions to be taken in the event of non-compliance. Monitoring shall be conducted full time during the initial vegetation removal (clear/grub activities), then periodically throughout project construction, or at a frequency and duration as directed by the affected natural resource agencies (e.g., USACE, USFWS, CDFW, and RWQCB).
3.5-2o: Conduct Ringtail Den(s) Surveys, and Avoidance If vegetation removal or construction activities within riparian habitat occur outside of the breeding and pupping season for ringtail (February 1 through June 15), no mitigation is necessary. If the ringtail breeding season cannot be avoided, Cal Poly shall retain a qualified biologist to conduct pre-construction surveys within 3 weeks prior to commencement of construction for potential natal or maternity den trees/rock crevices. If an active den is found, the qualified biologist, in consultation with CDFW, shall determine a construction-free buffer zone to be established around the den until the young have left the den. At a minimum, the buffer shall be 500 feet unless a reduced buffer is warranted as determined by a qualified biologist in consultation with CDFW. Because ringtails are known to move their offspring between dens, the biologist may maintain the den under surveillance with a trail camera in a way that does not affect the use of the den. If the biologist determines that ringtails have vacated the den during the surveillance period, then construction may begin within 7 days following this observation, but the den must remain under surveillance in the event that the mother has moved the litter back to the den. If the den is within a tree hollow, and the tree needs to be removed, the hollow section of the tree must be salvaged and secured to a nearby unaffected tree in order to maintain the number of dens in the area.
3.5-2q: Conduct Monterey Dusky-Footed Woodrat Midden Surveys, Avoidance, or Relocation Prior to implementation of 2035 Master Plan projects that require work in riparian corridors, California sagebrush scrub, coast live oak woodland, and non-native woodland habitat, Cal Poly shall retain a qualified biologist to survey for Monterey dusky-footed woodrat middens and assist in the removal/relocation of woodrat middens no more than 2 weeks prior to start of ground disturbance activities. The biologist shall document the results of the survey(s) in a letter report to Cal Poly and CDFW that includes a map of observed middens. If dusky-footed woodrat middens are found on a particular project site and are located outside of the permanent footprint of any proposed structure/site features and can be avoided, Cal Poly shall establish and maintain a 40-foot protective buffer, unless a reduced buffer is warranted as determined by a qualified biologist in consultation with CDFW, ensuring that the buffer does not isolate the midden from available habitat. If middens can be avoided no further mitigation is required. If middens cannot be avoided, relocation shall be conducted in consultation with CDFW. Relocation of the middens shall occur after July 1 and before December 1 to avoid the maternity season. During implementation of site clearing activities and under supervision of the biologist, the equipment operators shall remove all vegetation and other potential woodrat shelter within the disturbance areas that surround the woodrat midden(s) to be removed. Upon completion of clearing the adjacent woodrat shelter, the operator shall gently nudge the intact woodrat midden with equipment or long handled tools. Due to the potential health hazards associated with removing woodrat middens, hand removal is not recommended. The operators shall place their equipment within the previously cleared area and not within the undisturbed woodrat shelter area. The objective is to alarm the woodrats so that they evacuate the midden and scatter away from the equipment and into the undisturbed vegetation. Once the woodrats have evacuated the midden(s), the operator shall gently pick up the midden structure and move it to the undisturbed adjacent vegetation. The objective of moving the structure is to provide the displaced woodrats with a stockpile of material to scavenge while they build a new midden; jeopardizing the integrity of the midden structure is not an adverse impact.
3.5-2r: Conduct Environmental Monitoring During construction of future development that requires work in or around active Monterey dusky-footed woodrat middens, implement Mitigation Measure 3.5-2h, described above.
3.5-2u: Conduct Special-Status Bird and Other Bird Nest Avoidance For any project-specific construction activities under the 2035 Master Plan, the following measures shall be implemented to avoid or minimize loss of active special-status bird nests including tricolored blackbird, grasshopper sparrow, burrowing owl, western yellow-billed cuckoo, white-tailed kite, least Bell's vireo, loggerhead shrike, and purple martin: a) To minimize the potential for loss of special-status or other bird nests, vegetation removal activities within potentially suitable nesting habitat shall commence during the nonbreeding season (September 16 - January 31), where feasible. b) If project construction activities, including ground-disturbing activities, vegetation trimming, or tree removal are scheduled to occur between February 1 and September 15, the following measures shall be implemented:

Mitigation Measures

i. For project sites on or within 500 feet of agricultural land, pasture, non-native annual grassland, or riparian habitat as shown in Figure 3.5-1, "Land Cover," and ornamental/landscaping trees in developed habitat, Cal Poly shall retain a qualified biologist to conduct habitat assessment surveys for tricolored blackbird, grasshopper sparrow, burrowing owl, western yellow-billed cuckoo, white-tailed kite, least Bell's vireo, loggerhead shrike, and purple martin. If no suitable habitat is present within 500 feet of the project site, no further action is required.

ii. Where suitable habitat is present, surveys shall be conducted by biologists adhering to guidance offered in Western Yellow-billed Cuckoo Natural History Summary and Survey Methodology (Halterman et al. 2015); Least Bell's Vireo Survey Guidelines (USFWS 2001); CDFW Staff Report on Burrowing Owl Mitigation (CDFW 21012) and/or current industry standards. Cal Poly shall initiate consultation with USFWS and/or CDFW as required and shall mitigate for the loss of breeding and foraging habitat as determined by consultation.

iii. Two weeks prior to construction, a pre-construction nesting bird survey shall be conducted within suitable habitat identified in Mitigation Measure 3.5-2u(b)(i). If nests of these species are detected, a qualified biologist shall establish no-disturbance buffers around nests. Buffers shall be of sufficient width that breeding is not likely to be disrupted or adversely affected by construction. No-disturbance buffers around active nests shall be a minimum of 0.25 mile wide for white-tailed kite, 500 feet wide for other raptors, and 250 feet wide for other special-status birds, unless a qualified biologist determines based on site-specific conditions that a larger or smaller buffer would be sufficient to avoid impacts on nesting birds. Factors to be considered in determining buffer size shall include the presence of existing buffers provided by vegetation, topography, or existing buildings/structures; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival. Monitoring of the nest by a qualified biologist during and after construction activities shall be required if the activity has potential to adversely affect the nest.

iv. For tricolored blackbird, the qualified biologist shall conduct preconstruction surveys within tules, cattails, Himalayan blackberry, and riparian scrub habitat areas. The surveys shall be conducted no more than 14 days before construction commences. If no active nests or tricolored blackbird colonies are found during focused surveys, no further action under this measure shall be required. If active nests are located during the preconstruction surveys, the biologist shall notify CDFW. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives shall be evaluated and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, construction shall be prohibited within a minimum of 100 feet of the outer edge of the nesting colony, unless a qualified biologist determines based on site-specific conditions that a larger or smaller buffer would be sufficient, to avoid disturbance until the nest colony is no longer active.

3.5-2v: Conduct Environmental Monitoring

During construction of future development within the active nesting season where nesting birds have been found and a no-disturbance buffer is established, implement Mitigation Measure 3.5-2h, described above.

3.5-2w: Implement Bat Preconstruction Surveys and Exclusion

Before commencing construction activities with the potential to affect bats, including land surveying with a Global Positioning System (GPS) Total Station and removal of farm structures and trees with hollows or exfoliating bark suitable for bats, a qualified biologist shall conduct surveys for roosting bats 2 weeks prior to start of construction activities. GPS Total Stations used for land surveying emit high frequency noise outside of the human hearing frequency but within the hearing range of bats, which has resulted in colony abandonment. If evidence of bat use is observed, the species and number of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts is found, then no further study and no additional measures are required. If the roost site can be avoided, a 250-foot-wide no-disturbance buffer shall be implemented unless a qualified biologist determines, based on bat species and site-specific conditions, that a larger or smaller buffer would be adequate to avoid impacts on bat roosts.

If roosts of pallid bat or other bat species are found, and the roost cannot be avoided, bats shall be excluded from the roosting site before the tree or structure is removed. Exclusion efforts shall be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). Once it is confirmed that bats are not present in the original roost site, the tree or structure may be removed. A detailed program to identify exclusion methods and roost removal procedures shall be developed by a qualified biologist in consultation with CDFW before implementation.

3.5-2x: Conduct Environmental Monitoring

If construction of future development would occur where an active bat roost or maternity colony is found and a no-disturbance buffer has been established, conduct environmental monitoring as described in Mitigation Measure 3.5-2h.

Mitigation Measures
3.5-3b: Implement Low-Impact Development Principles Pursuant to 2035 Master Plan Principle OR 17, Cal Poly shall incorporate Low-Impact Development (LID) principles in the design of all projects within 100 feet of Brizzolara Creek, Stenner Creek, campus reservoirs, waterways and riparian areas unless a qualified biologist determines, based on site-specific conditions, that a larger or smaller buffer would be sufficient to avoid impacts on these resources.
3.5-3c: Install Exclusion Fencing Prior to construction of any project within 100 feet of Brizzolara Creek, Stenner Creek, campus reservoirs, and other campus waterways, all grading plans shall clearly show the outer limits of riparian vegetation or top-of-bank features and specify the location of project delineation fencing that excludes the riparian areas from disturbance. The project delineation fencing shall remain in place and functional throughout the duration of the project, and no work activities shall occur outside the delineated work area. This measure shall not apply to any project specifically designed to cross a creek, such as a bridge or span.
3.5-3d: Map and Protect Waterways and Riparian Areas Prior to construction, plans shall clearly show all staging areas, which shall be located a minimum of 100 feet outside of the Brizzolara Creek, Stenner Creek, campus reservoirs, and other campus waterways and riparian areas. The minimum buffer size may be reduced at the discretion of a qualified biologist if, based on local habitat conditions and project features, the buffer is sufficient to avoid construction-related disturbances to waterways and riparian areas.
3.5-3g: Avoid Planting Invasive Plants Project landscaping shall not utilize any species included on the most recent Cal-IPC Inventory.
3.5-3h: Use Clean and Weed-Free Vehicles and Equipment a) Cal Poly shall require of its contractor(s) that all vehicles and construction equipment arrive at project areas clean and weed free to avoid inadvertent transport of invasive species. Equipment shall be inspected by the on-site inspector or environmental monitor for mud and other signs that weed seeds or propagules could be present prior to use in project areas in or near sensitive natural communities. If the equipment is not clean, the environmental inspector or monitor shall deny access to the work areas until the equipment is clean. b) Vehicles and equipment shall be cleaned using high-pressure water or air in designated weed-cleaning stations after exiting a weed-infested area. Cleaning stations shall be designated by a botanist or noxious weed specialist and located away from aquatic resources, riparian areas, and other sensitive natural communities.
3.5-3i: Require Use of Certified Weed-Free Construction Materials Only certified weed-free construction materials, such as sand, gravel, straw, or fill, shall be used throughout each project site.
3.5-3j: Treat Invasive Plant Infestations Before construction activities begin, Cal Poly shall treat invasive plant infestations in the construction area, and within 50 feet of the construction activity area. Any new invasive plant infestations discovered during construction shall be documented, reported to Cal Poly, and treated where needed. After construction is complete, Cal Poly or its contractors shall monitor all construction disturbance areas for new invasive plant invasions and expansion of existing weed populations and treat invasive plan infestations where needed. Post-construction monitoring for invasive plant infestations would be conducted annually for 3 years within sensitive natural communities.
3.5-4: Design Projects to Avoid and Minimize Disturbances to Jurisdictional Waters; Conduct Delineation of Jurisdictional Waters and Obtain Authorization for Fill and Required Permits; and Compensate for Unavoidable Degradation or Loss of Jurisdictional Waters Cal Poly shall avoid, minimize, and compensate for potential degradation or loss of waters of the United States and waters of the state by implementing the following measures. ▶ Cal Poly shall design new facilities and improvements to existing facilities to avoid impacts on potential jurisdictional waters where feasible. If avoidance of these features is not feasible, or the jurisdictional status of an waterways that may be encroached upon is unknown, Cal Poly shall prepare a project-specific Jurisdictional Waters Delineation that identifies the project boundaries in relation to the jurisdictional boundaries of the site. For any unavoidable fill or alteration of a jurisdictional feature, Cal Poly shall coordinate with USACE to obtain a CWA Section 404 permit, CDFW to obtain a Streambed Alteration Agreement, and RWQCB to obtain a CWA Section 401 Certification. Cal Poly shall comply with all special conditions of the necessary permits.

Mitigation Measures

- To support the permit applications, Cal Poly shall prepare a Habitat Mitigation and Monitoring Plan (HMMP) for inclusion into the permit applications. The HMMP shall, at a minimum propose a 2:1 replacement ratio for permanent impacts on jurisdictional areas and a 1:1 ratio for temporary impacts on the jurisdictional areas, or higher mitigation ratios if required by the permitting agencies. Unless otherwise directed by the permitting agencies, Cal Poly shall incorporate on-site, in-kind, permittee-responsible compensatory mitigation to ensure that the drainages' functions and values are retained or improved as part of the project. The HMMP shall identify the location(s) where the proposed compensatory mitigation shall be implemented and the type (e.g., creation, restoration, enhancement, preservation) of mitigation that shall be implemented. At a minimum, the HMMP shall include a 5-year maintenance and monitoring program that facilitates the successful completion of the mitigation efforts.
- Pursuant to Master Plan Principles S 02 and S 03, all improvements to the existing pedestrian pathways that currently cross Brizzolara Creek shall have the sole purpose of maintaining safe pedestrian and bicycle use of the crossings. Cal Poly shall not improve these existing pedestrian/bicycle crossings for vehicular use.
- Pursuant to Master Plan Principles S 02 and S 03, all improvements to the existing vehicle crossing at Via Carta shall have the sole purpose of maintain the existing use as a two-lane vehicle crossing or a pedestrian/bicycle crossing. The existing Via Carta crossing shall not be improved in such a manner that increases the width of the crossing or increases the amount of the crossing's surface area that covers Brizzolara Creek. Any improvements to the existing bridge shall be designed to result in a decrease of creek surface area being covered by bridge structure.
- Pursuant to Master Plan Principles S 02 and S 03, to the extent feasible, Cal Poly shall omit the one proposed pedestrian/bicycle crossing at the existing parking area located at the Highland Drive and East Creek Road intersection from future development plans. Cal Poly shall design the pedestrian/bicycle circulation routes to utilize the existing crossings in the area if feasible. The intent of omitting the proposed crossing is to minimize impacts on jurisdictional waters and the habitat functions and services that the creek provides.

If omitting the one new pedestrian/bicycle crossing is not feasible, Cal Poly shall design, permit, and construct the new pedestrian/bicycle crossing in conjunction with the proposed California Boulevard extension crossing at East Creek Road. These two crossings shall not be designed and constructed independently from each other. The intent of combining the design of the two crossings is to ensure that the two crossings are developed in such a way that minimizes impacts on the creek and allows permitting agencies to evaluate the full effect of the two crossings on the creek functions and services during the permitting process.

3.4-2b: Protect Known Unique Archaeological Resources

For an archaeological site that has been determined by a qualified archaeologist to qualify as a unique archaeological resource through the process set forth under Mitigation Measure 3.4-2a, and where it has been determined under Mitigation Measure 3.4-2a that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with Cal Poly Facilities Management and Development, and Native American tribes as applicable, shall:

1. Prepare a research design and archaeological data recovery plan for the recovery that shall capture those categories of data for which the site is significant and implement the data recovery plan before or during development of the site.
2. Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials.
3. If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, Cal Poly Facilities Management and Development shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, Cal Poly shall implement Mitigation Measure 3.4-2c.

3.4-2c: Document Unique Archaeological Resources

If a significant unique archaeological resource cannot be preserved intact, before the property is damaged or destroyed, Cal Poly Facilities Management and Development shall ensure that the resource is appropriately documented. For an archaeological site, a program of research-directed data recovery shall be conducted and reported, consistent with Mitigation Measure 3.4-2a.

Mitigation Measures
Geology and Soils
3.7-3: Perform Site-Specific Geotechnical Investigations For any areas within the campus where development is proposed in an area designated as having a high potential for landslide hazards, have substantial erosion potential, or be located on a geologic unit that is unstable or within an area known to have expansive soils, a site-specific geotechnical investigation shall be performed. Based on the findings of the geotechnical investigation for each future development or redevelopment projects under the 2035 Master Plan, any appropriate stabilization and site design recommendations, or low impact development features determined necessary to support proposed development shall be incorporated in the project design and implemented as part of project construction. Examples of stabilization and erosion control recommendations may include, but are not limited to: ▶ installation of earthen buttress(es); ▶ excavation of landslide mass/material; ▶ slope stabilization through excavation into benches and/or keyways and other methods; ▶ deep soil mixing; ▶ installation of retaining walls; ▶ use of tie-back anchors, micropiles, or shear pins; or ▶ a combination of any of these methods. Before final plan approval, Cal Poly shall incorporate into the project design and implement all recommendations identified in the site-specific geotechnical investigation, including all recommendations included in the final geotechnical report prepared for the project. All recommendations shall be shown on final plans and/or included as project specifications.
3.7-7: Treatment of Paleontological Resources If any paleontological resources are encountered during ground-disturbing activities, the construction contractor shall ensure that activities in the immediate area of the find are halted and Cal Poly informed. Cal Poly shall retain a qualified paleontologist to evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology, including development and implementation of a paleontological resource impact mitigation program for treatment of the resource, if applicable.
Greenhouse Gas Emissions
3.8-1: Implement On-Site GHG Reduction Measures Cal Poly shall implement the following GHG reduction measures: ▶ Design all new and renovated buildings to achieve a 30-percent or greater reduction in energy use compared to a standard 2019 California Energy Code-compliant building or other best practices as defined by CSU Sustainability Policy. Reductions in energy shall be achieved through energy efficiency measures consistent with Tier 2 of the California Green Building Energy Code Section A5.203.1.2.2. ▶ Design all new and renovated buildings to include Cool Roofs in accordance with the requirements set forth in Tier 2 of the 2019 California Green Building Energy Code, Sections A5.106.11.2. ▶ Install rooftop solar photovoltaics on all new and renovated buildings, including parking structures, where specific site parameters and constraints allow for adequate rooftop space. The amount of megawatt-hours that would be installed to offset electricity consumption would be based on the feasibility at each building site. ▶ Ensure that all new and renovated buildings comply with requirements for water efficiency and conservation as described in the 2019 California Green Building Standards Code, Division 5.3. ▶ Ensure that all new parking structures include preferential parking spaces to vehicles with more than one occupant and ZEVs. The number of dedicated spaces will be no less than 5 percent of the total parking spaces. These dedicated spaces shall be in preferential locations, such as near the entrance to the parking structure. ZEV spaces shall also include campus-standard electric vehicle charging stations, with electrical infrastructure capacity to expand charging stations by a factor of four as the number of electric vehicle drivers grows. These spaces shall be clearly marked with signs and pavement markings. This measure shall not be implemented in a way that prevents compliance with requirements in the California Vehicle Code regarding parking spaces for disabled persons or disabled veterans. ▶ Include multiple electrical receptacles on the exterior of all new and renovated buildings and accessible for purposes of charging or powering electric landscaping equipment and providing an alternative to using fossil fuel-powered generators. The electrical receptacles shall have an electric potential of 120 volts. There should be a minimum of one electrical receptacle on each building and one receptacle every 100 linear feet around the perimeter of the building.

Mitigation Measures

- Ensure that all appliances and fixtures installed in project buildings are EnergyStar®-certified if an EnergyStar®-certified model of the appliance is available. Types of EnergyStar®-certified appliances include boilers, ceiling fans, central and room air conditioners, clothes washers, compact fluorescent light bulbs, computer monitors, copiers, consumer electronics, dehumidifiers, dishwashers, external power adapters, furnaces, geothermal heat pumps, programmable thermostats, refrigerators and freezers, room air cleaners, transformers, televisions, vending machines, ventilating fans, and windows (EPA 2018). If EPA's EnergyStar® program is discontinued and not replaced with a comparable certification program before appliances and fixtures are selected, then similar measures which exceed the 2019 California Green Building Standards Code may be used.
- Ensure that all space and water heating is solar- or electric-powered.
- Install high-efficacy lighting (e.g., light emitting diodes) in all streetlights, security lighting, and all other exterior lighting applications.
- Accomplish a waste diversion rate of 90 percent by and strive for 100 percent by 2040.
- Plant water-efficient and drought tolerant landscapes at all project buildings.

In addition to the quantifiable onsite measures presented above, the following additional measures would reduce GHG emissions, although the extent to which they would reduce GHG emissions is not quantifiable. Nonetheless, Cal Poly shall implement the following measures as part of implementation of the 2035 Master Plan and the Cal Poly Climate Action Plan to the extent feasible.

- At the time of contract renegotiation, work with current car share companies (e.g., ZIP car) to increase the use of fully electric vehicles or consider partnerships with other similar services that do use electric vehicles.
- Where appropriate site conditions exist, install solar photovoltaics on available land throughout the Cal Poly campus to offset the use of nonrenewable energy for existing and future facilities and buildings.
- Cal Poly shall work with San Luis Obispo County, the City of San Luis Obispo, TriCounty Regional Energy Network (3C-REN), and other local agencies to determine if Cal Poly can fund and take GHG reduction credit for energy efficiency retrofits of local existing housing stock, commercial spaces, and other land uses.
- Accelerate the expansion of Cal Poly's fleet vehicles to electric.
- Accelerate the expansion of Level 2 EV chargers on campus to meet the anticipated demand at Cal Poly.
- Implement energy efficiency retrofits for existing buildings on campus that will remain.
- Work with SLO Regional Rideshare to refine Cal Poly's use of the iRideshare trip reporting/incentive platform to help VMT and emission reduction goals.
- To help commute incentives more effectively change commute behavior to benefit VMT, emissions, and the modal hierarchy:
- Expand faculty and staff daily benefits for using alternative transportation modes to an effective amount.
- Consider reducing the frequency between parking permit purchasing (e.g. weekly, monthly)
- Consider increasing faculty and staff parking permit costs over time.

Hydrology and Water Quality

3.9-3: Prepare Drainage Plan and Supportive Hydrologic Analysis

Before the commencement of construction activities associated with new development that will modify existing drainage and/or require the construction of new drainage infrastructure to collect and control storm water runoff, Cal Poly shall prepare a drainage plan and supportive hydrologic analysis demonstrating compliance with the following, or equally effective similar measures, to maximize groundwater recharge and maintain similar drainage patterns and flow rates:

a) Off-site runoff shall not exceed existing flow rates during storm events.

b) If required to maintain the current flow rate, appropriate methods/design features (e.g., detention/retention basins, infiltration systems, or bioswales) shall be installed to reduce local increases in runoff, particularly on frequent runoff events (up to 10-year frequency) and to maximize groundwater recharge.

c) If proposed, drainage discharge points shall include erosion protection and be designed such that flow hydraulics exiting the site mimics the natural condition as much as possible.

d) Drainage from impervious surfaces (e.g., roads, driveways, buildings) shall be directed to a common drainage basin.

e) Where feasible, grading and earth contouring shall be done in a way to direct surface runoff towards the above-referenced drainage improvements (and/or closed depressions).

3.9-4a: Prepare a Drainage Plan and Supportive Hydrologic Analysis

Implement Mitigation Measure 3.9-3, described above.

Mitigation Measures

3.9-4b: Implement Post-Development Storm Water Best Management Practices and Low-Impact Development

During the design review phase of each future development project within the Master Plan Area, Facilities Management and Development will verify that the storm water BMPs and LID technologies were evaluated for each project within the 2035 Master Plan and all appropriate BMPs are incorporated into the specific project. Additionally, consistent with MS4 requirements, Facilities Management and Development will also verify that post-development runoff from the project site will approximate pre-development runoff volumes. If post-development runoff does not approximate pre-development runoff, additional BMPs shall be required in order to ensure that storm drain system capacity is not exceeded and that the drainage pattern of each project site is not significantly altered in such a way that it would result in erosion, siltation, or flooding.

Noise

3.10-1: Implement Construction-Noise Reduction Measures (as amended)

For all construction activities related to new/renovated structures, Cal Poly shall implement or incorporate the following noise reduction measures into construction specifications for contractor(s) implementation during project construction:

- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.
- All construction equipment and equipment staging areas shall be located as far as feasible from nearby noise-sensitive land uses, and/or located to the extent feasible such that existing or constructed noise attenuating features (e.g., temporary noise wall or blankets) block line-of-sight between affected noise-sensitive land uses and construction staging areas.
- Individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site, using electric powered equipment instead of pneumatic or internal combustion powered equipment) where feasible and consistent with building codes and other applicable laws and regulations.
- Stationary noise sources such as generators or pumps shall be located as far away from noise-sensitive uses as feasible.
- No less than 1 week prior to the start of construction activities at a particular location, notification shall be provided to nearby off-campus, noise-sensitive land uses (e.g., residential uses) that are located within 350 feet of the construction site (i.e., based on the construction noise modeling, distance at which noise-sensitive receptors would experience noise levels exceeding acceptable daytime construction-noise levels).
- When construction would occur within 350 feet of on-campus housing or other on-campus or off-campus noise-sensitive uses and may result in temporary noise levels in excess of 75 Lmax at the exterior of the adjacent noise-sensitive structure, temporary noise barriers (e.g., noise-insulating blankets or temporary plywood structures) shall be erected, if deemed to be feasible and effective, between the noise source and sensitive receptor such that construction-related noise levels are reduced to 75 Lmax or less at the receptor.]
- Loud construction activity (e.g., jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within 350 feet of adjacent primary school facilities, shall not occur during state standardized testing time periods for the surrounding school districts.
- When construction requires material hauling, a haul route plan shall be prepared for construction of each facility and/or improvement for review and approval by the Cal Poly that designates haul routes as far as feasible from sensitive receptors.
- The contractor shall designate a disturbance coordinator and post that person's telephone number conspicuously around the construction site and provide to nearby residences. The disturbance coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem.
- Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday, where feasible. Although potential impacts were determined to be significant and unavoidable, for any construction activity that must extend beyond the daytime hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday, occur on Sunday, or legal holidays and occur within 2,000 feet of a residential building, Cal Poly shall comply, to the extent feasible, with the City of San Luis Obispo exterior noise level standard of 60 dBA Lmax for temporary construction noise at off-campus residences. Typical residential structures with windows closed achieve a 25-30 dBA exterior-to-interior noise reduction (Caltrans 2002). Thus, using the lower end of this range, an exterior noise level of 60 dBA Lmax would result in interior noise levels of about 35 dBA Lmax, which would not result in a substantially increased risk for sleep disturbance. If exterior noise levels of 60 dBA Lmax are infeasible due to the type of construction activity and proximity to residential structures, achieving interior noise levels of 45 dBA Leq or less, consistent with City standards, would prevent nearby residents from being disturbed. One or more of the following or equivalent measures shall be considered and implemented to the extent feasible and effective:
  - Use noise-reducing enclosures and techniques around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors).

Mitigation Measures

- Install temporary noise curtains as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s) that consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side.
- Retain a qualified noise specialist to develop a noise monitoring plan and conduct noise monitoring to ensure that effective noise reduction measures are implemented to achieve exterior noise levels of 60 dBA Lmax or less at off-campus residences for construction activity occurring during these noise-sensitive hours to the maximum extent feasible.

3.10-3c: Implement Noise Reduction Measures to Reduce Long-Term Noise Impacts of Building Mechanical Equipment

To minimize noise levels generated by building mechanical equipment, the following measures shall be implemented:

- Building air conditioning units for proposed structures shall be located on building rooftops or shielded from direct line-of-sight of adjacent noise-sensitive land uses. Building parapets shall be constructed, when necessary, to shield nearby land uses from direct line-of-site of air conditioning units.

During project design of individual projects proposed as part of the 2035 Master Plan, Cal Poly shall review and ensure that external building mechanical equipment (e.g., HVAC systems) incorporate noise-reduction features sufficient to reduce average-hourly exterior operational noise levels at nearby noise-sensitive land uses to 50 Leq and 70 dba Lmax, or less during the daytime (i.e., 7:00 a.m. to 10:00 p.m.) and 45 Leq and 60 dBA Lmax, or less during the nighttime (i.e., 10:00 p.m. to 7:00 a.m.), within outdoor activity areas. Noise-reduction measures to be incorporated may include, but are not limited to, the selection of alternative or lower noise-generating equipment, relocation of equipment, and use of equipment enclosures.

3.10-4a: Implement Measures to Reduce Ground Vibration

For any future construction activity that would involve pile driving and be located within 300 feet of an existing sensitive land use or occupied building, the following measures shall be implemented:

- To the extent feasible, earthmoving and ground-impacting operations shall be phased so as not to occur simultaneously in areas close to sensitive receptors (i.e., within 300 feet). The total vibration level produced could be significantly less when each vibration source is operated at separate times.
- Where there is flexibility in the location of use of heavy-duty construction equipment, or impact equipment, the equipment shall be operated as far away from vibration-sensitive sites as reasonably feasible.

3.10-4b: Develop and Implement a Vibration Control Plan

To assess and, when needed, reduce vibration and noise impacts from construction activities, the following measures shall be implemented:

- A vibration control plan shall be developed prior to initiating any pile-driving activities. Applicable elements of the plan shall be implemented before, during, and after pile-driving activity. The plan will include measures sufficient to reduce vibration at sensitive receptors to levels below applicable thresholds. Items that will be addressed in the plan include, but are not limited to, the following:
  - Identification of the maximum allowable vibration levels at nearby buildings may consider Caltrans's recommended standards with respect to the prevention of architectural building damage of 0.25 in/sec PPV for historic and some old buildings and for buildings that are occupied at the time of pile driving, FTA's maximum-acceptable-vibration standard with respect to human response, 80 VdB. However, based on site-specific parameters (e.g., building age, structural integrity), and construction specifics (e.g., time of day when vibration activities occur, pile frequency), these standards may be adjusted, as long as sensitive receptors and structures are protected.
  - Pre-construction surveys shall be conducted to identify any pre-existing structural damage to buildings that may be affected by project-generated vibration.
  - Identification of minimum setback requirements for different types of ground-vibration-producing activities (e.g., pile driving) for the purpose of preventing damage to nearby structures and preventing adverse effects on people. Factors to be considered include the nature of the vibration-producing activity, local soil conditions, and the fragility/resiliency of the nearby structures. Initial setback requirements can be reduced if a project- and site-specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage to buildings or structures would occur.
  - Vibration levels from pile driving shall be monitored and documented at the nearest sensitive land use to document that applicable thresholds are not exceeded. Recorded data shall be submitted on a twice-weekly basis to Cal Poly. If it is found at any time that thresholds are exceeded, pile driving shall cease in that location, and methods shall be implemented to reduce vibration to below applicable thresholds, or an alternative pile installation method shall be used at that location.

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Appendix B

Air Quality Modeling Results

Cal Poly Student Housing_Construction Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cal Poly Student Housing_Construction
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	32.4
Location	Palomar Hall, San Luis Obispo, CA 93407, USA
County	San Luis Obispo
City	Unincorporated
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3331
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	208	Dwelling Unit	5.48	150,000	0.00	—	500	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-B	Water Active Demolition Sites
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Construction	C-13	Use Low-VOC Paints for Construction

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.03	1.76	11.6	18.2	0.03	0.44	0.99	1.43	0.40	0.24	0.64	—	3,812	3,812	0.17	0.13	5.14	3,862
Mit.	2.03	1.76	11.6	18.2	0.03	0.44	0.99	1.43	0.40	0.24	0.64	—	3,812	3,812	0.17	0.13	5.14	3,862
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.68	313	68.4	55.8	0.15	2.47	34.5	37.0	2.22	12.7	14.9	—	19,007	19,007	0.89	1.79	0.65	19,536
Mit.	7.68	62.8	68.4	55.8	0.15	2.47	18.2	20.6	2.22	5.87	8.09	—	19,007	19,007	0.89	1.79	0.65	19,536

% Reduced	—	80%	—	—	—	—	47%	44%	—	54%	46%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.76	14.3	12.4	14.8	0.03	0.45	3.04	3.49	0.41	0.81	1.22	—	3,982	3,982	0.17	0.27	2.24	4,069
Mit.	1.76	4.03	12.4	14.8	0.03	0.45	2.05	2.50	0.41	0.50	0.91	—	3,982	3,982	0.17	0.27	2.24	4,069
% Reduced	—	72%	—	—	—	—	32%	28%	—	38%	26%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.32	2.61	2.27	2.70	0.01	0.08	0.55	0.64	0.07	0.15	0.22	—	659	659	0.03	0.04	0.37	674
Mit.	0.32	0.74	2.27	2.70	0.01	0.08	0.37	0.46	0.07	0.09	0.17	—	659	659	0.03	0.04	0.37	674
% Reduced	—	72%	—	—	—	—	32%	28%	—	38%	26%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.03	1.76	11.6	18.2	0.03	0.44	0.99	1.43	0.40	0.24	0.64	—	3,812	3,812	0.17	0.13	5.14	3,862
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	7.68	313	68.4	55.8	0.15	2.47	34.5	37.0	2.22	12.7	14.9	—	19,007	19,007	0.89	1.79	0.65	19,536
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.76	14.3	12.4	14.8	0.03	0.45	3.04	3.49	0.41	0.81	1.22	—	3,982	3,982	0.17	0.27	2.24	4,069
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.32	2.61	2.27	2.70	0.01	0.08	0.55	0.64	0.07	0.15	0.22	—	659	659	0.03	0.04	0.37	674

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.03	1.76	11.6	18.2	0.03	0.44	0.99	1.43	0.40	0.24	0.64	—	3,812	3,812	0.17	0.13	5.14	3,862
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	7.68	62.8	68.4	55.8	0.15	2.47	18.2	20.6	2.22	5.87	8.09	—	19,007	19,007	0.89	1.79	0.65	19,536
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.76	4.03	12.4	14.8	0.03	0.45	2.05	2.50	0.41	0.50	0.91	—	3,982	3,982	0.17	0.27	2.24	4,069
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.32	0.74	2.27	2.70	0.01	0.08	0.37	0.46	0.07	0.09	0.17	—	659	659	0.03	0.04	0.37	674

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	12.2	12.2	—	1.85	1.85	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.61	2.35	< 0.005	0.11	—	0.11	0.10	—	0.10	—	403	403	0.02	< 0.005	—	405
Demolition	—	—	—	—	—	—	1.44	1.44	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.48	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	66.8	66.8	< 0.005	< 0.005	—	67.0
Demolition	—	—	—	—	—	—	0.26	0.26	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.74	0.20	14.5	4.70	0.06	0.18	2.50	2.68	0.12	0.70	0.82	—	10,096	10,096	0.53	1.62	0.51	10,593
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.02	10.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.70	0.55	0.01	0.02	0.29	0.31	0.01	0.08	0.10	—	1,189	1,189	0.06	0.19	1.00	1,249
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.72	1.72	< 0.005	< 0.005	< 0.005	1.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.10	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	197	197	0.01	0.03	0.17	207

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	7.81	7.81	—	1.18	1.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.61	2.35	< 0.005	0.11	—	0.11	0.10	—	0.10	—	403	403	0.02	< 0.005	—	405

Demolitio	—	—	—	—	—	—	0.92	0.92	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.48	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	66.8	66.8	< 0.005	< 0.005	—	67.0
Demolitio n	—	—	—	—	—	—	0.17	0.17	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.74	0.20	14.5	4.70	0.06	0.18	2.50	2.68	0.12	0.70	0.82	—	10,096	10,096	0.53	1.62	0.51	10,593
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.02	10.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.70	0.55	0.01	0.02	0.29	0.31	0.01	0.08	0.10	—	1,189	1,189	0.06	0.19	1.00	1,249
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.72	1.72	< 0.005	< 0.005	< 0.005	1.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.10	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	197	197	0.01	0.03	0.17	207

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.61	0.58	< 0.005	0.03	—	0.03	0.02	—	0.02	—	102	102	< 0.005	< 0.005	—	102
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9

Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.01	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.61	0.58	< 0.005	0.03	—	0.03	0.02	—	0.02	—	102	102	< 0.005	< 0.005	—	102
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.01	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970

Dust From Material Movement	—	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.89	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.89	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163

Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.61	7.00	0.01	0.23	—	0.23	0.21	—	0.21	—	1,288	1,288	0.05	0.01	—	1,292
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.02	1.28	< 0.005	0.04	—	0.04	0.04	—	0.04	—	213	213	0.01	< 0.005	—	214
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.61	0.38	4.89	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	914	914	0.06	0.04	3.83	932
Vendor	0.04	0.02	0.74	0.30	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	500	500	0.02	0.07	1.31	524
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.60	0.43	4.78	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	876	876	0.04	0.04	0.10	889
Vendor	0.04	0.02	0.75	0.30	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	501	501	0.02	0.07	0.03	523
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.23	2.54	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	474	474	0.02	0.02	0.89	482
Vendor	0.02	0.01	0.41	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	269	269	0.01	0.04	0.30	281
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.46	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.5	78.5	< 0.005	< 0.005	0.15	79.7
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.5	44.5	< 0.005	0.01	0.05	46.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.61	7.00	0.01	0.23	—	0.23	0.21	—	0.21	—	1,288	1,288	0.05	0.01	—	1,292
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.02	1.28	< 0.005	0.04	—	0.04	0.04	—	0.04	—	213	213	0.01	< 0.005	—	214
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.61	0.38	4.89	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	914	914	0.06	0.04	3.83	932
Vendor	0.04	0.02	0.74	0.30	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	500	500	0.02	0.07	1.31	524
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.60	0.43	4.78	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	876	876	0.04	0.04	0.10	889

Vendor	0.04	0.02	0.75	0.30	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	501	501	0.02	0.07	0.03	523
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.32	0.23	2.54	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	474	474	0.02	0.02	0.89	482
Vendor	0.02	0.01	0.41	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	269	269	0.01	0.04	0.30	281
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.46	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.5	78.5	< 0.005	< 0.005	0.15	79.7
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.5	44.5	< 0.005	0.01	0.05	46.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.03	0.31	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	—	62.1	62.1	< 0.005	< 0.005	—	62.3
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.3
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.63	3.63	< 0.005	< 0.005	0.01	3.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	—	62.1	62.1	< 0.005	< 0.005	—	62.3
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.3
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.63	3.63	< 0.005	< 0.005	0.01	3.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	313	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.49	5.49	< 0.005	< 0.005	—	5.51
Architectural Coatings	—	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.91	0.91	< 0.005	< 0.005	—	0.91
Architectural Coatings	—	2.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	0.96	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	0.01	0.01	0.02	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.25	7.25	< 0.005	< 0.005	0.01	7.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	62.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.49	5.49	< 0.005	< 0.005	—	5.51
Architectural Coatings	—	2.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.91	0.91	< 0.005	< 0.005	—	0.91
Architectural Coatings	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	0.96	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	0.01	0.01	0.02	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.25	7.25	< 0.005	< 0.005	0.01	7.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2025	2/28/2025	5.00	43.0	—
Site Preparation	Site Preparation	1/12/2025	1/21/2025	5.00	7.00	—
Grading	Grading	1/22/2025	2/18/2025	5.00	20.0	—
Building Construction	Building Construction	2/19/2025	11/19/2025	5.00	196	—
Paving	Paving	11/20/2025	12/10/2025	5.00	15.0	—
Architectural Coating	Architectural Coating	12/11/2025	12/31/2025	5.00	15.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	8.10	LDA,LDT1,LDT2

Demolition	Vendor	—	6.90	HHDT,MHDT
Demolition	Hauling	138	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	150	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	22.3	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.0	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	8.10	LDA,LDT1,LDT2
Demolition	Vendor	—	6.90	HHDT,MHDT
Demolition	Hauling	138	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.10	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	8.10	LDA,LDT1,LDT2
Grading	Vendor	—	6.90	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	150	8.10	LDA,LDT1,LDT2
Building Construction	Vendor	22.3	6.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	8.10	LDA,LDT1,LDT2
Paving	Vendor	—	6.90	HHDT,MHDT

Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.0	8.10	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	303,750	101,250	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	516,600	—
Site Preparation	—	—	0.00	0.00	—
Grading	—	—	3.74	0.00	—
Paving	0.00	0.00	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.73	annual days of extreme heat
Extreme Precipitation	7.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	50.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	14.9
AQ-PM	9.16
AQ-DPM	13.2
Drinking Water	83.2
Lead Risk Housing	13.7
Pesticides	55.0
Toxic Releases	12.0
Traffic	78.5
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	39.4
Haz Waste Facilities/Generators	74.7
Impaired Water Bodies	23.9
Solid Waste	52.9

Sensitive Population	—
Asthma	0.11
Cardio-vascular	2.08
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	99.9
Linguistic	17.3
Poverty	99.9
Unemployment	96.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—

Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	0.0
Asthma ER Admissions	99.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	0.0
Cognitively Disabled	88.7
Physically Disabled	99.5
Heart Attack ER Admissions	99.8

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	0.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.6
SLR Inundation Area	0.0
Children	99.4
Elderly	99.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	62.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	92.1
Traffic Density	0.0
Traffic Access	0.0
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Project specific 300 gsf per bed * 500 beds = 150,000 gsf. Size = 500 beds/2.4 beds per DU = 208.3333 DU.
Construction: Construction Phases	Adjusted schedule so demolition takes 60 calendar days and entire construction lasts one year.
Construction: Dust From Material Movement	The graded area comprises distinct zones. The first zone, totaling 4.23 acres, is delineated by Klamath Rd, Mountain Ln, and Perimeter Rd. Here, plans include demolishing five existing buildings and erecting four new structures. The second zone, spanning 7 acres, is bordered by Klamath Rd and Cerro Vista Cir. In this area, five new buildings are slated for construction, located east of the Red Bricks Student Housing Facilities. Scaling factors indicate that for every two buildings demolished, one new building will be constructed. Calculating, this yields (4.23+7)*(2+1)/9 = 3.74 acres.
Construction: Architectural Coatings	Project specifics: 50 g/L VOC content in paint

Cal Poly Student Housing_Operation Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cal Poly Student Housing_Operation
Operational Year	2032
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	32.4
Location	Palomar Hall, San Luis Obispo, CA 93407, USA
County	San Luis Obispo
City	Unincorporated
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3331
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.24

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	1,731	Dwelling Unit	11.2	1,251,000	6.74	—	4,155	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-B	Water Active Demolition Sites
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Construction	C-13	Use Low-VOC Paints for Construction
Energy	E-15	Require All-Electric Development
Area Sources	AS-1	Use Low-VOC Cleaning Supplies
Area Sources	AS-2	Use Low-VOC Paints

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	38.4	38.3	1.14	9.93	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,230	14,021	81.0	0.56	15.9	16,227
Mit.	27.8	27.7	1.14	9.93	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,231	14,022	81.0	0.56	15.9	16,228
% Reduced	28%	28%	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	—	—	—	> -0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	38.4	38.3	1.23	9.37	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,132	13,922	81.0	0.56	9.14	16,123
Mit.	27.8	27.7	1.23	9.37	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,133	13,923	81.0	0.56	9.14	16,124
% Reduced	28%	28%	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	—	—	—	> -0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	38.4	38.3	1.23	9.39	0.03	0.02	2.93	2.95	0.02	0.74	0.76	790	13,158	13,948	81.0	0.56	12.0	16,152
Mit.	27.8	27.7	1.23	9.39	0.03	0.02	2.93	2.95	0.02	0.74	0.76	790	13,159	13,949	81.0	0.56	12.0	16,153
% Reduced	28%	28%	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	—	—	—	> -0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.01	6.99	0.22	1.71	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	131	2,178	2,309	13.4	0.09	1.98	2,674
Mit.	5.08	5.06	0.22	1.71	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	131	2,179	2,309	13.4	0.09	1.98	2,674
% Reduced	28%	28%	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	> -0.5%	> -0.5%	—	> -0.5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.91	0.80	1.14	9.93	0.03	0.02	2.99	3.01	0.02	0.76	0.78	—	3,086	3,086	0.08	0.11	6.96	3,129
Area	37.5	37.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	9,986	9,986	1.62	0.20	—	10,085
Water	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Waste	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96

Total	38.4	38.3	1.14	9.93	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,230	14,021	81.0	0.56	15.9	16,227
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.91	0.80	1.23	9.37	0.03	0.02	2.99	3.01	0.02	0.76	0.78	—	2,987	2,987	0.09	0.12	0.18	3,025
Area	37.5	37.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	9,986	9,986	1.62	0.20	—	10,085
Water	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Waste	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	38.4	38.3	1.23	9.37	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,132	13,922	81.0	0.56	9.14	16,123
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.90	0.80	1.23	9.39	0.03	0.02	2.93	2.95	0.02	0.74	0.76	—	3,004	3,004	0.08	0.12	3.00	3,044
Area	37.5	37.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	9,996	9,996	1.62	0.20	—	10,095
Water	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Waste	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	38.4	38.3	1.23	9.39	0.03	0.02	2.93	2.95	0.02	0.74	0.76	790	13,158	13,948	81.0	0.56	12.0	16,152
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.15	0.22	1.71	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	—	497	497	0.01	0.02	0.50	504
Area	6.84	6.84	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,655	1,655	0.27	0.03	—	1,671
Water	—	—	—	—	—	—	—	—	—	—	—	16.6	26.2	42.8	1.71	0.04	—	97.7
Waste	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	400
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.48	1.48
Total	7.01	6.99	0.22	1.71	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	131	2,178	2,309	13.4	0.09	1.98	2,674

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.91	0.80	1.14	9.93	0.03	0.02	2.99	3.01	0.02	0.76	0.78	—	3,086	3,086	0.08	0.11	6.96	3,129
Area	26.9	26.9	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	9,987	9,987	1.62	0.20	—	10,086
Water	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Waste	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	27.8	27.7	1.14	9.93	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,231	14,022	81.0	0.56	15.9	16,228
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.91	0.80	1.23	9.37	0.03	0.02	2.99	3.01	0.02	0.76	0.78	—	2,987	2,987	0.09	0.12	0.18	3,025
Area	26.9	26.9	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	9,987	9,987	1.62	0.20	—	10,086
Water	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Waste	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	27.8	27.7	1.23	9.37	0.03	0.02	2.99	3.01	0.02	0.76	0.78	790	13,133	13,923	81.0	0.56	9.14	16,124
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.90	0.80	1.23	9.39	0.03	0.02	2.93	2.95	0.02	0.74	0.76	—	3,004	3,004	0.08	0.12	3.00	3,044
Area	26.9	26.9	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	9,997	9,997	1.62	0.20	—	10,096
Water	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590

Waste	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	27.8	27.7	1.23	9.39	0.03	0.02	2.93	2.95	0.02	0.74	0.76	790	13,159	13,949	81.0	0.56	12.0	16,153
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.15	0.22	1.71	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	—	497	497	0.01	0.02	0.50	504
Area	4.91	4.91	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,655	1,655	0.27	0.03	—	1,672
Water	—	—	—	—	—	—	—	—	—	—	—	16.6	26.2	42.8	1.71	0.04	—	97.7
Waste	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	400
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.48	1.48
Total	5.08	5.06	0.22	1.71	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	131	2,179	2,309	13.4	0.09	1.98	2,674

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	9,986	9,986	1.62	0.20	—	10,085
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,986	9,986	1.62	0.20	—	10,085
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	9,986	9,986	1.62	0.20	—	10,085
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,986	9,986	1.62	0.20	—	10,085
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,655	1,655	0.27	0.03	—	1,671
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,655	1,655	0.27	0.03	—	1,671

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	9,987	9,987	1.62	0.20	—	10,086
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,987	9,987	1.62	0.20	—	10,086
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	9,987	9,987	1.62	0.20	—	10,086
Total	—	—	—	—	—	—	—	—	—	—	—	—	9,987	9,987	1.62	0.20	—	10,086
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,655	1,655	0.27	0.03	—	1,672
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,655	1,655	0.27	0.03	—	1,672

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	26.8	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	10.7	10.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	37.5	37.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	26.8	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	10.7	10.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	37.5	37.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	4.89	4.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.96	1.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.84	6.84	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	24.8	24.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.15	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	26.9	26.9	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	24.8	24.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.15	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	26.9	26.9	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	4.52	4.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.39	0.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	4.91	4.91	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Total	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Total	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	16.6	26.2	42.8	1.71	0.04	—	97.7
Total	—	—	—	—	—	—	—	—	—	—	—	16.6	26.2	42.8	1.71	0.04	—	97.7

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Total	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Total	—	—	—	—	—	—	—	—	—	—	—	100	158	258	10.3	0.25	—	590
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	16.6	26.2	42.8	1.71	0.04	—	97.7
Total	—	—	—	—	—	—	—	—	—	—	—	16.6	26.2	42.8	1.71	0.04	—	97.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Total	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Total	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	400
Total	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	400

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Total	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Total	—	—	—	—	—	—	—	—	—	—	—	690	0.00	690	69.0	0.00	—	2,414
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	400
Total	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.4	0.00	—	400

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.48	1.48
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.48	1.48

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.96	8.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.48	1.48
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.48	1.48

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	139	139	139	50,574	4,231	4,231	4,231	1,544,315

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	139	139	139	50,574	4,231	4,231	4,231	1,544,315

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1731
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1731
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
2533275	844,425	0.00	0.00	—

5.10.3. Landscape Equipment

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Chainsaws	Electric	1.00	8.00	2,096	1.86	0.70
Chainsaws Preempt	Electric	1.00	4.30	1,127	1.86	0.70
Chippers/Stump Grinders/Shredder Preempt	Electric	1.00	0.10	26.0	4.85	0.78
Lawn Mowers	Electric	3.00	8.00	6,288	3.86	0.36
Leaf Blowers/Vacuums	Electric	1.00	5.80	1,520	1.79	0.94
Other Lawn & Garden Equipment	Electric	1.00	0.20	52.0	6.09	0.58
Riding Mowers	Electric	2.00	5.35	2,803	21.4	0.38
Tillers	Electric	1.00	0.40	105	1.39	0.40
Trimmers/Edgers/Brush Cutters	Electric	1.00	2.60	681	1.13	0.91
Wood Splitters	Electric	1.00	1.90	498	6.92	0.69

5.10.4. Landscape Equipment - Mitigated

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Chainsaws	Electric	1.00	8.00	2,096	1.86	0.70
Chainsaws Preempt	Electric	1.00	4.30	1,127	1.86	0.70
Chippers/Stump Grinders/Shredder Preempt	Electric	1.00	0.10	26.0	4.85	0.78
Lawn Mowers	Electric	3.00	8.00	6,288	3.86	0.36

Leaf Blowers/Vacuums	Electric	1.00	5.80	1,520	1.79	0.94
Other Lawn & Garden Equipment	Electric	1.00	0.20	52.0	6.09	0.58
Riding Mowers	Electric	2.00	5.35	2,803	21.4	0.38
Tillers	Electric	1.00	0.40	105	1.39	0.40
Trimmers/Edgers/Brush Cutters	Electric	1.00	2.60	681	1.13	0.91
Wood Splitters	Electric	1.00	1.90	498	6.92	0.69

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	17,825,843	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	17,827,423	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	52,321,838	112

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	52,321,838	112

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	1,280	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	1,280	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.73	annual days of extreme heat
Extreme Precipitation	7.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	50.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	14.9

AQ-PM	9.16
AQ-DPM	13.2
Drinking Water	83.2
Lead Risk Housing	13.7
Pesticides	55.0
Toxic Releases	12.0
Traffic	78.5
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	39.4
Haz Waste Facilities/Generators	74.7
Impaired Water Bodies	23.9
Solid Waste	52.9
Sensitive Population	—
Asthma	0.11
Cardio-vascular	2.08
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	99.9
Linguistic	17.3
Poverty	99.9
Unemployment	96.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—

Insured adults	—
Arthritis	0.0
Asthma ER Admissions	99.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	0.0
Cognitively Disabled	88.7
Physically Disabled	99.5
Heart Attack ER Admissions	99.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	0.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.6
SLR Inundation Area	0.0
Children	99.4

Elderly	99.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	62.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	92.1
Traffic Density	0.0
Traffic Access	0.0
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Project specific data 4,155 beds (population), resulting in DU of 1731.25 , assuming 2.4 beds per DU. Lot acreage is estimated as 11.23 acres, sum of areas of two zones measured in Google Earth Pro: The first zone, totaling 4.23 acres, is delineated by Klamath Rd, Mountain Ln, and Perimeter Rd. The second zone, spanning 7 acres, is bordered by Klamath Rd and Cerro Vista Cir. Building square footage is estimated at project -specific rate of 300 gsf per bed, so a net increase of 4,155 beds result in construction of 1,246,500 gsf. To be conservative, an 500-gsf is added for unexpected construction for each nine buildings, resulting in a total 1,251,000 gsf. Landscape area is estimated as 60% of the lot acreage from provided Project Site Plan.
Construction: Construction Phases	Adjusted schedule so demolition takes 60 calendar days and entire schedule fits into one year
Construction: Dust From Material Movement	The graded area comprises distinct zones. The first zone, totaling 4.23 acres, is delineated by Klamath Rd, Mountain Ln, and Perimeter Rd. Here, plans include demolishing five existing buildings and erecting four new structures. The second zone, spanning 7 acres, is bordered by Klamath Rd and Cerro Vista Cir. In this area, five new buildings are slated for construction, located east of the Red Bricks Student Housing Facilities. Scaling factors indicate that for every two buildings demolished, one new building will be constructed. Calculating, this yields (4.23+7)*(2+1)/9 = 3.74 acres.
Construction: Architectural Coatings	Project specifics: 50 g/L VOC content in paint
Operations: Energy Use	No natural gas, converted natural gas demand to electricity using a factor of 0.2930711 kWh/kBTU.