Final Mitigated Negative Declaration

Garden of Peace Cemetery

October 31, 2023

Prepared by

EMC Planning Group

FINAL MITIGATED NEGATIVE DECLARATION

GARDEN OF PEACE CEMETERY

PREPARED FOR

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October 31, 2023

MITIGATED NEGATIVE DECLARATION

Project Name	Garden of Peace Cemetery
Lead Agency	County of Merced
Project Proponent	Faiyaz Zaman Garden of Peace Executive/President 8315 Waterwell Way, Tracy CA 95304
Project Location	17205 South Jasper Sears Road, Unincorporated Merced County
Project Description	The proposed project is a cemetery, with a 1,500 square foot prayer room with permanent restrooms and a proposed septic system, and a proposed overhang/canopy prayer room. The project would include an unpaved parking lot for 20 vehicles and a 24-foot-wide gravel road within the project site. The project also includes a proposed 24-foot road easement connecting the entrance of the cemetery to Jasper Sears Road and a 15-foot gravel road running south of the proposed area of rest. The proposed area of rest covers the only usable, gently rolling area of the property, which is approximately 50 acres. According to the applicant, one acre of land can contain 1,000 graves; therefore, the project site is anticipating a total of approximately 50,000 to 60,000 graves, which can take up to 200 years to fill up completely. The cemetery would be open from 10:00 A.M. to 5:00 P.M., seven days a week. However, staff and visitors would only come to the site when there is a burial. It is expected that no more than 20 people would visit the cemetery at one time. The cemetery would include one full-time employee and up to two part-time, temporary employees who would be on-call and be on-site only when there is a burial. The burial services involve the digging of a grave (four feet by eight feet) and would only occur once per day, at most.
Public Review Period	Begins- November 2, 2023 Ends- December 1, 2023
Written Comments To	Valeria Renteria, Planner I (209) 385-7654 ext. 4422 Valeria.Renteria@countyofmerced.com

Proposed Findings	The County of Merced is the custodian of the documents and other material that constitute the record of proceedings upon which this decision is based. The initial study indicates that the proposed project has the potential to result in significant adverse environmental impacts. However, the mitigation measures identified in the initial study would reduce the impacts to a less than significant level. There is no substantial evidence, in light of the whole record before the lead agency, County of Merced, that the project, with mitigation measures incorporated, may have a significant effect on the environment. See the following project-specific mitigation measures.

Mitigation Measures

Biological Resources

BIO-1 Prior to approval of a building permit for Phase I activities, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of special-status species potentially occurring in the project vicinity, including, but not limited to, American badger, San Joaquin kit fox, burrowing owl, Swainson's hawk, golden eagle, and nesting birds and raptors. Their habitats, general measures that are being implemented to conserve species as they relate to the project, and the boundaries within which construction activities will occur will be explained. Informational handouts with photographs clearly illustrating the species' appearances shall be used in the training session. All new construction personnel shall undergo this mandatory environmental awareness training. The project applicant shall document evidence of completion of this training by a letter report prepared by the biologist and submitted to the Merced County Community and Economic Development Department, where it will be kept on file, prior to issuance of a building permit.

The qualified biologist will train biological monitors selected from the construction crew by the construction contractor (typically the project foreman). Before the start of work each day, the monitor will check for animals under any equipment such as vehicles and stored pipes within active construction zones. The monitor will also check all excavated steep-walled holes or trenches greater than one foot deep for trapped animals. If a special-status species is observed within an active construction zone, the qualified biologist will be notified immediately and all work within 50 feet of the individual will be halted and all equipment turned off until the individual has left the construction area.

BIO-2 Not more than 14 days prior to the commencement of Phase I ground-disturbing construction activities, and once every five years during operation of the cemetery, a qualified wildlife biologist shall conduct surveys of the grassland habitat on site to identify

any potential American badger burrows/dens. If the survey results are negative (i.e., no badger dens observed), a letter report confirming absence shall be prepared and submitted to the Merced County Community and Economic Development Department prior to issuance of a building permit for Phase I and once every five years during operation of the cemetery and no further mitigation is required.

If the results are positive (badger dens are observed), the qualified biologist shall determine if the dens are active by installing a game camera for three days and three nights to determine if the den is in use.

a. If the biologist determines that a den may be active, coordination with the California Department of Fish and Wildlife shall be undertaken to develop a suitable strategy to avoid impacts to American badger. The strategy may include the following: the biologist shall install a one-way door in the den opening and continue use of the game camera. Once the camera captures the individual exiting the one-way door, the den can be excavated with hand tools to prevent badgers from reusing them. If the biologist determines that the den is a maternity den, construction activities shall be delayed during the maternity season (February to August), or until the badgers leave the den on their own accord or the biologist determines that the den is no longer in use.

b. If the game camera does not capture an individual entering/exiting the den, the den can be excavated with hand tools to prevent badgers from reusing them.

c. After dens have been excavated and the absence of American badger confirmed, a letter report shall be prepared and submitted to the Merced County Community and Economic Development Department, prior to issuance of a building permit for Phase I and once every five years during operation of the cemetery.

BIO-3 The U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the *San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011) shall be implemented prior to initiation of and during any construction activity on the project site to avoid unintended take of individual San Joaquin kit foxes.

Preconstruction/pre-activity surveys for San Joaquin kit fox shall be conducted no less than 30 days prior to the beginning of ground disturbance and/or construction activities associated with Phase I that may impact San Joaquin kit fox, and once every five years during operation of the cemetery. The surveys shall include all work areas and a minimum 200-foot buffer of the project site. The preconstruction surveys shall identify kit fox habitat features on the project site, evaluate use by kit fox and, if possible, assess the potential impacts of the proposed activity. The status of all dens shall be determined and mapped.

If a natal/pupping den is discovered within the project area or within 200 feet of the project boundary, the applicant shall consult with the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service to establish an appropriate avoidance buffer.

The avoidance buffer shall be maintained until such time as the burrow is no longer active and/or an incidental take permit is determined to be required and is obtained.

In addition, the following measures shall be observed:

a. Project-related vehicles shall observe a 20-mph speed limit in all project areas. Night-time construction shall be prohibited. Off-road traffic outside of the designated project area shall be prohibited.

b. To prevent inadvertent entrapment of kit foxes or other animals during the construction of Phase I, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures under number 11 of the Construction and Operational Requirements in the Standardized Recommendations must be followed.

c. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the U.S. Fish and Wildlife Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.

d. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from a construction or project site.

e. No firearms shall be allowed on the project site during construction activities.

f. To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets shall be permitted on site during construction activities.

g. Use of rodenticides and herbicides on the project site during construction or operation shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project related restrictions deemed necessary by the U.S. Fish and Wildlife Service. If rodent control must be conducted, zinc phosphide shall be used because of proven lower risk to kit fox.

h. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape.

i. Any contractor, employee, or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service.

BIO-4 To avoid loss of or harm to burrowing owl, the following measures shall be implemented:

a. Prior to issuance of a building permit for Phase I, and once every five years during operation of the cemetery, to avoid/minimize impacts to burrowing owls potentially occurring within or immediately adjacent to the project site, the applicant shall retain a biologist qualified in ornithology to conduct surveys for burrowing owl. The qualified biologist shall conduct a two-visit (i.e., morning and evening) presence/absence survey at areas of suitable habitat on and adjacent to the project site boundary no less than 14 days prior to the start of construction or ground disturbance activities. Surveys shall be conducted according to the methods for take avoidance described in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) and the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no burrowing owls are found, a letter report confirming absence shall be prepared and submitted to the County of Merced Community Development Department and no further measures are required.

b. Because burrowing owls occupy habitat year-round, seasonal no-disturbance buffers, as outlined in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) and the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), shall be in place around occupied habitat prior to and during any ground disturbance activities associated with Phase I. The following table includes buffer areas based on the time of year and level of disturbance (CDFW 2012), unless a qualified biologist approved by the California Department of Fish and Wildlife verifies through non-invasive measures that either: 1) birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	**Time of Year**	**Level of Disturbance Buffers (meters)**		
		Low	**Med**	**High**
Nesting Sites	April 1 – Aug 15	200 m	500 m	500 m
Nesting Sites	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting Sites	Oct 16 – Mar 31	50 m	100 m	500 m

c. If burrowing owl is found and avoidance is not possible, burrow exclusion may be conducted by qualified biologists only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. Occupied burrows shall be replaced with artificial burrows at a ratio of one collapsed burrow to one constructed artificial burrow (1:1). Evicted burrowing owls may attempt to colonize or re-colonize an area that would be impacted, thus ongoing surveillance during project activities shall be conducted at a rate sufficient to detect burrowing owls if they return.

d. If surveys locate occupied burrows, consultation with the California Department of Fish and Wildlife shall occur to interpret survey results and develop a project-specific avoidance and minimization approach. Once the absence of burrowing owl has been confirmed, a letter report shall be prepared and submitted to the Merced County Community and Economic Development Department.

BIO-5 If there is an active nest within ten miles of Phase I, the following measures shall be implemented to mitigate for the loss of Swainson's hawk and golden eagle foraging habitat:

a. Prior to ground-disturbing activities, suitable Swainson's hawk and golden eagle foraging habitat shall be preserved to ensure replacement of foraging habitat lost as a result of the project, as determined by a qualified biologist, in consultation with California Department of Fish and Wildlife.

b. The habitat value shall be based on Swainson's hawk nesting distribution and an assessment of habitat quality, availability, and use within Merced County. The mitigation ratio shall be consistent with the guidelines included in the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFG 1994). These guidelines specify that the mitigation ratio shall be 1:1 if there is an active nest within one mile of the project site, 0.75:1 if there is an active nest within five miles but greater than one mile away, and 0.5:1 if there is an active nest within 10 miles but greater than five miles away. If there is an active nest within one mile of the project site, the mitigation ratio can be reduced to 0.5:1 if all of the mitigation land can be actively managed for prey production. Such mitigation shall be accomplished through either the transfer of fee title or perpetual conservation easement. Preservation of all or a portion of the remainder of the subject parcel may be considered suitable mitigation. The mitigation land shall be located within the known foraging area within Merced County.

c. There is one potentially active Swainson's hawk nest within five miles of the project site (CNDDB Occ. No. 980) and one potentially active golden eagle nest one mile west of the project site (Observed during the July 2023 survey). To mitigate for the loss of foraging habitat for these nests, replacement foraging habitat shall be preserved at a mitigation ratio of 0.75:1 in consultation with California Department of Fish and Wildlife. Such mitigation shall be accomplished through either the transfer of fee title or perpetual conservation easement. The mitigation land shall be located within the known foraging area within Merced County.

Prior to construction of Phase I, an updated database search and field survey for Swainson's hawk and golden eagle nests within ten miles of the project site shall be conducted by qualified biologists. If additional nests are observed, foraging habitat shall be preserved following the mitigation ratios outlined above.

BIO-6 To avoid impacts to nesting birds during the nesting season (January 15 through September 15), all Phase I construction activities should be conducted between September 16 and January 14, which is outside of the bird nesting season. If construction or project-related work is scheduled during the nesting season (February 15 to August 30 for small bird species such as passerines; January 15 to September 15 for owls; and February 15 to September 15 for other raptors), a qualified biologist shall conduct nesting bird surveys.

a. Two surveys for active bird nests will occur within 14 days prior to start of Phase I construction, with the final survey conducted within 48 hours prior to construction. Appropriate minimum survey radii surrounding each work area are typically 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys will be conducted at the appropriate times of day to observe nesting activities. Locations off the site to which access is not available may be surveyed from within the site or from public areas. If no nesting birds are found, a letter report confirming absence will be prepared and submitted to the Merced County Community and Economic Development Department and no further mitigation is required.

b. If the qualified biologist documents active nests within the project site or in nearby surrounding areas, an appropriate buffer between each nest and active construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist shall conduct baseline monitoring of each nest to characterize "normal" bird behavior and establish a buffer distance, which allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, the qualified biologist or construction foreman shall have the authority to cease all construction work in the area until the young have fledged and the nest is no longer active. Once the absence of nesting birds has been confirmed, a letter report will be prepared and submitted to the Merced County Community and Economic Development Department.

BIO-7 No development or construction activities shall occur within 50 feet of the stream centerline (100 feet total width, based on existing topography). Along with the temporary silt fencing discussed above, the applicant shall construct a permanent wildlife-friendly wooden jack fence along the stream at a 40-foot distance from the stream centerline that will allow free travel of wildlife under, over, or around the fence while still maintaining an

effective barrier from disturbance from Phase I construction and Phase II operations. The bottom rail of the fencing shall be 18 inches above ground and the top rail at 40 inches above ground. This fence shall be maintained for the lifespan of all cemetery operations at the site.

BIO-8 Prior to initiation of ground disturbance or construction along the road easement that affect the drainage channel, the applicant will retain a qualified biologist to determine the extent of potential wetlands and waterways regulated by the United States Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife.

If the USACE claims jurisdiction, the applicant shall obtain a Clean Water Act Section 404 Nationwide Permit. If the impacts to the drainage does not qualify for a Nationwide Permit, the applicant will proceed in obtaining an Individual Permit from the United States Army Corps of Engineers. The applicant will then coordinate with the Regional Water Quality Control Board to obtain a Clean Water Act Section 401 Water Quality Certification. If necessary, the applicant will coordinate with the California Department of Fish and Wildlife to obtain a Streambed Alteration Agreement.

To compensate for temporary and/or permanent impacts to wetlands and Waters of the U.S. that would be impacted as a result of the proposed project, mitigation shall be provided as required by the regulatory permits. Mitigation would be provided through one of the following mechanisms:

a. A Wetland Mitigation and Monitoring Plan shall be developed that outlines mitigation and monitoring obligations for temporary impacts to wetlands and other waters as a result of construction activities. The Wetland Mitigation and Monitoring Plan would include thresholds of success, monitoring and reporting requirements, and site-specific plans to compensate for wetland losses resulting from the project. The Wetland Mitigation and Monitoring Plan shall be submitted to the appropriate regulatory agencies for review and approval during the permit application process.

b. To compensate for permanent impacts, the purchase and/or dedication of land to provide suitable wetland restoration or creation shall ensure a no net loss of wetland values or functions. If restoration is available and feasible, a minimum 1:1 impact to mitigation ratio would apply to projects for which mitigation is provided in advance.

   For improvements on the project site or off-site improvement locations, the applicant shall comply with terms and conditions of the permits, including measures to protect and maintain water quality, restore work sites, and mitigation to offset temporary and/or permanent wetland impacts. The applicant shall be responsible for implementation of this mitigation measure prior to issuance of a building permit.

BIO-9 Prior to initiation of Phase I ground disturbance or construction activities, the applicant shall protect waterways adjacent to the project site through the use of best management practices for erosion control and vehicle/equipment fueling. This will include the installation of silt fencing between the project site and adjacent waterways. The silt fencing will prevent soil from washing off the project site into waterways and exclude construction activities from the drainage channels.

Potential fuel spills and leaks from construction vehicle/equipment fueling operations shall be prevented from entering waterways. Designated fueling areas should be on a level grade and must be at least 50 feet from any waterway. The fueling area should be protected by a berm to prevent any runoff from leaving the fueling area.

BIO-10 All exterior light fixtures at the cemetery shall be hooded, with lights directed downward. Prior to issuance of a building permit, plans for lighting shall be subject to the review and approval by the Merced County Community and Economic Development Department to verify that light pollution reduction measures are included.

Cultural Resources

CUL-1 In the event that archaeological resources are encountered during ground disturbing activities, contractor shall temporarily halt or divert excavations within a 50 meter (165 feet) of the find until it can be evaluated. All potentially significant archaeological deposits shall be evaluated to demonstrate whether the resource is eligible for inclusion on the California Register of Historic Resources, even if discovered during construction. If archaeological deposits are encountered, they will be evaluated and mitigated simultaneously in the timeliest manner practicable, allowing for recovery of materials and data by standard archaeological procedures. For prehistoric archaeological sites, this data recovery involves the hand-excavated recovery and non-destructive analysis of a small sample of the deposit. Historic resources shall also be sampled through hand excavation, though architectural features may require careful mechanical exposure and hand excavation.

Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance by a qualified Archaeologist. Significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites.

CUL-2 In the event that human remains (or remains that may be human) are discovered at the project site, Public Resource Code Section 5097.98 must be followed. All grading or earthmoving activities shall immediately stop within 50 meters (165 feet) of the find. The Merced County Coroner will be notified immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b).

Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the project proponent shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (Public Resource Code [PRC] § 5097). The coroner shall contact the Native American Heritage Commission (NAHC) to determine the most likely descendant(s) (MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD will determine the most appropriate means of treating the human remains and associated grave artifacts, and shall oversee the disposition of the remains. In the event the NAHC is unable to identify an MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity within the project area in a location not subject to further subsurface disturbance if: a) the Native American Heritage Commission is unable to identify the MLD or the MLD failed to make a recommendation within 48 hours after being allowed access to the site; b) the descendent identified fails to make a recommendation; or c) the landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Geology and Soils

GEO-1 The applicant shall obtain a soils/geotechnical report for use in the structural design of the proposed prayer room. This report will also provide recommendations for the design of the septic system proposed on the site. This report must be submitted for review and approval by the County Building and Safety Division prior to issuance of a building permit.

GEO-2 The following language shall be included on all building permits: "If paleontological resources are discovered during demolition and earthmoving activities, work shall stop within 100 feet of the find until a qualified paleontologist can assess if the find is unique and, if necessary, develop appropriate treatment measures in consultation with the Merced County Community and Economic Development Department."

PUBLIC REVIEW INITIAL STUDY

GARDEN OF PEACE CEMETERY

PREPARED FOR

Merced County Community and Economic Development
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October 31, 2023

TABLE OF CONTENTS

Appendices

Figures

Tables

A. BACKGROUND

Project Title	Garden of Peace Cemetery
Lead Agency Contact Person and Phone Number	Valeria Renteria, Planner I (209) 385-7654 ext. 4422
Date Prepared	October 31, 2023
Study Prepared by	EMC Planning Group Inc. 601 Abrego Street Monterey, CA 93940
Project Location	Unincorporated Merced County
Project Sponsor Name and Address	Faiyaz Zaman Garden of Peace Executive/President 8315 Waterwell Way, Tracy CA 95304
General Plan Designation	FP, Foothill Pasture
Zoning	A-2, Exclusive General Agricultural

Setting

The approximately 50-acre project site is located on a 164-acre parcel at 17205 South Jasper Sears Road, within unincorporated Merced County (APN 078-120-005). The site is located approximately one mile south of State Route 152, approximately 1.3 miles east of the San Luis Reservoir, and approximately nine miles west of the City of Los Banos. The project site is accessed from an existing dirt road from South Jasper Sears Road.

The 50-acre project site consists of non-native grasslands and is gently sloping from the northeast corner of the site to the south with elevations ranging from about 450 to 650 feet above sea level. The remainder of the property consists of steep hills. The project site is primarily vacant with a few existing storage metal structures located at the northeast corner of the site. A drainage feature is located generally along the eastern boundary of the 164-acre parcel as well as the Aqua Fria Multi-Species Conservation Bank. The drainage feature extends northeast where is crosses under the existing, off-site dirt access road. Existing distribution power poles and lines border the parcel to the north. Existing transmission towers and lines cross the southeastern corner of the 164-acre parcel. The parcel is surrounded on all sides by vacant foothills and is zoned A-2, Exclusive General Agricultural, and has a general plan land use designation of Foothill Pasture (FP).

Figure 1, Location Map, presents the regional and vicinity location of the project site. Figure 2, Aerial Map, provides an aerial view of the property and project site, and Figure 3, Site Photographs, illustrates the existing uses and roadways surrounding the project site. Figure 4, Topographic Map, presents the project boundary and project site topography.

Description of Project

The proposed project is a cemetery, with a 1,500 square foot prayer room with permanent restrooms and a proposed septic system, and a proposed overhang/canopy prayer room. The project would include an unpaved parking lot for 20 vehicles and a 24-foot-wide gravel road within the project site. The project also includes a proposed 24-foot road easement connecting the entrance of the cemetery to Jasper Sears Road and a 15-foot gravel road running south of the proposed area of rest. Although no lighting plan was submitted, the applicant has indicated that there will be light posts focused at the entrance of the site and on the prayer room (Valeria Renteria, email message, October 3, 2023). The proposed area of rest covers the only usable, gently rolling area of the property, which is approximately 50 acres. According to the applicant, one acre of land can contain 1,000 graves; therefore, the project site is anticipating a total of approximately 50,000 to 60,000 graves, which can take up to 200 years to fill up completely.

The cemetery would be open from 10:00 A.M. to 5:00 P.M., seven days a week. However, staff and visitors would only come to the site when there is a burial. It is expected that no more than 20 people would visit the cemetery at one time.

The cemetery would include one full-time employee and up to two part-time, temporary employees who would be on-call and be on-site only when there is a burial. The burial services involve the digging of a grave (four feet by eight feet) and would only occur once per day, at most.

The project site is bordered on all sides by a five-foot high barbed-wire fence and an existing water well located near the entrance of the site. According to the applicant, there are also two 119-gallon pressure tanks that exist on the site. Existing overhead power lines border the site on the north, with another power line crossing the site in the southeast corner.

Figure 5, Site Plan, shows the proposed site plan.

Phasing

For the purpose of this initial study, the proposed project has been split into two phases based on implementation timing. Phase I includes the improvements that would be implemented during construction of the project, while Phases II includes preparation of the burial sites over an approximate 200-year period.

Phase I Improvements

- Construction of the 1,500 square foot prayer room;
- Construction of the on-site unpaved roadways;
- Construction of the unpaved parking lot;
- Construction of the septic leach field; and
- Improvements to the existing off-site access road.

Phase II Improvements

Preparation and implementation of burial sites over an approximate 200-year period.

Assumptions

The application and materials submitted to the County do not include a lighting plan, landscaping plan, or pedestrian pathways. Therefore, the following assumptions have been made:

- The cemetery operations close at 5:00 PM; therefore, no nighttime lighting will be used for the majority of the year. However, during the winter months when the sun sets early, there may be minimal lighting at the property entrance and at the prayer room for a short period of time until staff and visitors leave the site;
- No landscaping is associated with Phases I or II;
- No rodent control associated with the area of rest (Phase II); and

No pedestrian sidewalks or walkways within the area of rest (Phase II).

Other Public Agencies Whose Approval May Be Required

- United States Army Corps of Engineers
- Regional Water Quality Control Board
- California Department of Fish and Wildlife

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Merced County sent out a letter offering consultation to the Table Mountain Rancheria Tribe on September 27, 2023 (Valeria Renteria, email message, October 3, 2023). The Table Mountain Rancheria Tribe responded to Merced County on October 19, 2023 declining consultation and requesting to be notified in the event that cultural resources are identified (Valeria Renteria, email message, October 25, 2023).

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

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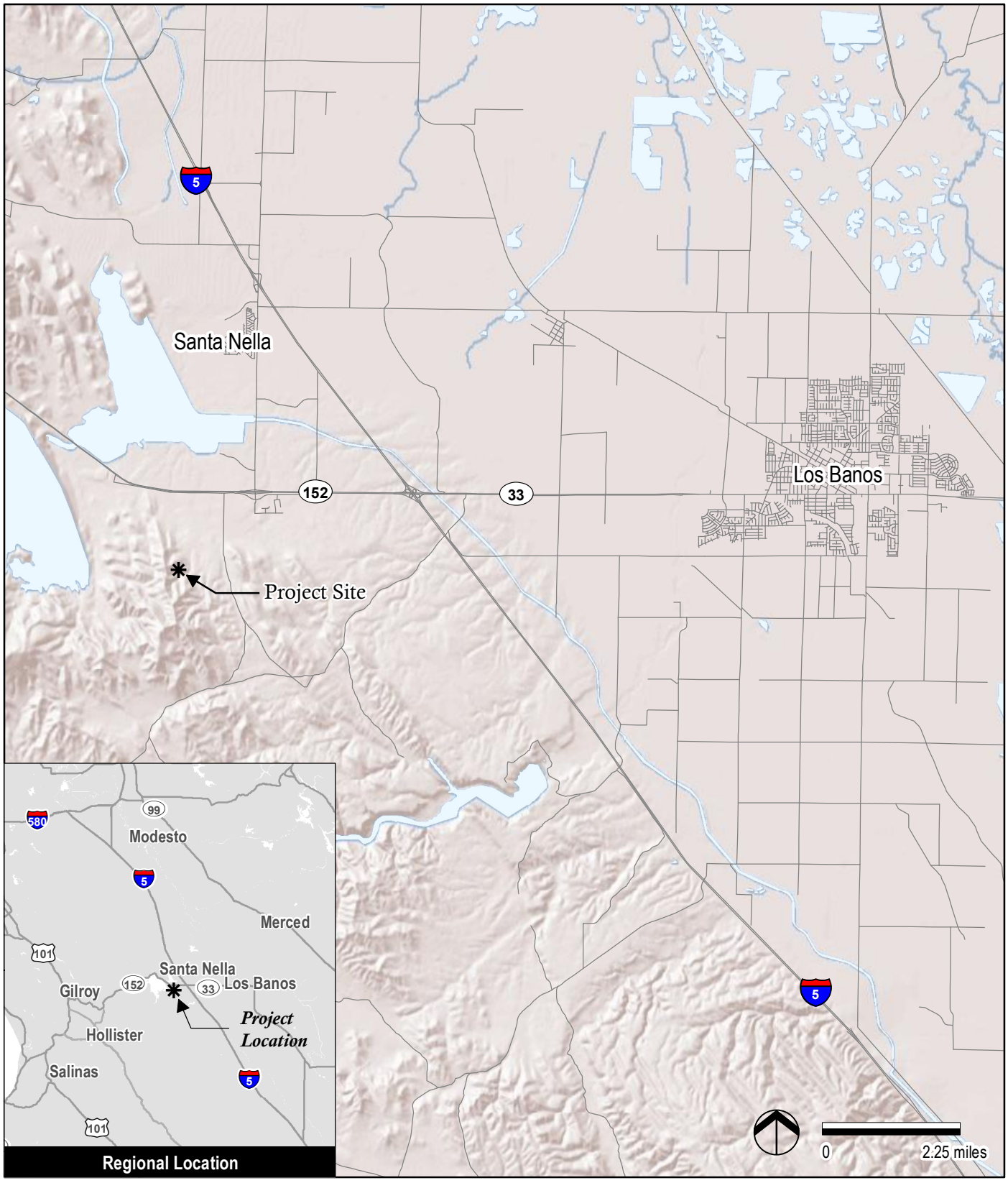

Source: ESRI 2023

Figure 1

Location Map

Garden of Peace Cemetery Initial Study

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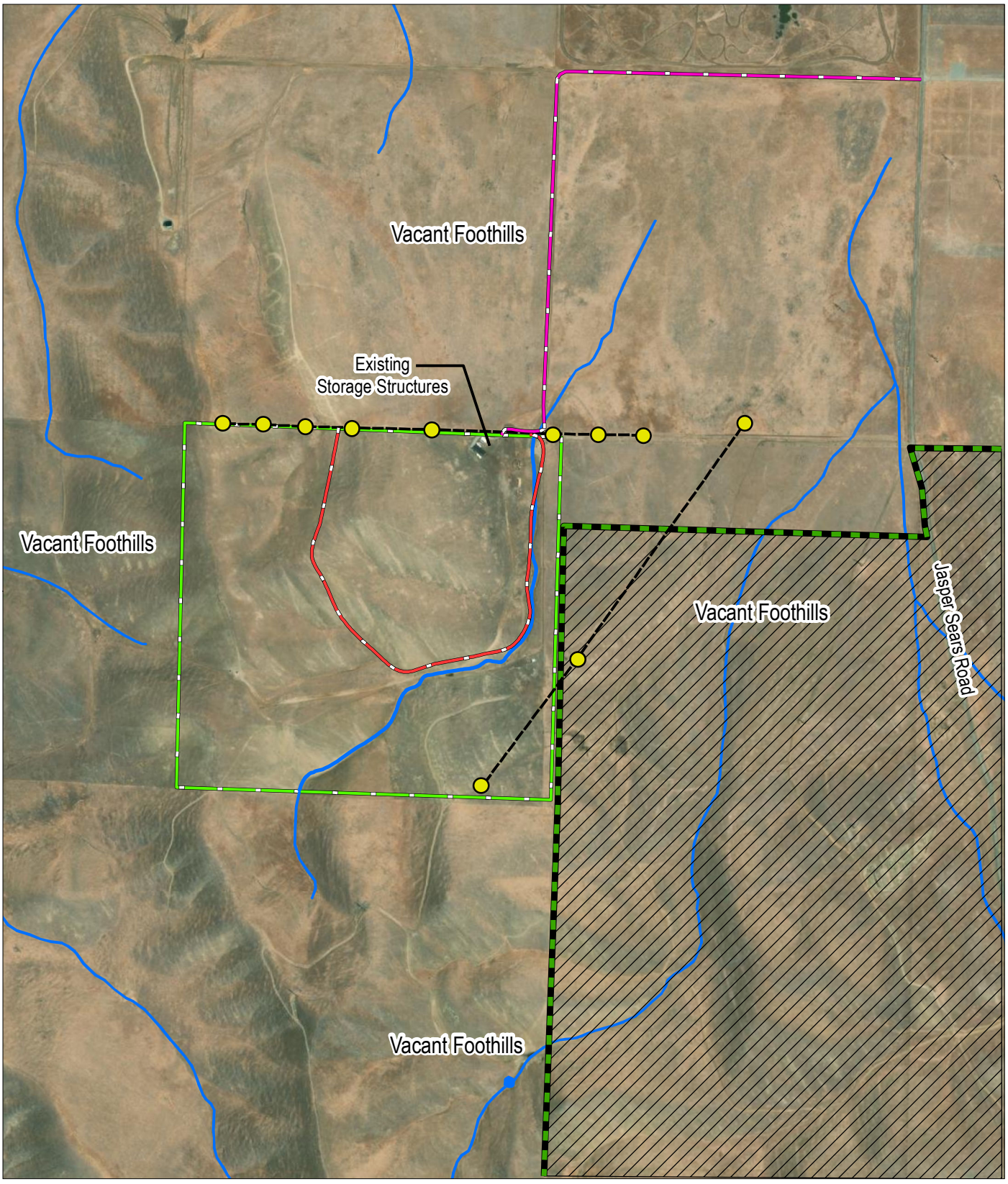

Source: Merced County GIS 2023, ESRI 2023

Figure 2

Aerial Map

Garden of Peace Cemetery Initial Study

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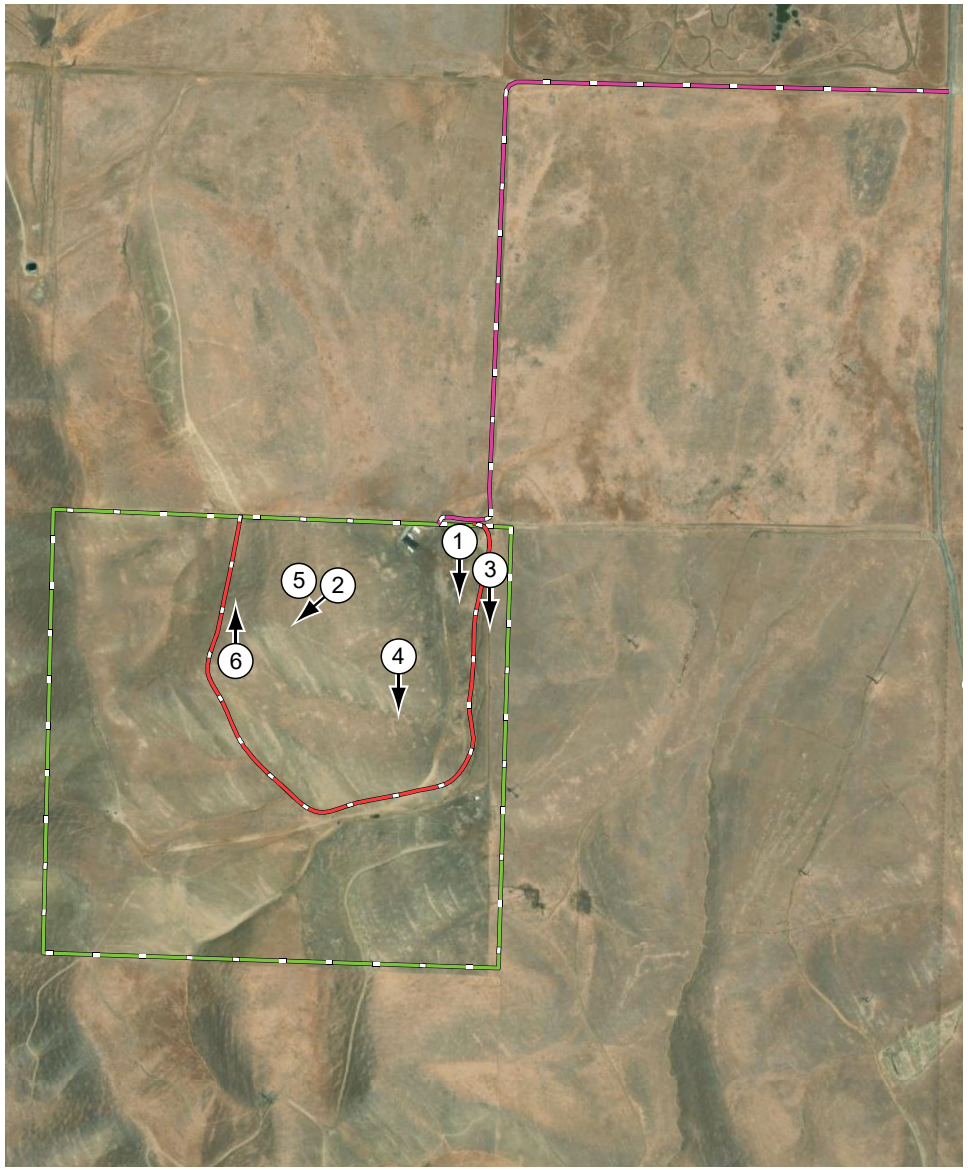
1 At the entrance gate facing south across the project site.

2 On the project site facing southwest.

3 At the northeast corner of the project site facing south at the existing drainage ditch.



Project Site
Property Boundary
Existing Dirt Access Road

Source: ESRI 2023
Photographs: EMC Planning Group 2023

4 On the project site facing south.

5 American badger (*Taxidea taxus*) burrow.

6 Locoweed (*Astragalus* sp.) growing on the overgrazed slope.

Figure 3
Site Photographs

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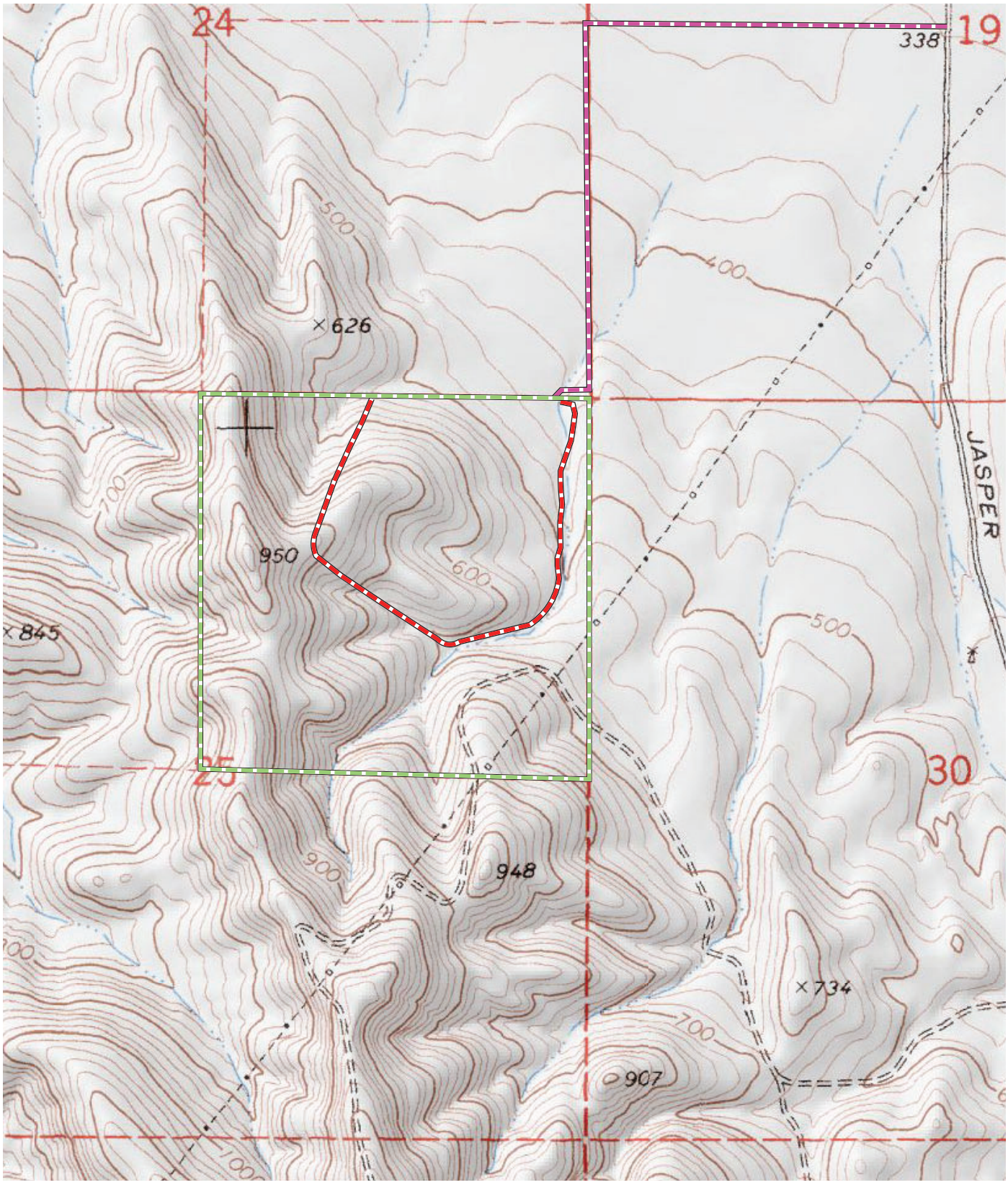

0 970 feet

Project Site

Property Boundary

Existing Dirt Access Road

Source: CalTopo 2023

Figure 4

Topographic Map

Garden of Peace Cemetery Initial Study

E M C

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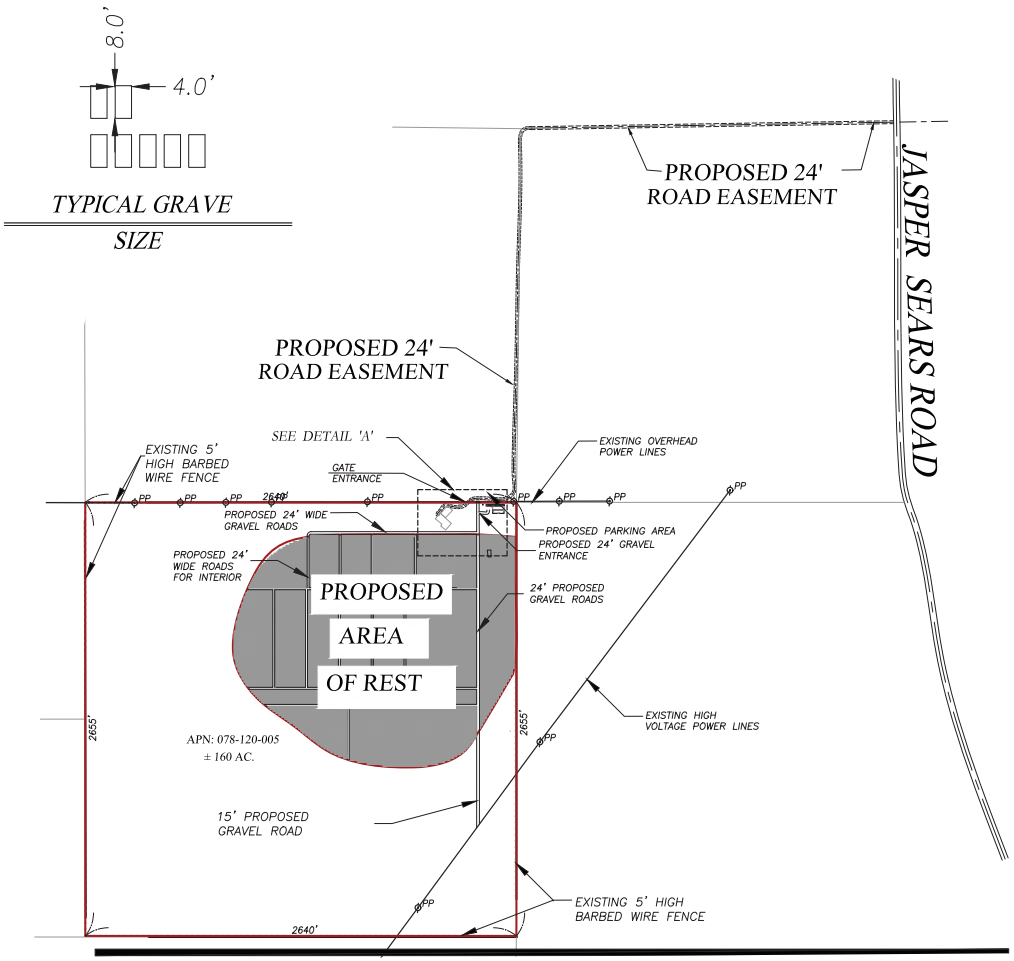

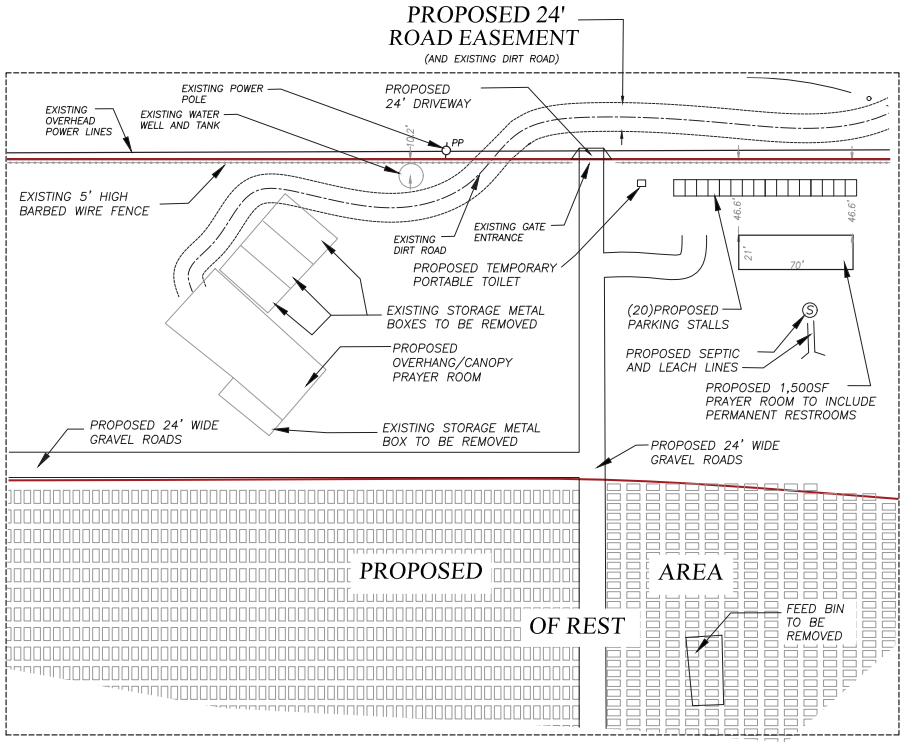

DETAIL 'A'

0 950 feet

Source: QK Inc. 2023

Figure 5
Site Plan

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B. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- ☐ Aesthetics
- ☐ Agriculture and Forestry Resources
- ☐ Air Quality
- ☐ Biological Resources
- ☐ Cultural Resources
- ☐ Energy
- ☐ Geology/Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards & Hazardous Materials
- ☐ Hydrology/Water Quality
- ☐ Land Use/Planning
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population/Housing
- ☐ Public Services
- ☐ Recreation
- ☐ Transportation
- ☐ Tribal Cultural Resources
- ☐ Utilities/Service Systems
- ☐ Wildfire
- ☐ Mandatory Findings of Significance

C. DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Valeria Renteria, Planner I Date

D. Evaluation of Environmental Impacts

Notes

1. All answers take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
2. Once it has been determined that a particular physical impact may occur, then the checklist answers indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
3. "Negative Declaration: Less-Than-Significant Impact with Mitigation Measures Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from section XVII, "Earlier Analyses," may be cross-referenced).
4. Earlier analyses are used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. [Section 15063(c)(3)(D)] In this case, a brief discussion would identify the following:
    a. "Earlier Analysis Used" identifies and states where such document is available for review.
    b. "Impact Adequately Addressed" identifies which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and states whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. "Mitigation Measures"—For effects that are "Less-Than-Significant Impact with Mitigation Measures Incorporated," mitigation measures are described which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
5. Checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances, etc.) are incorporated. Each reference to a previously prepared or outside document, where appropriate, includes a reference to the page or pages where the statement is substantiated.
6. "Supporting Information Sources"—A source list is attached, and other sources used or individuals contacted are cited in the discussion.
7. The explanation of each issue identifies:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any to reduce the impact to less than significant.

1. AESTHETICS

Except as provided in Public Resources Code Section 21099 (Modernization of Transportation Analysis for Transit-Oriented Infill Projects), would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b.	Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d.	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Comments:

a. According to the *2030 Merced County General Plan* ("General Plan"), Merced County has many scenic vistas, such as the Coastal and Sierra Nevada Mountain ranges and the Los Banos Creek, Merced, San Joaquin, and Bear Creek River corridors (Merced County 2013, p. NR-8).

As shown in Figure 3, Site Photographs, views across the project site include the project site and its foothills. The Coast Mountain Range and river corridors are not visible. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista.

b. The project site is located approximately one mile south of State Route 152, which is an officially designated state scenic highway between the western edge of Merced County and State Route 5. The project site is not visible from State Route 152; therefore, the project would not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.

c. The project site's foothills are visible from Jasper Sears Road, which is the nearest public viewpoint for travelers on roadways near the site. However, the project site is approximately one-half mile from Jasper Sears Road and, therefore, the proposed cemetery, which includes a prayer room and parking area, would not be visible from

Jasper Sears Road in a manner that would substantially degrade the existing visual character or quality of public views of the site and its surroundings. The project does not propose any higher elevations of the site, which would potentially be visible from Jasper Sears Road.

Therefore, development of the proposed project would not degrade the existing visual character or quality of public views of the site and its surroundings

d. The project site does not currently include any sources of light or glare. The cemetery would not create a source of potential glare, but does include minimal lighting at the entrance to the site and at the prayer room (Valeria Renteria, email message, October 3, 2023). The cemetery would be open from 10:00 A.M. to 5:00 P.M. and, therefore, would not be operational at night. During most of the year, no nighttime lighting would occur and during the winter months when the sun goes down earlier, the proposed lighting may be utilized for a short period of time as staff and visitors are leaving the site.

Because the proposed lighting would occur at night for a short period of time during only the winter months, with no other development nearby to be impacted by the light, no impacts associated with creating a new source of substantial light would adversely affect day or nighttime views in the area.

2. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts on agricultural resources are significant environmental effects and in assessing impacts on agriculture and farmland, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Comments:

a. The project site is designated Grazing Land by the California Department of Conservation (California Department of Conservation 2023). Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.

b. The project site is not under a Williamson Act contract, but is zoned Exclusive General Agricultural (A-2). However, the use of a cemetery is conditionally permitted within the Exclusive General Agricultural (A-G) Zoning District. The proposed project would not conflict with agricultural resources as the site is designated by the California Department of Conservation as Grazing Land (California Department of Conservation 2023) and has not been in agricultural use for at least the past 30 years (Google Earth 2023).

c-d. There is no forest land, timberland, or timberland production at the project site; therefore, the proposed project would not conflict with existing zoning for forest land or timberland zoned Timberland Production.

e. The project site is designated as "Grazing Land" by the California Department of Conservation (California Department of Conservation 2023) and there are no forest lands in Merced County (Merced County 2012, p. 6-47). Therefore, the proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
d.	Result in other emissions, such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

Comments:

The project is located in Merced County in the San Joaquin Valley Air Basin, which is within the jurisdiction of the San Joaquin Valley Air Pollution Control District ("air district"). The discussion in this section is based primarily on the air district's *Guidance for Assessing and Mitigating Air Quality Impacts* (2015) (GAMAQI), *Guidance for Assessing and Mitigating Air Quality Impacts for Small Project Analysis Levels* (2020) (SPAL), and *2018 PM2.5 Plan for the San Joaquin Valley* ("air quality plan"), and on the results of emissions modeling using the California Emission Estimation Model (CalEEMod) version 2022.1. The "unmitigated" emissions scenario provides estimates of the criteria air pollutant emissions that would be generated during project operations. The CalEEMod results are included in Appendix A.

Data inputs to the model take into account the type and size of proposed uses utilizing CalEEMod default land uses based on the size metrics provided by the applicant. The project land use type and size metrics used as inputs to CalEEMod are presented in Table 1, Project Characteristics.

Operational criteria air pollutant emissions estimates are quantified based on the project characteristics presented in Table 1. Unless otherwise noted, other data inputs to CalEEMod are based on the following primary assumptions:

- Construction start date will be November 2023;
- Operational emissions are estimated for the year of 2024;

- There are no existing structures on-site or demolition required;
- There will be a total of 30 daily vehicle trips (15 trips in and 15 trips out);
- Wastewater will be treated through an on-site septic system; and
- The proposed project would operate 7 hours per day, 7 days a week, and 365 days per year with no more than one ceremony per day.

Table 1 Project Characteristics

Project Component	Land Use Subtype[1]	Proposed
Prayer Room	Place of Worship	1,500 sq-ft
Unpaved Parking[2]	Other Non-Asphalt Surface	0.18 acres

SOURCE: CalEEMod version 2022.1, Garden of Peace Non-profit Corporation
NOTES:
1. CalEEMod default land use subtype. Descriptions of the model default land use categories and subtypes are found in the User's Guide for CalEEMod Version 2022.1 available online at: https://caleemod.com/user-guide.
2. Unpaved parking lot acreage approximated in CalEEMod based on the area required for a 20-space parking lot.

a. The air district provides guidance on determining potential significant impacts in the GAMAQI. The Air Quality Thresholds of Significance for Criteria Pollutants, Table 2 on page 80 of the GAMAQI, can be used to determine if a project's operational emissions would violate ambient air quality standards. Projects that do not exceed the screening thresholds or criteria pollutant emissions volume thresholds would not conflict with or obstruct implementation of the air quality plan. Projects with emissions that exceed the thresholds have the potential to exceed ambient air quality standards. Such exceedances would be considered a potentially significant impact, as well as a conflict with the air quality plan.

As seen in Table 2, Unmitigated Operational Criteria Air Pollutant Emissions, the proposed project would generate criteria air pollutant emissions during construction and operations that are well below the air district standards. The proposed project would not conflict with or obstruct implementation of the air quality plan.

b. The air district's guidance on determining potential significant impacts and their mitigation is described in its SPAL. The SPAL identifies project type, size, and number of vehicle trips with pre-quantified emissions and determined values for which such projects are assumed to have less-than-significant criteria emissions impacts. The SPAL guidance does not include cemeteries in their land use types. For the proposed project, educational projects, including places of worship, was chosen. This information is provided in Table 3, Small Project Analysis Level – Educational. Since the project type, size, and projected trip volume are within the SPAL parameters, the project is considered to have a less-than-significant impact on air quality. Additionally, there are no anticipated heavy heavy-duty trucks trips associated with the proposed operations. Although ozone and PM emissions would contribute to regional air quality impacts, the project contribution would be less-than-cumulatively considerable.

Table 2 Unmitigated Operational Criteria Air Pollutant Emissions

Annual Emission	Reactive Organic Gases (ROG)	Nitrogen Oxides (NOx)	Sulfur Oxides (SO_2)	Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Carbon Monoxide (CO)
Operational[1]	<0.1	0.1	<0.1	0.1	0.1	0.3
Construction[1]	0.1	0.7	<0.1	0.2	0.1	0.8
Air District Thresholds[1,2]	10.0	10.0	27.0	15.0	15.0	100.0
Exceeds Threshold?	No	No	No	No	No	No

SOURCE: CalEEMod version 2022.1, GAMAQI 2015
NOTES:
1. Expressed in tons per year.
2. The San Joaquin Valley Air Pollution Control District thresholds for operational and construction related emission are equivalent.

Table 3 Small Project Analysis Level – Educational (Place of Worship)

Land Use Type	Size (Sq-Ft)	AND LESS THAN	Average Daily One-way Trips for All Fleet Types (Except Heavy Heavy-Duty Trucks)	Average Daily One-way for Heavy Heavy-Duty Trucks Trips Only (50-Mile Trip Length)
Place of Worship	141,000		1,000	15

SOURCE: San Joaquin Valley Air Pollution Control District Small Project Analysis 2020, Page 3, Table 4a: Industrial.

The fact that the project would have a less-than-significant impact on air quality is supported by the CalEEMod results, as shown in Table 2. The model results indicate that operational emissions would be well below air district standards. Therefore, the project would have a less-than-significant impact and would not result in a cumulatively considerable net increase in criteria air pollutants.

c. Sensitive receptors refer to those segments of the population most susceptible to poor air quality. Children, the elderly, and the chronically or acutely ill are the most sensitive population groups that are more susceptible to adverse effects of air pollution than others. These sensitive receptors are commonly associated with specific land uses such as residential areas, elementary schools, retirement homes, and hospitals.

Toxic air contaminants (TACs) are pollutants that may be expected to result in an increase in mortality or serious illness or may pose a present or potential hazard to human health. Health effects include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuels combustion, and commercial operations (e.g., dry cleaners). Construction equipment and associated

heavy-duty truck traffic generates diesel exhaust and fugitive dust ($PM_{2.5}$) that poses health risks for sensitive receptors. Diesel particulate matter (DPM), which is a known TAC, is a component of diesel exhaust. Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs.

The project type, as well as the location of a development project is a major factor in determining whether the project will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and receptors decreases. From a health risk perspective, there are basically two types of land use projects that have the potential to cause long-term public health risk impacts: (1) Land use projects that will place new toxic sources in the vicinity of existing receptors; and (2) Land use projects that will place new receptors in the vicinity of existing toxics sources.

TACs, such as DPM, are commonly produced during construction related activities, generally resulting from projects that generate a significant volume of diesel truck traffic. The emissions generated by construction are considered to be "short-term" in the sense that they would be limited to the actual periods of site development and construction. Emissions generated by the proposed project would be relatively minimal since there is no existing infrastructure onsite that would require demolition and the small scale of site preparation and construction required for development. Furthermore, the project site is located in a rural unincorporated area of Merced County with no nearby land uses commonly associated with sensitive receptors that would be exposed to TACs generated by the project's construction or operation. Consequentially, the project is considered to have no impact associated with the exposure of sensitive receptors to substantial pollutant concentrations.

d. The most common sources of odors identified in complaints received by local air districts are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, autobody shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The proposed project would not produce these types or other significant objectionable odors that would affect a substantial number of people. Therefore, odor impacts would be less than significant.

4. BIOLOGICAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☒	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☒	☐
c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filing, hydrological interruption, or other means?	☐	☒	☐	☐
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Comments:

A reconnaissance-level biological field survey of the project site was conducted by EMC Planning Group biologists Patrick Furtado, M.S., and Katherine Hardisty-Cranstone, on July 11, 2023, to document existing plant communities/wildlife habitats and assess the suitability of the site to support special-status species. Biological resources were documented in field notes, including plant and wildlife species observed, dominant plant communities, wildlife habitat quality, disturbance levels, and aquatic resources.

Prior to conducting the survey, EMC Planning Group biologists reviewed site plans, aerial photographs, natural resource database accounts, and other relevant scientific literature. This

included searching the U.S. Fish and Wildlife Service (USFWS) *Endangered Species Database* (USFWS 2023a), California Department of Fish and Wildlife (CDFW) *California Natural Diversity Database* (CDFW 2023a, CDFW 2023b), and California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants* (CNPS 2023a) to identify special-status plants, wildlife, and habitats known to occur in the vicinity of the project. A review of the USFWS National Wetlands Inventory (NWI) database was also conducted to identify jurisdictional aquatic features (wetlands, drainages, and/or riparian areas) on or adjacent to the project site (USFWS 2023b).

The approximately 50-acre project site is located one mile south of State Route 152 and one mile east of the San Luis Reservoir. The project site is on the eastern base of a steep hill, which rises several hundred feet above it. An ephemeral stream drains the hills to the south and flows along the eastern edge of the project site.

The project site is primarily vacant with a few shade structures and a recreational vehicle located in the northeast corner of the site. A large cattle ranching corral is located in the southeast corner. The site is surrounded on all sides by vacant foothills and the property boundary is bordered on the east by the Agua Fria Multi-Species Conservation Bank. The nearest development is a PG&E substation facility located approximately one mile northeast of the project site.

Wildlife habitat is composed entirely of nonnative annual grasses and is classified in the Manual of California Vegetation as wild oats and annual brome grassland (CNPS 2023b). This grassland habitat is dominated by ripgut brome (*Bromus diandrus*), wild oats (*Avena fatua*), and foxtail barley (*Hordeum murinum*). Other common plant species observed include vinegarweed (*Trichostema lanceolatum*), locoweed (*Astragalus* sp.), and Russian thistle *(Salsola tragus*). The grassland habitat has been intensively grazed by cattle and tule elk (*Cervus canadensis nannodes*).

Wildlife observed on the project site include tule elk, California ground squirrel (*Spermophilus beecheyi*), and several species of birds, including red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), and American crow (*Corvus brachyrhynchos*). Ground squirrel burrows were found throughout the site and possible signs of American badger (*Taxidea taxus*) burrowing activity were noted. Small rodents including mice (*Mus musculus*, *Reithrodontomys megalotis*, and *Peromyscus maniculatus*) and California vole (*Microtus californicus*) may also occur, along with common reptiles such as western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake (*Pituophis catenifer*), and northern Pacific rattlesnake (*Crotalus oreganus oreganus*) (Jameson 2004, Nafis, G. 2023).

The ephemeral stream is classified on the National Wetlands Map as seasonally flooded riverine habitat (USFWS 2023b). The streambed contained a few hydric plants, such as curly dock (*Rumex crispus*), and showed evidence of winter flood events. Developed areas, the ephemeral stream, and grassland habitat are shown on Figure 6, Habitat Map.

a. **Special-Status Species**. A search of the California Department of Fish and Wildlife *California Natural Diversity Database* was conducted for the site and the surrounding eight U.S. Geological Survey (USGS) quadrangles in order to generate a list of potentially occurring special-status species for the project vicinity. Records of occurrences for special-status plants were reviewed for those quadrangles in the CNPS *Inventory of Rare and*

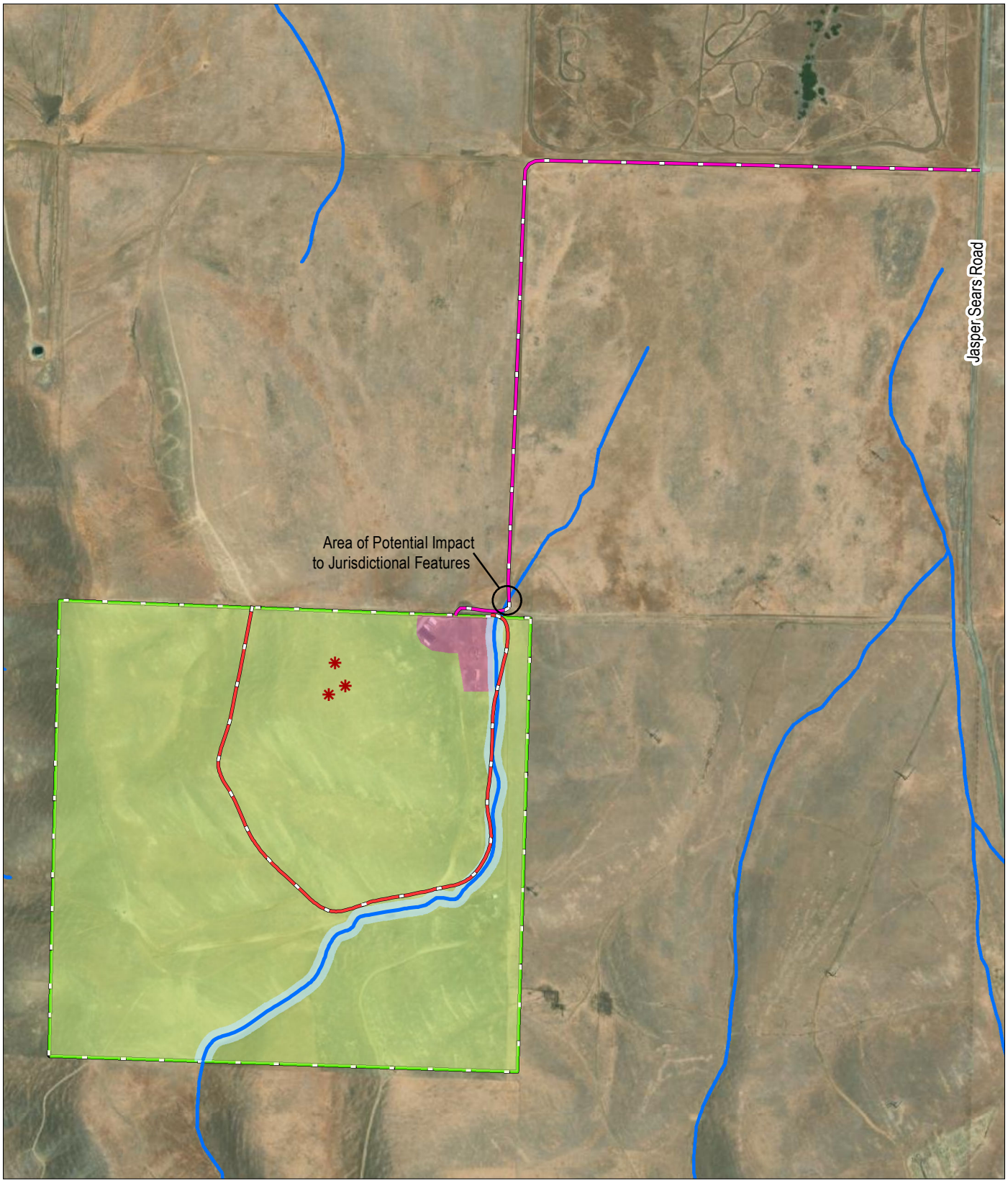
Endangered Plants of California. A USFWS *Endangered Species Program* threatened and endangered species list was also generated for Merced County, and the USFWS *Critical Habitat for Threatened & Endangered Species* online mapper was reviewed (USFWS 2023c). Special-status species in this report are those listed as Endangered, Threatened, or Rare or as candidates for listing by the USFWS and/or CDFW; as Species of Special Concern or Fully Protected species by the CDFW; or as Rare Plant Rank 1B or 2B species by CNPS. Appendix B, Special-Status Species with Potential to Occur in the Project Vicinity, presents tables with CNDDB results, which lists the special-status species documented within the project vicinity, their listing status, suitable habitat description, and their potential to occur on the project site. Figure 7, Special-Status Species in the Project Vicinity, presents a map of the CNDDB results.

Special-Status Plant Species. No special-status plants were observed during the biological survey. Suitable habitat for special-status plant species recorded as occurring in the vicinity of the project site was not found at the project site.

Special-Status Wildlife Species. Project impacts have been divided into two phases: Phase I includes immediate construction of the prayer room, parking area, internal roads, off-site access road improvements, and the leach field), and Phase II includes preparation of the burial sites over an approximate 200-year period. Because operation of the cemetery will result in frequent but small amounts of ground disturbance over 200 years and wildlife could move into the project area at any time, surveys for special-status species will be repeated every five years of project operation.

Special-status wildlife species with the potential to occur on the project site include American badger (*Taxidea taxus*), San Joaquin kit fox (*Vulpes macrotis mutica*), burrowing owl (*Athene cunicularia*), foraging golden eagle (*Aquila chrysaetos*), and foraging Swainson's hawk (*Buteo swainsoni*). Nesting birds may also occur on the project site. These species are addressed below.

American Badger. American badger is a California Species of Special Concern. It is an uncommon, permanent resident found throughout most of the state, except in the northern North Coast area. Typical habitats include drier open stages of most shrub, forest, and herbaceous habitats with friable soils suitable for burrows. Prey species include fossorial rodents such as rats, mice, chipmunks, ground squirrels, and pocket gophers. Badger diet shifts seasonally depending on the availability of prey and may also include reptiles, insects, earthworms, eggs, birds, and carrion. Mixed oak woodland, coastal scrub, and grassland habitats provide cover, drier soils for burrowing, and prey resources for this species. American badger signs were observed during the biological field survey in the form of lateral claw marks around California ground squirrel burrows, large throw piles, and numerous potential dens. Additionally, American badger was recorded approximately one mile north of the project site (Occ. No. 485, CDFW 2023b). As American badgers are known to occur in the region and could den and forage on the project site, project development could result in impacts to this species from disturbance, injury, or mortality during construction.



Source: ESRI 2023, Merced County GIS 2023, USFWS NWI 2020

0 800 feet

Property Boundary
Project Site
Existing Dirt Access Road
Potential Badger Burrows
Ephemeral Drainages
50-Foot Stream Buffer
Developed/Disturbed Area
Grassland

Figure 6

Habitat Map

Garden of Peace Cemetery Initial Study

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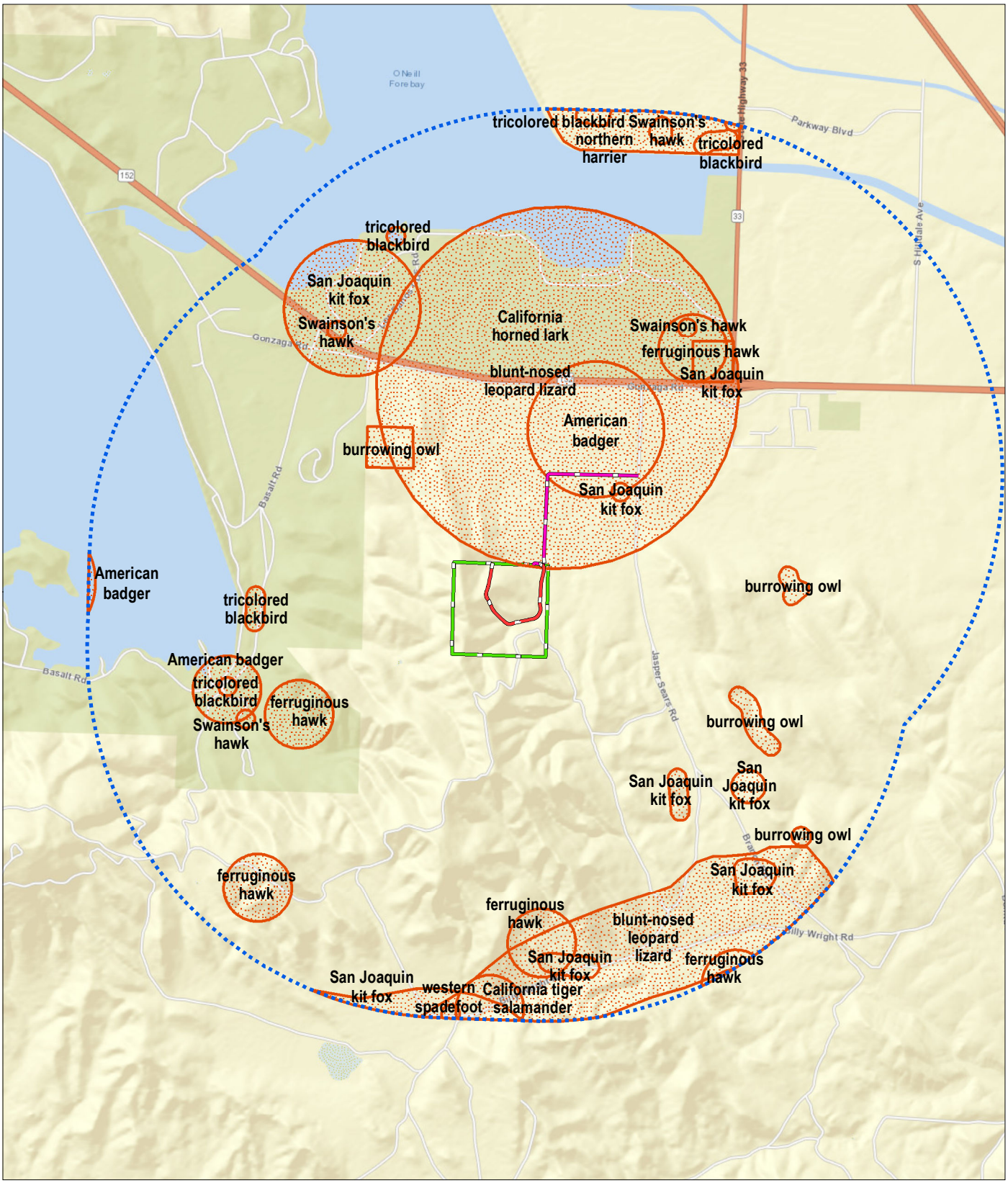

Figure 7

California Natural Diversity Database Map

Garden of Peace Cemetery Initial Study

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Loss or harm to American badger is considered a significant, adverse impact. Implementation of the following mitigation measures by the project applicant, with oversight by the Merced County Community and Economic Development Department, will reduce the potential, significant impact to American badger to a less-than-significant level:

Mitigation Measures

BIO-1 Prior to approval of a building permit for Phase I activities, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of special-status species potentially occurring in the project vicinity, including, but not limited to, American badger, San Joaquin kit fox, burrowing owl, Swainson's hawk, golden eagle, and nesting birds and raptors. Their habitats, general measures that are being implemented to conserve species as they relate to the project, and the boundaries within which construction activities will occur will be explained. Informational handouts with photographs clearly illustrating the species' appearances shall be used in the training session. All new construction personnel shall undergo this mandatory environmental awareness training. The project applicant shall document evidence of completion of this training by a letter report prepared by the biologist and submitted to the Merced County Community and Economic Development Department, where it will be kept on file, prior to issuance of a building permit.

The qualified biologist will train biological monitors selected from the construction crew by the construction contractor (typically the project foreman). Before the start of work each day, the monitor will check for animals under any equipment such as vehicles and stored pipes within active construction zones. The monitor will also check all excavated steep-walled holes or trenches greater than one foot deep for trapped animals. If a special-status species is observed within an active construction zone, the qualified biologist will be notified immediately and all work within 50 feet of the individual will be halted and all equipment turned off until the individual has left the construction area.

BIO-2 Not more than 14 days prior to the commencement of Phase I ground-disturbing construction activities, and once every five years during operation of the cemetery, a qualified wildlife biologist shall conduct surveys of the grassland habitat on site to identify any potential American badger burrows/dens. If the survey results are negative (i.e., no badger dens observed), a letter report confirming absence shall be prepared and submitted to the Merced County Community and Economic Development Department prior to issuance of a building permit for Phase I and once every five years during operation of the cemetery and no further mitigation is required.

If the results are positive (badger dens are observed), the qualified biologist shall determine if the dens are active by installing a game camera for three days and three nights to determine if the den is in use.

a. If the biologist determines that a den may be active, coordination with the California Department of Fish and Wildlife shall be undertaken to develop a suitable strategy to avoid impacts to American badger. The strategy may include the following: the biologist shall install a one-way door in the den opening and continue use of the game camera. Once the camera captures the individual exiting the one-way door, the den can be excavated with hand tools to prevent badgers from reusing them. If the biologist determines that the den is a maternity den, construction activities shall be delayed during the maternity season (February to August), or until the badgers leave the den on their own accord or the biologist determines that the den is no longer in use.

b. If the game camera does not capture an individual entering/exiting the den, the den can be excavated with hand tools to prevent badgers from reusing them.

c. After dens have been excavated and the absence of American badger confirmed, a letter report shall be prepared and submitted to the Merced County Community and Economic Development Department, prior to issuance of a building permit for Phase I and once every five years during operation of the cemetery.

Implementation of these mitigation measures would reduce the potential, significant impact to American badger to a less-than-significant level by requiring pre-construction training and surveys for active badger dens and the implementation of avoidance, minimization, and mitigation measures should they be found on the project site.

San Joaquin Kit Fox. The San Joaquin kit fox is a federally-listed endangered species and a state-listed threatened species. The present range of the San Joaquin kit fox extends from the southern end of the San Joaquin Valley, north to Tulare County, and along the interior Coast Range valleys and foothills to central Contra Costa County. San Joaquin kit foxes typically inhabit annual grasslands or grassy open spaces with scattered shrubby vegetation but can also be found in some agricultural habitats and urban areas. This species needs loose-textured sandy soils for burrowing, and they also need areas that provide a suitable prey base, including black-tailed hare, desert cottontails, and California ground squirrels, as well as birds, reptiles, and carrion.

According to the CDFW, San Joaquin kit foxes have become established in urban settings of the Central Valley, such as Bakersfield, Taft, and Coalinga (Harrison et. al 2011). When kit foxes have easy access to trash and pet food, they often lose fear of people and urban environments. In 1994, one individual was observed approximately a half mile to the northeast of the project site (Occ. No. 120, CDFW 2023b), and another approximately 0.33 miles to the southeast of the project site (Occ. No. 123, CDFW 2023). Prior to that, one individual was reported approximately 1.35 miles northwest of the project site (Occ. No. 875, CDFW 2023b) in 1975.

The likelihood of this species occurring on the project site is considered moderate. Loss of or harm to individual kit foxes could result if they are present on the site or seek shelter during construction within artificial structures, such as stored pipes or exposed trenches. Loss or harm to San Joaquin kit fox is considered a significant adverse impact. Implementation of Mitigation Measure BIO-1, which requires all new construction personnel to undergo environmental awareness training, and the following mitigation measure would reduce the potential, significant impact to San Joaquin kit fox to a less-than-significant level.

Mitigation Measure

BIO-3 The U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the *San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011) shall be implemented prior to initiation of and during any construction activity on the project site to avoid unintended take of individual San Joaquin kit foxes.

Preconstruction/pre-activity surveys for San Joaquin kit fox shall be conducted no less than 30 days prior to the beginning of ground disturbance and/or construction activities associated with Phase I that may impact San Joaquin kit fox, and once every five years during operation of the cemetery. The surveys shall include all work areas and a minimum 200-foot buffer of the project site. The preconstruction surveys shall identify kit fox habitat features on the project site, evaluate use by kit fox and, if possible, assess the potential impacts of the proposed activity. The status of all dens shall be determined and mapped.

If a natal/pupping den is discovered within the project area or within 200 feet of the project boundary, the applicant shall consult with the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service to establish an appropriate avoidance buffer. The avoidance buffer shall be maintained until such time as the burrow is no longer active and/or an incidental take permit is determined to be required and is obtained.

In addition, the following measures shall be observed:

a. Project-related vehicles shall observe a 20-mph speed limit in all project areas. Night-time construction shall be prohibited. Off-road traffic outside of the designated project area shall be prohibited.

b. To prevent inadvertent entrapment of kit foxes or other animals during the construction of Phase I, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures under number 11 of the Construction and Operational Requirements in the Standardized Recommendations must be followed.

c. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the U.S. Fish and Wildlife Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.

d. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from a construction or project site.

e. No firearms shall be allowed on the project site during construction activities.

f. To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets shall be permitted on site during construction activities.

g. Use of rodenticides and herbicides on the project site during construction or operation shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project related restrictions deemed necessary by the U.S. Fish and Wildlife Service. If rodent control must be conducted, zinc phosphide shall be used because of proven lower risk to kit fox.

h. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape.

i. Any contractor, employee, or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service.

Implementation of this mitigation measure would reduce the potential significant impact to San Joaquin kit fox to a less-than-significant level by requiring pre-construction surveys for kit fox and the implementation of avoidance, minimization, and mitigation measures should they be found on the project site.

Burrowing Owl. Burrowing owl is a California Species of Special Concern. Burrowing owls live and breed in burrows in the ground, especially in abandoned California ground squirrel burrows. Optimal habitat conditions include large open, dry and nearly level grasslands or prairies with short to moderate vegetation height and cover, areas of bare ground, and populations of burrowing mammals. This species has been observed approximately 0.75 miles away from the project site (Occ. No. 859, CDFW 2023b) and approximately 1.2 miles away (Occ. No. 507, CDFW 2023b). The project site's non-native grassland provides suitable foraging habitat for burrowing owl, and scattered ground squirrel and badger burrows observed on the site could be utilized for nesting habitat. If burrowing owl is present on or adjacent to the project site, construction activities could result in the loss or disturbance of individual animals. This would be a significant adverse environmental impact. Implementation of Mitigation Measure BIO-1, which requires all new construction personnel to undergo environmental awareness training, and the following mitigation measure would reduce the potential, significant impact to burrowing owl to a less-than-significant level.

Mitigation Measure

BIO-4 To avoid loss of or harm to burrowing owl, the following measures shall be implemented:

a. Prior to issuance of a building permit for Phase I, and once every five years during operation of the cemetery, to avoid/minimize impacts to burrowing owls potentially occurring within or immediately adjacent to the project site, the applicant shall retain a biologist qualified in ornithology to conduct surveys for burrowing owl. The qualified biologist shall conduct a two-visit (i.e., morning and evening) presence/absence survey at areas of suitable habitat on and adjacent to the project site boundary no less than 14 days prior to the start of construction or ground disturbance activities. Surveys shall be conducted according to the methods for take avoidance described in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) and the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no burrowing owls are found, a letter report confirming absence shall be prepared and submitted to the County of Merced Community Development Department and no further measures are required.

b. Because burrowing owls occupy habitat year-round, seasonal no-disturbance buffers, as outlined in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) and the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), shall be in place around occupied habitat prior to and during any ground disturbance activities associated with Phase I. The following table includes buffer areas based on the time of year and level of disturbance (CDFW 2012), unless a qualified biologist approved by the California Department of Fish and Wildlife verifies through non-invasive measures that either: 1) birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance Buffers (meters)		
		Low	Med	High
Nesting Sites	April 1 – Aug 15	200 m	500 m	500 m
Nesting Sites	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting Sites	Oct 16 – Mar 31	50 m	100 m	500 m

c. If burrowing owl is found and avoidance is not possible, burrow exclusion may be conducted by qualified biologists only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. Occupied burrows shall be replaced with artificial burrows at a ratio of one collapsed burrow to one constructed artificial burrow (1:1). Evicted burrowing owls may attempt to colonize or re-colonize an area that would be impacted, thus ongoing surveillance during project activities shall be conducted at a rate sufficient to detect burrowing owls if they return.

d. If surveys locate occupied burrows, consultation with the California Department of Fish and Wildlife shall occur to interpret survey results and develop a project-specific avoidance and minimization approach. Once the absence of burrowing owl has been confirmed, a letter report shall be prepared and submitted to the County of Merced Community and Economic Development Department.

Implementation of these mitigation measures would reduce the potential, significant impact to burrowing owl to a less-than-significant level by requiring pre-construction surveys for active nests/burrows and the implementation of avoidance, minimization, and mitigation measures should they be found on the project site.

Swainson's Hawk. Swainson's hawk is listed as a state-listed threatened species. Swainson's hawk is a long-distance migrator. Their nesting grounds occur in northwestern Canada, the western U.S., and Mexico and most populations migrate to wintering grounds in the open pampas and agricultural areas of South America (Argentina, Uruguay, southern Brazil). This round-trip journey may exceed 14,000 miles. The birds return to the nesting grounds and establish nesting territories in early March.

Swainson's hawk nests in the Central Valley of California are generally found in scattered trees or along riparian systems adjacent to agricultural fields or pastures. These open fields and pastures are their primary foraging areas. Suitable foraging habitat for Swainson's hawk is found in the open non-native grasslands at the project site, and there are two records of Swainson's hawks within two miles of the project site (Occ. Nos. 2,490 and 2,491, CDFW 2023b). However, no suitable nesting habitat was found on the project site during the survey.

Construction activities at the project site would likely not result in the loss of nesting sites occupied by Swainson's hawk. However, the change in land use from grassland to developed uses as a result of construction of Phase I would cause a loss of Swainson's hawk foraging habitat. Loss or harm to Swainson's hawk or its foraging habitat is considered a significant adverse impact. The California Department of Fish and Game's (now California Department of Fish and Wildlife) *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFG 1994) provides guidance on how impacts on Swainson's hawk are to be mitigated. Implementation of Mitigation Measure BIO-1, which requires all new construction personnel to undergo environmental awareness training, and the following mitigation measure would reduce the potential impact to Swainson's hawk to a less-than-significant level.

Mitigation Measure

BIO-5 If there is an active nest within ten miles of Phase I, the following measures shall be implemented to mitigate for the loss of Swainson's hawk and golden eagle foraging habitat:

a. Prior to ground-disturbing activities, suitable Swainson's hawk and golden eagle foraging habitat shall be preserved to ensure replacement of foraging habitat lost as a result of the project, as determined by a qualified biologist, in consultation with California Department of Fish and Wildlife.

b. The habitat value shall be based on Swainson's hawk nesting distribution and an assessment of habitat quality, availability, and use within Merced County. The mitigation ratio shall be consistent with the guidelines included in the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFG 1994). These guidelines specify that the mitigation ratio shall be 1:1 if there is an active nest within one mile of the project site, 0.75:1 if there is an active nest within five miles but greater than one mile away, and 0.5:1 if there is an active nest within 10 miles but greater than five miles away. If there is an active nest within one mile of the project site, the mitigation ratio can be reduced to 0.5:1 if all of the mitigation land can be actively managed for prey production. Such mitigation shall be accomplished through either the transfer of fee title or perpetual conservation easement. Preservation of all or a portion of the remainder of the subject parcel may be considered suitable mitigation. The mitigation land shall be located within the known foraging area within Merced County.

c. There is one potentially active Swainson's hawk nest within five miles of the project site (CNDDB Occ. No. 980) and one potentially active golden eagle nest one mile west of the project site (Observed during the July 2023 survey). To mitigate for the loss of foraging habitat for these nests, replacement foraging habitat shall be preserved at a mitigation ratio of 0.75:1 in consultation with California Department of Fish and Wildlife. Such mitigation shall be accomplished through either the transfer of fee title or perpetual conservation easement. The mitigation land shall be located within the known foraging area within Merced County.

Prior to construction of Phase I, an updated database search and field survey for Swainson's hawk and golden eagle nests within ten miles of the project site shall be conducted by qualified biologists. If additional nests are observed, foraging habitat shall be preserved following the mitigation ratios outlined above.

Implementation of this mitigation measure would reduce the potential significant impact to Swainson's hawk to a less-than-significant level by requiring foraging habitat mitigation and pre-construction surveys for Swainson's hawk nests on or near the project site.

Golden Eagle. Golden eagle is listed as a fully protected species in the state of California under Fish and game Code section 3511. Golden eagles are monogamous and yearlong residents of the state. They inhabit a variety of habitats such as forests, grasslands, and shrublands. Pairs often return to the same nest annually. Their nesting starts in January and continues until fledging at the end of summer (Cornell Lab of Ornithology 2023).

The open fields and pastures of the western United States are their primary foraging areas as they primarily feed on small to medium-sized mammals, such as the California ground squirrel. One golden eagle juvenile was observed soaring over the site and hunting during the July 2023 biological field survey. A suspected nest was also observed approximately 0.75 miles west of the site on a power line pole. Additionally, golden eagle sightings were reported in 1987 seven miles east of the project site (Occ. No. 120, CDFW 2023) and more recently in 2011, ten miles west of the project site (Occ. No. 335, CDFW 2023). Suitable foraging habitat for golden eagles is found in the open grasslands at the project site, and there is limited suitable nesting habitat on the electricity poles that run east to west across the northern boundary of the site.

Construction activities for Phase I would likely not result in the loss of nesting sites occupied by golden eagle. However, the change in land use from grassland to developed uses would cause a loss of golden eagle foraging habitat at the project site. Loss or harm to golden eagles or its foraging habitat is considered a significant adverse impact. Implementation of Mitigation Measure BIO-1, which requires all new construction personnel to undergo environmental awareness training, and mitigation measure BIO-5 would reduce the potential significant impact to golden eagle to a less-than-significant level by requiring foraging habitat mitigation and pre-construction surveys for golden eagle nests within the project vicinity.

Nesting Birds. Protected nesting bird species have the potential to nest in buildings or structures, on open ground, or in any type of vegetation, including trees, during the nesting bird season (January 15 through September 15). The project site contains open grassland areas suitable for open ground nesting. Construction activities, including ground disturbance, can impact nesting birds protected under the federal Migratory Bird Treaty Act and California Fish and Game Code, should nesting birds be present during construction of Phase I. If protected bird species are nesting adjacent to the project site during the bird nesting season, then noise-generating construction activities could result in the loss of fertile eggs, nestlings, or otherwise lead to the abandonment of nests. Implementation of Mitigation Measure BIO-1, which requires all new construction personnel to undergo environmental awareness training, and the following mitigation measure would reduce the potential impact to nesting birds to a less-than-significant level.

Mitigation Measure

BIO-6 To avoid impacts to nesting birds during the nesting season (January 15 through September 15), all Phase I construction activities should be conducted between September 16 and January 14, which is outside of the bird nesting season. If construction or project-related work is scheduled during the nesting season (February 15 to August 30 for small bird species such as passerines; January 15 to September 15 for owls; and February 15 to September 15 for other raptors), a qualified biologist shall conduct nesting bird surveys.

a. Two surveys for active bird nests will occur within 14 days prior to start of Phase I construction, with the final survey conducted within 48 hours prior to construction. Appropriate minimum survey radii surrounding each work area are typically 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys will be conducted at the appropriate times of day to observe nesting activities. Locations off the site to which access is not available may be surveyed from within the site or from public areas. If no nesting birds are found, a letter report confirming absence will be prepared and submitted to the County of Merced Community and Economic Development Department and no further mitigation is required.

b. If the qualified biologist documents active nests within the project site or in nearby surrounding areas, an appropriate buffer between each nest and active construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist shall conduct baseline monitoring of each nest to characterize "normal" bird behavior and establish a buffer distance, which allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, the qualified biologist or construction foreman shall have the authority to cease all construction work in the area until the young have fledged and the nest is no longer active. Once the absence of nesting birds has been confirmed, a letter report will be prepared and submitted to the County of Merced Community and Economic Development Department.

Implementation of these mitigation measures would reduce the potential significant impact to nesting birds to a less-than-significant level by requiring pre-construction surveys for active bird nests and the implementation of avoidance, minimization, and mitigation measures should they be found on the project site.

b. **Riparian Habitat or Sensitive Natural Communities**. There were no riparian habitats or sensitive natural communities observed at the project site.

c. **Waters of the United States**. A review of the National Wetlands Inventory online database was conducted to identify potential jurisdictional aquatic features on or adjacent to the project site (USFWS 2023b). Results showed an agricultural drainage channel

bordering the project site on the east and identified on the NWI as "intermittent riverine" habitat. It is also noted to have seasonal flooding where water is present for extended periods of time, but is typically gone by the end of the rainy season. Drainage channels are defined by their ordinary high-water marks on channel banks and their connection to other waterways or aquatic features.

The drainage channel did not contain water, but did contain some wetland vegetation, green grassland vegetation where the surrounding area was all brown, and cracked portions of mud indicating winter/spring inundation. The drainage appeared to originate offsite and flow offsite. As this drainage may have connectivity to tributaries or natural streams, they may be subject to USACE jurisdiction under the Clean Water Act. The drainage would likely be considered jurisdictional by the Central Valley Regional Water Quality Control Board and California Department of Fish and Wildlife.

Both Phase I and II could impact these adjacent waterways and result in the loss of jurisdictional wetlands and other waters of the U.S. Improvements along the road easement where it crosses the ephemeral drainage may also result in the loss of jurisdictional wetlands and other waters of the U.S. Loss of wetlands is considered a significant adverse impact. Implementation of the following mitigation measures would reduce construction impacts to wetlands and other waters of the U.S. to a less-than-significant level.

Mitigation Measures

BIO-7 No development or construction activities shall occur within 50 feet of the stream centerline (100 feet total width, based on existing topography). Along with the temporary silt fencing discussed above, the applicant shall construct a permanent wildlife-friendly wooden jack fence along the stream at a 40-foot distance from the stream centerline that will allow free travel of wildlife under, over, or around the fence while still maintaining an effective barrier from disturbance from Phase I construction and Phase II operations. The bottom rail of the fencing shall be 18 inches above ground and the top rail at 40 inches above ground. This fence shall be maintained for the lifespan of all cemetery operations at the site.

BIO-8 Prior to initiation of ground disturbance or construction along the road easement that affect the drainage channel, the applicant will retain a qualified biologist to determine the extent of potential wetlands and waterways regulated by the United States Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife.

If the USACE claims jurisdiction, the applicant shall obtain a Clean Water Act Section 404 Nationwide Permit. If the impacts to the drainage does not qualify for a Nationwide Permit, the applicant will proceed in obtaining an Individual Permit from the United States Army Corps of Engineers. The applicant will then coordinate with the Regional Water Quality Control Board to obtain a Clean

Water Act Section 401 Water Quality Certification. If necessary, the applicant will coordinate with the California Department of Fish and Wildlife to obtain a Streambed Alteration Agreement.

To compensate for temporary and/or permanent impacts to wetlands and Waters of the U.S. that would be impacted as a result of the proposed project, mitigation shall be provided as required by the regulatory permits. Mitigation would be provided through one of the following mechanisms:

a. A Wetland Mitigation and Monitoring Plan shall be developed that outlines mitigation and monitoring obligations for temporary impacts to wetlands and other waters as a result of construction activities. The Wetland Mitigation and Monitoring Plan would include thresholds of success, monitoring and reporting requirements, and site-specific plans to compensate for wetland losses resulting from the project. The Wetland Mitigation and Monitoring Plan shall be submitted to the appropriate regulatory agencies for review and approval during the permit application process.

b. To compensate for permanent impacts, the purchase and/or dedication of land to provide suitable wetland restoration or creation shall ensure a no net loss of wetland values or functions. If restoration is available and feasible, a minimum 1:1 impact to mitigation ratio would apply to projects for which mitigation is provided in advance.

   For improvements on the project site or off-site improvement locations, the applicant shall comply with terms and conditions of the permits, including measures to protect and maintain water quality, restore work sites, and mitigation to offset temporary and/or permanent wetland impacts. The applicant shall be responsible for implementation of this mitigation measure prior to issuance of a building permit.

BIO-9 Prior to initiation of Phase I ground disturbance or construction activities, the applicant shall protect waterways adjacent to the project site through the use of best management practices for erosion control and vehicle/equipment fueling. This will include the installation of silt fencing between the project site and adjacent waterways. The silt fencing will prevent soil from washing off the project site into waterways and exclude construction activities from the drainage channels.

Potential fuel spills and leaks from construction vehicle/equipment fueling operations shall be prevented from entering waterways. Designated fueling areas should be on a level grade and must be at least 50 feet from any waterway. The fueling area should be protected by a berm to prevent any runoff from leaving the fueling area.

Implementation of these mitigation measures shall ensure that impacts to potentially jurisdictional wetlands and waterways adjacent to the project site are mitigated to a less-than-significant level by requiring best management practices for erosion control and vehicle fueling and by the establishment of temporary silt fencing and a permanent wildlife-friendly fence.

d. **Wildlife Movement.** Terrestrial species must navigate a habitat landscape that meets their needs for breeding, feeding and shelter. Natural and semi-natural components of the landscape must be large enough and connected enough to meet the needs of all species that use them. Wildlife movement corridors provide connectivity between habitat areas, enhancing species richness and diversity, and usually also provide cover, water, food, and breeding sites.

The project site is not located within any previously defined essential connectivity areas (CDFW 2023c). Due to the limited number of proposed physical buildings onsite (one, 1,500 square foot building), the project would not hinder major wildlife movement. As such, the proposed project would have a less-than-significant impact on wildlife movement. However, light pollution from any artificial lighting of the cemetery could alter the behavior of many wildlife species and interfere with their local movement. Interference with the movement of wildlife species is considered a significant adverse impact.

Based on communication with County staff, the project involves light posts at the entrance to the site and at the prayer room (Valeria Renteria, email message, October 3, 2023). Because the cemetery operations close at 5:00 PM, nighttime lighting during most of the year would not occur. During the winter months when the sun goes down earlier, these lights may be used for a short period of time while staff and visitors are leaving the site. Implementation of the following mitigation measure is required to prevent light pollution by the project applicant, with oversight by the Merced County Community and Economic Development Department, to reduce the potential impact to wildlife movement to a less-than-significant level.

Mitigation Measure

BIO-10 All exterior light fixtures at the cemetery shall be hooded, with lights directed downward. Prior to issuance of a building permit, plans for lighting shall be subject to the review and approval by the Merced County Community and Economic Development Department to verify that light pollution reduction measures are included.

e. **Local Biological Resource Policies/Ordinances.** The Natural Resources Element of the Merced County 2030 General Plan has goals in place for conserving local biological resources. The Natural Resources Element provides direction regarding the conservation, development, and use of natural resources in and around Merced County, including agricultural land, water quality, vegetation and wildlife, and air quality.

The 2030 Merced County General Plan contains the following policies associated with biological resources that are applicable to the proposed project:

Policy NR-1.1 - Habitat Protection. Identify areas that have significant long-term habitat and wetland values including riparian corridors, wetlands, grasslands, rivers and waterways, oak woodlands, vernal pools, and wildlife movement and migration corridors, and provide information to landowners.

Policy NR-1.13: Wetland Setbacks (RDR) Require an appropriate setback, to be determined during the development review process, for developed and agricultural uses from the delineated edges of wetlands.

Policy NR-1.21 - Special Status Species Surveys and Mitigation. Incorporate the survey standards and mitigation requirements of state and federal resource management agencies for use in the County's review processes for both private and public projects.

Policy NR-4.5: Light Pollution Reduction (RDR) Require good lighting practices, such as the use of specific light fixtures that reduce light pollution, minimize light impacts, and preserve views of the night sky.

Mitigation measures contained in this section, such as the stream setback and the prevention of light pollution, will mitigate impacts to biological resources to a less-than-significant level. With these considerations, the proposed project would not conflict with local regulations related to biological resources.

Tree Protection. No trees are present on the project site.

f. **Conservation Plans.** The project site is immediately northwest of the Agua Fria Multi-Species Conservation Bank (Figure 2, Aerial Photograph). The conservation bank was established in 2001 to offset adverse impacts to burrowing owl and San Joaquin kit fox; however, other special-status animal species that would also benefit from establishment of the bank were identified, including protected amphibians, reptiles and birds (H.T. Harvey and Associates 2001). Currently, there are no credits available at this bank and it is being managed for conservation of San Joaquin kit fox and burrowing owl in perpetuity. Although adjacent to the Bank, the proposed project would have no effect on the Agua Fria Multi-Species Conservation Bank property.

Outside of the Agua Fria Conservation Bank, there are no critical habitat boundaries, habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans applicable to the project site.

5. CULTURAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5?	☐	☐	☐	☒
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	☐	☒	☐	☐
c.	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Comments:

a. On June 6, 2023, Vanessa Potter, MA, a registered professional archaeologist, conducted a pedestrian survey of the project area with negative results. No historical materials were observed.

On June 16, 2023, an archival database search was conducted through CCalC (12541I), of the California Historical Resources Information Center (CHRIS) affiliated with the State of California Office of Historic Preservation in Sacramento. The CCalC was provided with a location map and coordinates of the project area, with a request of the archaeological and non-archaeological resources within ¼ mile radius of the project site boundary. No known cultural resources were located within the project area or within the ¼ mile radius. Also, there were no reports written that were based within the project area or within a ¼ mile radius.

b. No cultural materials were located during the pedestrian survey. However, unknown buried significant historic or unique archaeological resources could still be present at the project site. Such resources, if present, could be damaged or destroyed by ground disturbing construction activities associated with the project. This would be a significant impact. Implementation of the mitigation measure CUL-1 would reduce this potential impact to a less-than-significant level.

Mitigation Measure

CUL-1 In the event that archaeological resources are encountered during ground disturbing activities, contractor shall temporarily halt or divert excavations within a 50 meter (165 feet) of the find until it can be evaluated. All potentially significant archaeological deposits shall be evaluated to demonstrate whether the resource is eligible for inclusion on the California Register of Historic Resources, even if discovered during construction. If archaeological deposits are encountered, they will be evaluated and mitigated simultaneously in the timeliest

manner practicable, allowing for recovery of materials and data by standard archaeological procedures. For prehistoric archaeological sites, this data recovery involves the hand-excavated recovery and non-destructive analysis of a small sample of the deposit. Historic resources shall also be sampled through hand excavation, though architectural features may require careful mechanical exposure and hand excavation.

Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance by a qualified Archaeologist. Significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites.

c. With no evidence of prehistoric or historic sites within the immediate project area or in a quarter mile buffer, the likelihood of the project disturbing human remains is low. However, there remains the possibility that ground disturbing activities associated with the proposed project could damage or destroy previously undiscovered Native American human remains. Disturbance of Native American human remains would be a significant impact. The following mitigation would reduce this potential impact to a less-than-significant level.

Mitigation Measure

CUL-2 In the event that human remains (or remains that may be human) are discovered at the project site, Public Resource Code Section 5097.98 must be followed. All grading or earthmoving activities shall immediately stop within 50 meters (165 feet) of the find. The Merced County Coroner will be notified immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b).

Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the project proponent shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (Public Resource Code [PRC] § 5097). The coroner shall contact the Native American Heritage Commission (NAHC) to determine the most likely descendant(s) (MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD will determine the most appropriate means of treating the human remains and associated grave artifacts, and shall oversee the disposition of the remains. In the event the NAHC is unable to identify an MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate

dignity within the project area in a location not subject to further subsurface disturbance if: a) the Native American Heritage Commission is unable to identify the MLD or the MLD failed to make a recommendation within 48 hours after being allowed access to the site; b) the descendent identified fails to make a recommendation; or c) the landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

6. ENERGY

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Comments:

a. This analysis of energy impacts is qualitative because no quantified threshold of energy demand exists at which energy demand could be considered wasteful, inefficient or unnecessary, either during construction or project operations. Rather, energy effects are examined in light of the project type, related development guidance provided in the general plan, the robust suite of plans and regulations promulgated by the State that directly and indirectly result in reduced energy consumption. For informational purposes, estimates of energy demand from the most common forms of energy used in land use projects – electricity, natural gas, and transportation fuel - are provided.

As shown in Table 5.11.1, Unmitigated Operational Energy Consumption, in the CalEEMod results (Appendix A, p. 37), electricity demand would be approximately 17,796 kilowatt hours per year. For context, according to the California Energy Commission Energy Consumption Data Management System, in 2021, total electricity consumption in Merced County was 3,129,000,000 kilowatt-hours per year. Estimated project electricity demand would represent 0.0006 percent of that demand (California Energy Commission. Energy Consumption Data Management System 2021).

Regarding natural gas, the Energy Consumption Data Management System database shows that in 2021, total natural gas consumption in Merced County was 104,558,149 therms. Section 5.11, Operational Energy Consumption – Natural Gas, in the project's CalEEMod results show that projected natural gas demand would be about 61,458 British thermal unit (Btu) per year or approximately 0.61 therms per year, which would account for less than 0.001 percent of countywide demand in comparison to 2021 values.

The proposed project would generate vehicle trips from visitors and employee travel that will result in transportation fuel demand. The analysis in Section 17.0, Transportation, concludes that the proposed project would generate less than 30 vehicle trips per day, which is well below the 1,000 daily trip thresholds of significance. This suggests that transportation fuel demand may be lower than would be expected for a project whose vehicle miles traveled impact is significant.

A project could be considered to result in significant wasteful, inefficient, or unnecessary energy consumption if its energy demand is extraordinary relative to common land use types. A cemetery/place of worship is a common land use type and not considered to be extraordinarily energy consumptive relative to similar land use types in the county. The project energy demand is not considered to be wasteful or unnecessary.

The general plan includes policies and implementing actions that address topics including, but not limited to: energy conservation, energy conservation through land use and planning, greenhouse gas reduction planning, reducing transportation related greenhouse gases, renewable energy use and production, and green building. The Merced County general plan EIR concluded that plan implementation would result in less-than-significant impacts due to wasteful, inefficient and unnecessary energy consumption, and the need for new and improved energy transmission facilities (County of Merced 2013).

A multitude of State regulations and legislative acts are aimed at reducing electricity/natural gas demand, improving energy efficiency in new construction, promoting alternative energy production and use efficiency, and enhancing vehicle fuel efficiency. Required compliance with many of the regulations is not within the direct control of local agencies or individual project developers, but their implementation can reduce energy demand from land use projects both directly and indirectly. Representative examples that are relevant to the proposed project include:

- California Renewables Portfolio Standard to increase the percentage of utility provided electricity derived from renewable sources;
- The California Energy Code, Building Energy Efficiency Standards (Title 24, Part 6) are uniformly applied building codes to reduce energy consumption and provide energy-efficiency standards for residential and non-residential buildings; and
- California Green Building Standards (Title 24, Part 11), also known as CALGreen, identify green building standards for statewide residential and non-residential construction that are equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality.

Site preparation and grading, as well as the construction of the proposed 1,500 square-foot prayer room, parking improvements, and improvements to the access road, would demand energy primarily in the form of fuel used in construction equipment. Common construction equipment types such as excavators, backhoes, compactors and haul trucks would be employed. However, construction related activities would be minimal and the fuel use would not be wasteful since the proposed equipment used would conform to existing applicable regulatory standards.

Given the considerations summarized above, the proposed project would have a less-than-significant energy impact.

b. At this time, there are no regulations at the State or local level that would mandate that the proposed project include on-site renewable energy sources. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

7. GEOLOGY AND SOILS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	(1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
	(2) Strong seismic ground shaking?	☐	☒	☐	☐
	(3) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	(4) Landslides?	☐	☐	☐	☒
b.	Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d.	Be located on expansive soil, creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☒	☐	☐
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Comments:

a. **Fault Rupture**. The project site is not located within an Alquist-Priolo Earthquake Fault Zone (California Department of Conservation 2023). Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated

on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

Ground Shaking. The nearest earthquake fault zone (Ortigalita Fault) is approximately four miles northwest from the project site; therefore, it is likely that strong seismic ground shaking would occur at the project site. Mitigation Measure GEO-1, provided below, requires the preparation of a soils/geotechnical report to be used for the structural design of the prayer room. The applicant would be required to implement all recommendations outlined in the soils/geotechnical report ensuring that the structural integrity of the prayer room holds even during strong seismic shake. Therefore, implementation of Mitigation Measure GEO-1 would ensure that less than significant impacts occur associated with the proposed project its potential to cause adverse effects including the risk of loss, injury, or death involving strong seismic ground shaking.

Mitigation Measure

GEO-1 The applicant shall obtain a soils/geotechnical report for use in the structural design of the proposed prayer room. This report will also provide recommendations for the design of the septic system proposed on the site. This report must be submitted for review and approval by the County Building and Safety Division prior to issuance of a building permit.

Liquefaction. According to the California Department of Conservation, the project site is not located in a liquefaction hazard zone (California Department of Conservation 2023). Liquefaction hazards are reasonably assumed to be present in the wetland areas of Merced County, adjacent to the San Joaquin River and west of State Route 99 (Merced County 2012). The project site, however, is more than 10 miles and 25 miles southwest of the San Joaquin River and State Route 99, respectively. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction.

Landslide. Although the 164-acre parcel contains steep hillsides, disturbance of the soil would occur in the northeast portion of the 50-acre project site where it's gently sloping. According to the Department of Conservation, the project site is not located in a landslide hazard zone (California Department of Conservation 2023). Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

b. The project site soil (Oneil silt loam, 30 to 50 percent slopes) (Merced County 2023) has high erosion risk and moderately slow permeability rate (Soil Conservation Service 1983, p. 119), which can aid in the site's potential to result in soil erosion during construction activities.

The proposed project involves construction and grading activities that could result in soil erosion on the project site. Soil erosion would be minimized through compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges associated with construction and land disturbance activities.

Pursuant to County Code Chapter 9.53, Regulation of Stormwater, the preparation of a Sediment Control Plan is required as it will designate the type and location of best management practices to be incorporated into construction of the proposed project and how to prevent or minimize soil erosion from occurring. Additionally, the County Building and Safety Division requires that the applicant obtain a soils/geotechnical report for their designer to use for the structural design of the 1,500 square foot prayer room building (Charles Mendenhall, application comment letter, no date). This report would analyze the project site's soils and provide recommendations regarding the proposed septic system as well as recommendations ensuring structural integrity of the prayer room.

It is not likely that the operation of the proposed cemetery would result in soil erosion as each grave is dug only as needed, which at most is once per day) and then covered and compacted after it is filled.

Implementation of Mitigation Measure GEO-1, presented in checklist question "a" above, as well as the project's required compliance with the NPDES and the County Code Chapter 9.53, would ensure that impacts associated with soil erosion would be reduced to a less-than-significant level.

c-d. The applicant is required to prepare a soils/geotechnical report. This report will identify any unstable soils, including potential expansive properties, that may be present on the project site. Implementation of Mitigation Measure GEO-1 would ensure that the proposed project would result less than significant impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse and expansive soils.

e. The proposed project includes a septic system (tank and leach field) for waste disposal associated with the restroom in the proposed prayer room.

The Merced County Division of Environmental Health enforces design standards for the operation and maintenance of on-site sewage disposal systems to minimize potential pollution of groundwater and surface water features. The Merced County Division of Environmental Health requires that every occupied structure in the County that cannot be connected to a public wastewater treatment system must construct an onsite wastewater treatment system under permit from the Merced County Division of Environmental Health, consisting of an onsite wastewater treatment system with effluent discharging into an approved subsurface disposal field. All systems must meet the minimum design standards of the Merced County Division of Environmental Health (Merced County 2012, p. 10-25).

The County Building and Safety Division requires that the applicant obtain a soils/geotechnical report (Charles Mendenhall, application comment letter, no date). This report will provide recommendations for the design of the proposed septic system at the site.

In addition, the proposed project is required to comply with the regulations outlined in County Code Chapter 9.54, Regulation of On-Site Wastewater Treatment Systems. Compliance with these requirements in addition to Mitigation Measure GEO-1 would ensure that impacts associated with onsite soils and the use of a septic system are less than significant.

f. There are no known paleontological resources on the project site; however, the General Plan EIR states that there is evidence to suggest that paleontological resources may be encountered virtually anywhere within Merced County (Merced County 2012, p. 9-14).

Therefore, it is possible that paleontological resources could be accidentally discovered during construction activities associated with development of the project site. Directly or indirectly destroying a unique paleontological site is considered a significant, adverse environmental impact. Implementation of the following mitigation measure would ensure this potential impact would be less than significant.

Mitigation Measure

GEO-2 The following language shall be included on all building permits: "If paleontological resources are discovered during demolition and earthmoving activities, work shall stop within 100 feet of the find until a qualified paleontologist can assess if the find is unique and, if necessary, develop appropriate treatment measures in consultation with the Merced County Community and Economic Development Department."

8. GREENHOUSE GAS EMISSIONS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Comments:

a. Merced County has not adopted a plan for reducing greenhouse gas emissions (GHG), nor has the County adopted a threshold of significance for GHGs. The air district has not developed or adopted a threshold of significance for GHGs from land use development projects, such as the proposed project. In light of the absence of local or regional GHG threshold guidance, the methodology described below is used.

The significance of GHG emissions from the proposed project is evaluated based on a methodology which examines mobile source emissions separately from the balance of GHG emissions sources. This methodology looks first at mobile source emissions in the context of vehicle miles traveled (VMT) generated by the project and a quantified threshold of significance for VMT as recommended by the Merced County Association of Governments and adopted by the County in March 2023. GHG emissions from other project sources (e.g., electricity, area sources, water, wastewater) are quantified and qualitatively compared to values derived by modifying quantified thresholds of significance formerly recommended by the adjacent air district.

This "bifurcated" analysis approach is supported by several published sources. These include: 1) *California Office of Planning and Research's Discussion Draft CEQA and Climate Change Advisory* (December 2018), which discusses CEQA streamlining for GHG impacts by examining VMT effects (mobile source emissions) separately from energy and natural gas sources; 2) *California Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018b), which provides guidance on evaluating VMT impacts that affect the State's ability to meet it long-term climate goals; and 3) *Association of Environmental Professionals' Final Whitepaper - Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California* (October 2016), which identifies two hybrid analysis concepts using Senate Bill 375 and Senate Bill 743 that each evaluate transportation (mobile source) GHG emissions separately from non-mobile sources. Senate Bill 375 was enacted in 2008. Its overall purpose is to reduce GHGs from passenger vehicles by setting regional emissions targets

allowing local communities to align their land use and transportation policies to help achieve emission reductions. Senate Bill 743, enacted in 2013, was designed to help achieve state climate policy and sustainability goals (See Pub. Resources Code, § 21099; CEQA Guidelines, § 15064.3.). It eliminates traffic delay as an environmental impact under CEQA and instead, requires an assessment of VMT as a basis to encourage development that reduces VMT and associated mobile source GHG emissions.

VMT and Mobile Source GHG Emissions. Mobile source emissions are directly related with the VMT associated with a specific land use and/or development. The VMT impacts of the project are discussed in Section 17.0, Transportation. The proposed project would generate vehicle trips far below the Merced County Association of Governments' 2022 VMT Thresholds and Implementation Guidelines, which are used as reference by Merced County. Projects that generate fewer than 1,000 daily trips may be screened out from the need for a VMT analysis (Merced County Association of Governments 2022). Therefore, a VMT analysis is not required and it can be assumed that the proposed project would not result in significant VMT impacts. Given that the project VMT impact is less than significant, the mobile source GHG emissions the project generates can be assumed to have a less-than-significant impact. Note that the CalEEMod results show a value for mobile-source emissions. This result is not reported here, as it does not affect this VMT-based analysis approach for mobile source GHG emissions.

Non-Mobile Source GHG Emissions. GHG emissions from construction and operation of the proposed project were estimated using CalEEMod. Refer to Section 3.0, Air Quality, for modeling methodology and assumption. The detailed CalEEMod modeling results are included as Appendix A.

Construction activity, including operation of off-road construction equipment, would generate approximately 120 metric tons of carbon dioxide equivalent (MT CO_2e). To account for the contribution of construction emissions to the project's non-mobile source annual emissions inventory, construction emissions are amortized over an assumed 30-year operational timeframe; amortized annual emissions equal 4.0 MT CO_2e.

Project operations would generate GHG emissions from energy use (electricity), waste generation, and water use. Projected unmitigated emissions from these sources are summarized in Table 4, Non-Mobile Unmitigated Operational GHG Emissions. Refer to Section 2.5, Operations Emissions by Sector, Unmitigated, of the CalEEMod results in Appendix A for reference to these emissions volumes.

As previously noted, the air district does not provide guidance for evaluating GHG impacts from land development projects. Consequently, the air district has not developed a threshold of significance for such impacts. In the absence of this direction, a former threshold of significance developed by the adjacent air district – the Bay Area Air Quality Management District (BAAQMD), is used as reference for qualitatively assessing the relative magnitude of non-mobile source emissions from the proposed project.

Table 4 Non-Mobile Unmitigated Operational GHG Emissions

Emission Sources	GHG Emissions[1,2]
Area	0.02
Energy	4.93
Water	0.29
Waste	2.67
Refrigerant	<0.005
Total	8.00

SOURCE: CalEEMod version 2022.1
NOTE:
1. Expressed in MT CO_2e.
2. Results may vary due to rounding.

BAAQMD provided guidance for assessing GHG impacts in its 2017 California Environmental Quality Act Air Quality Guidelines, and as part of that guidance, derived a bright line threshold of 1,100 MT CO_2e/year. The substantial evidence used by the agency to develop the threshold is included its CEQA guidance documentation. The bright line threshold was developed to guide new development within the district with the goal of meeting the State's Assembly Bill 32 statewide GHG emissions reduction target of 20 percent below 1990 levels by 2020. Assembly Bill 32 was passed in 2006.

With the subsequent passage of Senate Bill 32 in 2016, the state set a more restrictive GHG reduction target of 40 percent below 1990 levels by 2030. Consequently, after 2020, the bright line threshold identified would no longer have been valid. Reducing these bright line thresholds by an additional 20 percent, to 880 MT CO_2e/year would approximate a bright line value of 40 percent below 1990 levels to meet the 2030 emissions reduction target. The project would be operational in 2024, so the 2030 target is applicable. BAAQMD did not adopt the scaled down value as a threshold of significance, nor has the air district or County adopted either value. Rather, as noted above, this value is being used to qualitatively assess the relative magnitude of non-mobile source emissions from the proposed project. The non-mobile source project emissions of 8 MT CO_2e/year are approximately one percent of the noted scaled down value, which indicates that the non-mobile source emissions would not be considered to have a significant impact.

In 2022, BAAQMD updated its GHG threshold of significance guidance to be project design/performance based, with a goal to achieve GHG reductions needed to meet the State's more aggressive 2045 GHG reduction target as embodied in Senate Bill 100. Nevertheless, the analysis approach here is germane for a project that becomes operational prior to 2030.

Given that neither the project mobile source GHG emissions or the non-mobile source emissions would be significant, the project would have a less-than-significant impact from generation of GHG emissions.

b. As described in checklist question "a" above, neither the County nor air district have adopted plans for reducing GHG emissions. Consequently, the significance of mobile source GHG impacts is evaluated in the context of state legislation embodied in Senate Bill 743, and the non-mobile source GHGs are evaluated in the context of a scaled quantified threshold of significance that had been adopted by the BAAQMD as part of its prior plan for reducing GHG emissions. Because the project impacts are less than significant, the project would have no impact from conflict with regulations or the referenced plan for reducing GHG emissions.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☐	☐	☐	☒
e.	For a project located within an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or a public-use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Comments:

a. The project as a cemetery will not consist of routine transport, use, and disposal of hazardous materials. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

b. The project site has never been developed or used in any way that would result in the potential to involve contaminants in the soils that would be disturbed during construction and release hazards into the environment. Operation of the proposed project as a

cemetery would also not involve hazards that could be released into the environment. Therefore, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c. The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste and there are no schools within one-quarter mile of the project site. Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. The following lists were reviewed:

- Hazardous Materials Waste and Substances Sites from the Department of Toxic Substances Control EnviroStor Database (Department of Toxic Substances Control 2023);
- Leaking Underground Storage Tank Sites from the State Water Board's GeoTracker Database (State Water Resources Board 2023);
- Solid Waste Disposal Sites Identified by Water Board with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit (California Environmental Protection Agency 2023a);
- "Active" Cease and Desist Order and Cleanup and Abatement Orders from Water Board (California Environmental Protection Agency 2023b); and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by the Department of Toxic Substances Control (California Environmental Protection Agency 2023c).

The project site is not located on or adjacent to any of these lists. Therefore, the proposed project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

e. The project site is not within an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or a public-use airport. Therefore, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area.

f. The proposed project involves the development of gravel roads within the project site and a proposed gravel road on an easement connecting the entrance of the site to Jasper Sears Road. However, the proposed project does not involve any changes to County roadways and would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g. According to the California Department of Forestry and Fire's Fire Hazard Severity Zone Viewer, the 164-acre property boundary is located primarily within a high fire hazard severity zone with some moderate fire hazard severity zones while the 50-acre project site consists mostly of moderate fire hazard severity zones with some high fire hazard zones in the southwestern edges (CalFire 2023). However, the nature of the proposed project as a cemetery would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

10. HYDROLOGY AND WATER QUALITY

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(1)	Result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
(2)	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
(3)	Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(4)	Impede or redirect flood flows?	☐	☐	☐	☒
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Comments:

a. **Construction Water Quality Impacts**. Construction activities would involve some soil disturbance associated with the 1,500 square foot prayer room, the parking lot, and the gravel roads. Delivery, handling and storage of construction materials and wastes; equipment refueling; and construction equipment use and maintenance could result in spills of oil, grease, or related pollutants. Improper handling, storage, disposal of fuels and materials or improper cleaning of machinery also are potential sources of water pollution associated with construction activities.

New development is required to meet National Pollutant Discharge Elimination System (NPDES) requirements. The NPDES permit program for storm water and construction site runoff is designed to reduce discharge of pollutants in storm water to the maximum extent practicable to protect water quality and beneficial uses of surface waters. The applicant will be required to provide plans and calculations from a licensed engineer or architect that are to be submitted and a permit obtained before starting any construction (Charles Mendenhall, application comment letter, no date). These plans will include a Sediment Control Plan, pursuant to County Code Chapter 9.53, Regulation of Stormwater, which will designate the type and location of best management practices to be incorporated into construction of the proposed project.

The project may disturb more than one acre of soil and, therefore, coverage under the Construction General Permit for Discharges of Storm Water Associated with Construction Activity per NPDES requirements must be obtained. The Construction General Permit requires that individual developers prepare and implement a Storm Water Pollution Prevention Plan. A Storm Water Pollution Prevention Plan identifies best management practices (filters, traps, bio-filtration swales, etc.) consistent with the requirements of the NPDES and County Code Chapter 9.53, Regulation of Stormwater, that must be implemented during construction. The practices are intended to reduce potential impacts on surface water by reducing the potential for sediment or other water quality contaminants to be discharged directly or indirectly into a surface water body and to ensure that urban runoff contaminants and sediment are minimized during site preparation and construction periods.

The project's compliance with the NPDES requirements would ensure that applicable water quality standards are met and that water quality impacts from construction activities will be less than significant.

Post-Construction (Operational) Water Quality Impacts. The proposed project would alter existing storm water drainage conditions by replacing undeveloped land with impervious surfaces such as the proposed prayer room, parking lot, and internal and external roadways. The change in surface conditions would result in an increase in storm water runoff relative to existing conditions where a significant portion of storm water percolates though exposed soil back to groundwater. Increases in the rate or volume of storm water delivered into receiving waters can cause erosion of downstream drainage courses.

The project plans will be required to show how stormwater would be retained onsite or how the stormwater would be treated using design measures before being discharged from the site, consistent with County Code Chapter 9.53, Regulation of Stormwater. Best management practices will be required in order for the project to meet the post-construction storm water management requirements of the Central Valley Regional Water Quality Control Board, whose primary objective in establishing these requirements is to ensure that land development projects reduce pollutant discharges to the maximum extent practicable and to prevent storm water discharges from causing or contributing to a violation of receiving water quality standards.

Required compliance with post-construction water quality performance standards would ensure that applicable water quality standards would be met. The project impact on water qualify would be less than significant.

b. The proposed project would require minimal water and the applicant has indicated that the on-site well will provide sufficient water for the project. According to the Groundwater Basin Boundary Assessment Tool by the Department of Water Resources, the project site is located adjacent to, but outside of, the San Joaquin Groundwater Basin – Delta Mendota (Department of Water Resources 2023). Therefore, the proposed project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

c. **Erosion**. Refer to the response under checklist question "b" in Section 7.0, Geology and Soils.

Flooding. Although the proposed project introduces an impermeable surface (i.e., the prayer room), the project site will continue to be primarily covered with permeable surfaces. Therefore, the volume of stormwater runoff under post-construction conditions would increase compared to existing conditions but would not be substantial.

As discussed in checklist question "a," the project plans are required to show how these practices are being utilized on the site to prevent or minimize flooding on- and offsite. The project will be required to be designed to accommodate maximum daily rainfall events, which could otherwise cause flooding at the project site.

Compliance with these requirements would ensure that the project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Runoff. The project plans are required to show how stormwater would be retained onsite or how the stormwater would be treated using design measures before being discharged from the site, consistent with County Code Chapter 9.53, Regulation of Stormwater.

Although the proposed project introduces an impermeable surface (i.e., the prayer room), the project site will continue to be primarily covered with permeable surfaces. Therefore, runoff from the proposed project would be minimal. The project plans will be required to illustrate how the best management practices are used on the site to retain all stormwater runoff or reduce the amount of runoff that discharges from the site.

Because the proposed project will not create a substantial amount of runoff and is required to implement practices to retain or reduce stormwater runoff, it would not create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

Flood Flows. According to the Flood Emergency Management Agency, the project site is entirely within Flood Zone D, which is an area with undetermined food hazards (FEMA 2023). Therefore, it is unlikely that the proposed project has the potential to impede or redirect flood flows.

d. The project site is located approximately 1.8 miles south of the O'Neill Forebay and approximately 1.4 miles east of the San Luis Reservoir, thereby reducing the likelihood for the potential for a tsunami or seiche. The project site is also not located within a dam inundation area (City of Los Banos 2009, Figure 7-1). Additionally, according to the Flood Emergency Management Agency, the project site is entirely within Flood Zone D, which is an area with undetermined food hazards (FEMA 2023). Therefore, the project would have no impacts related to releasing hazardous materials during a flood.

e. As discussed in checklist question "b," the project site is not located within a groundwater basin (Department of Water Resources 2023). Therefore, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

11. LAND USE AND PLANNING

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Comments:

a. The project site is surrounded on all sides by vacant foothills and, therefore, would not physically divide an established community.

b. The proposed use as a cemetery is consistent with the project site's zoning (Exclusive General Agriculture). Further, Section 3.0, Air Quality, states that the proposed project would generate criteria air pollutant emissions during construction and operations that are well below the air district standards and, therefore, the proposed project would not conflict with or obstruct implementation of the air quality plan.

As discussed in Section 4.0, Biological Resources, there are no critical habitat boundaries, habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans applicable to the proposed project site.

Section 8.0, Greenhouse Gas Emissions, concludes that because the project impacts are less than significant, the project would have no impact from conflict with regulations or the referenced plan for reducing GHG emissions.

As concluded in Section 10.0, Hydrology and Water Quality, the proposed project would not conflict an adopted groundwater sustainability plan because the project is not located within the boundaries of a groundwater basin and, therefore, would not substantially deplete groundwater resources or adversely impact groundwater recharge.

As discussed in Section 13.0, Noise, compliance with the applicable General Plan policies and County Code requirements would ensure less than significant impacts associated with reducing exposures to unacceptable noise due to project construction.

Section 17.0, Transportation, discusses the project's minimal increase to the County's roadway system (i.e., Jasper Sears Road). The applicant's payment of the regional traffic impact fee would offset any potential impacts the project could have to the circulation system and, therefore, would not conflict with a program, plan, ordinance, or policy addressing the circulation system.

12. MINERAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Result in loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated in a local general plan, specific plan, or other land-use plan?	☐	☐	☐	☒

Comments:

a, b. According to Figure 10-3 of the General Plan EIR, the project site is not located within an area that has a high likelihood of known significant sand and gravel resources (Merced County 2012, p. 10-6). Therefore, implementation of the project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state nor would the project result in the loss of availability of a locally important mineral resource recovery site delineated in a local general plan, specific plan, or other land-use plan.

13. NOISE

Would the project result in:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies?	☐	☐	☒	☐
b.	Generation of excessive ground-borne vibration or ground borne noise levels?	☐	☐	☐	☒
c.	For a project located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Comments:

a. **Temporary**. The proposed cemetery involves associated components such as the development of a 1,500 square foot prayer room, gravel roads throughout the project site, and a proposed gravel road on an easement connecting the entrance of the site to Jasper Sears Road. Construction activities associated with these components would generate temporary noise in the project site vicinity. Approximately one-half mile northeast of this construction (specifically, the proposed easement gravel road) are residences. These same residences are approximately 1.2 miles northeast of the construction of the prayer room.

The applicant would be required to comply with General Plan Policy HS-7.5, which requires that noise-generating activities (such as construction) be limited to hours of normal business operation. Further, County Code Section 10.60.030.5 states that noise from construction activities shall be limited to the daytime hours between 7:00 A.M. and 6:00 P.M. and all construction equipment shall be properly muffled and maintained.

Compliance with the abovementioned General Plan Policy and County Code noise regulations for construction would ensure that the project's impact associated with temporary construction activities would be less than significant.

Permanent. The project site has been primarily vacant for decades, with the metal storage structures appearing in 2018 (Google Earth 2023) that were determined in 2023 by County staff to be illegally placed there. Therefore, there is no existing noise source at the project site. The proposed cemetery noise levels would be generally low because staff

and visitors (total of 20 people at most) would only be on the site for a burial, which can last from 30 minutes to 2 hours. Burial services would only occur one time a day and may not occur every day.

The General Plan EIR concluded that implementation of applicable General Plan policies would reduce impacts associated with future development of noise-generating uses in areas containing noise-sensitive land uses to a less-than-significant level (Merced County 2012, p. 15-17). Further, the proposed project would be required to comply with General Plan Policy HS-7.1, which requires that new development projects meet the standards shown in Tables HS-1 and HS-2, at the property line of the proposed use, through either project design or other noise mitigation techniques, and General Plan Policy HS-7.8, which requires that land use projects comply with adopted noise standards through proper site and building design. The project would also be required to comply with the noise regulations identified in County Code Sections 18.40.050, Noise, and Chapter 10.60, Noise Control.

The project's consistency with the General Plan and compliance with General Plan policies and County Code would ensure that the project's permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies, would be less than significant.

b. The use of a cemetery, including the proposed development of the prayer room and unpaved roadways on- and off-site, would not result in the generation of any operational or construction-related ground borne vibration levels that would affect existing residences or businesses in the general vicinity, the nearest of which is a PG&E substation facility located approximately one mile northeast of the project site.

c. The project site is not within the vicinity of a private airstrip or an airport land-use plan and is not within two miles of a public airport or public-use airport (Google Earth 2023). Therefore, the proposed project would not expose people working in the project area to excessive noise levels.

14. POPULATION AND HOUSING

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Comments:

a. The proposed project does not increase population or propose new homes. Therefore, the proposed project would not induce population growth directly or indirectly.

b. The project site does not include any residences. Therefore, the project would not displace existing housing or people necessitating the construction of replace housing elsewhere.

15. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	☐	☐	☐	☒
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

Comments:

a. The proposed project is a cemetery with a 1,500 square foot prayer room and would not result in adverse environmental impacts associated with the need for construction of new, or alteration of the existing, fire facilities in order to maintain acceptable service ratios, response times, or other performance objectives. However, General Plan Policy PFS-7.7 requires new development to pay its fair share of public facility fees for new fire station facilities, equipment, and staffing necessary to maintain the County's service standards in that area. The policy also states that new development may also be required to create or join a special assessment district or other funding mechanism, to pay the costs associated with the operation of a fire station. Therefore, the project is required to pay its fair share of the development impact fees for fire facilities, which mitigates the project's contribution to cumulative impacts to fire facilities. As a result, the proposed project would not result in the need to construct fire facilities, the construction of which could cause significant environmental effects.

b. The proposed project is a cemetery with a 1,500 square foot prayer room and would not result in adverse environmental impacts associated with the need for construction of new, or alteration of the existing, police protection facilities in order to maintain acceptable service ratios, response times, or other performance objectives. However, General Plan Policy PFS-6.4 requires new development to pay its fair share of the costs for providing law enforcement service facilities and equipment to new residents. Therefore, the project is required to pay its fair share of the development impact fees for police protection facilities, which mitigates the project's contribution to cumulative impacts to police protection facilities. As a result, the proposed project would not result in the need to construct police protection facilities, the construction of which could cause significant environmental effects.

c-e. The proposed project is a cemetery. Therefore, the project would not impact schools, parks, or other public facilities in a manner in which new or altered facilities would be required, the construction of which potentially causing significant, adverse impacts.

16. RECREATION

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Comments:

a, b. The proposed project is a cemetery and, therefore, would not result in the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Being a cemetery, no recreational facilities are proposed; however, its operation would not require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

17. TRANSPORTATION

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b.	Conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d.	Result in inadequate emergency access?	☐	☐	☐	☒

Comments:

a. The project site is located approximately one-half mile from the nearest County Road (Jasper Sears Road), which does not include pedestrian or bicycle facilities. There is also a dirt road that connects the site to Jasper Sears Road, which also does not contain these facilities. The nearest bus stop is located within the City of Los Banos, approximately nine miles east of the site.

According to the application materials, the proposed project would operate from 10:00 A.M. to 5:00 P.M., seven days a week. Staff would include one full-time employee and up to two part-time, temporary employees who would be on-call and be on-site only when there is a burial. The number of vehicle trips is estimated to be less than 30 trips each day (15 in and 15 out), which would primarily impact Jasper Sears Road. This road fronting the project site is not listed in any of the tables identified by the General Plan EIR as requiring improvements at buildout of the General Plan, so it can be assumed that Jasper Sears Road operates acceptably in the vicinity of the project site. General Plan Policy CIR-1.5 indicates that the Countywide roadway system has a level of service (LOS) standard of LOS C or better for roadways located within rural areas (such as Jasper Sears Road).

The project's increase in daily trips on Jasper Sears Road would not measurably affect the level of service on the roadway. Pursuant to County Code Chapter 5.68, Regional Transportation Impact Fee, these additional trips to the roadway require that the project developer pay their fair share (amount to be determined by the County Community and Economic Development Department) before the issuance of a building permit. Payment of this impact fee would offset the cumulative impact the project could have on the circulation system.

Further, the County Building and Safety Division requires that the proposed restroom within the prayer room have disability access. The applicant is also required to provide ADA compliant parking and path of travel ensuring accessibility for all pedestrians (Charles Mendenhall, application comment letter, no date).

Ensuring the project is ADA-compliant as well as payment of the above-mentioned impact fee would ensure that the proposed project would be consistent with relevant programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

b. According to the Merced County Association of Governments' VMT Thresholds and Implementation Guidelines, projects that generate fewer than 1,000 daily trips may be screened out from the need for a VMT analysis. The proposed project would generate fewer than 1,000 daily trips; therefore, a VMT analysis is not required and it can be assumed that the proposed project would not result in significant VMT impacts.

c. The proposed project involves the development of a cemetery with gravel roads throughout the project site. The use of a cemetery is conditionally permitted within the Exclusive General Agricultural (A-2) Zoning District and the gravel roads would not be designed with sharp curves. Therefore, the proposed cemetery would not substantially increase hazards due to a geometric feature or incompatible uses.

d. The proposed cemetery includes one entrance and exit at the northern side of the site. It is expected that no more than 20 people would visit the cemetery (not including staff) at one time and only when there is a burial, which would occur no more than one time a day. Therefore, more than one exit for this type of use is not necessary. The Merced County Fire Department is required to review the project plans and ensure adequate access for emergency vehicles is present prior to issuance of a any permit. With application approval from the Merced County Fire Department, the project would not result in inadequate emergency access.

18. TRIBAL CULTURAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
(1)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or	☐	☐	☐	☒
(2)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Comments:

a. Merced County sent out a letter offering consultation to the Table Mountain Rancheria Tribe on September 27, 2023 (Valeria Renteria, email message, October 3, 2023). The Table Mountain Rancheria Tribe responded to Merced County on October 19, 2023 declining consultation and requesting to be notified in the event that cultural resources are identified (Valeria Renteria, email message, October 25, 2023).

19. UTILITIES AND SERVICES SYSTEMS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c.	Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d.	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Comments:

a. **Water and Wastewater**. The site includes an existing water well that will be utilized by the proposed project and proposes a new septic system. Therefore, the project would not connect into the County's existing water or wastewater system. As a result, the project would not require or result in the relocation or construction of new or expanded water or wastewater facilities.

Stormwater. The project involves the construction of a 1,500 square foot prayer room, which is the only impermeable structure proposed on the site. The majority of the site will remain permeable and, therefore, the proposed cemetery use does not require the need for stormwater facilities and would not result in the relocation or construction of any other new or expanded stormwater facilities.

Additional Utilities. The project would connect to the existing powerline facilities located along the northern border of the site and would not require or result in the relocation or construction of new or expanded utilities.

b. The project site includes an existing well that will be utilized by the proposed project's office and bathroom. According to the applicant, there are two 119-gallon pressure tanks that exist on the site, which is a sufficient amount of water for the applicant's need to operate the cemetery. The project site is not located within a groundwater basin and, therefore, it is assumed there will be sufficient water supplies available to serve the project and reasonably foreseeable future development in the area during normal, dry, and multiple dry years.

c. The proposed project would utilize on-site septic systems for wastewater treatment. No public wastewater collection or treatment systems are provided to the project site; therefore, it is not applicable to the proposed project to receive any determination by a wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

d, e. Merced County does not operate solid or hazardous waste hauling operations. Within Merced County, there are two active solid waste disposal/landfill facilities owned and operated by the Merced County Regional Waste Management Authority: Highway 59 Landfill and the Billy Wright Landfill. The proposed project would use the Billy Wright Landfill located at 17173 Billy Wright Road in Los Banos.

The Billy Wright Landfill has a maximum permitted capacity of 14,800,000 cubic yards (CalRecycle 2023a), which translates to a maximum capacity of 20,720,000 tons of solid waste.

The proposed project involves a total of three employees (one full-time employee and up to two part-time, temporary employees who would be on-call and be on-site only when there is a burial). According to CalRecycle, the project would have a solid waste generation rate of 10.53 pounds per employee per day (CalRecycle 2023b). Therefore, the proposed project is projected to generate up to 32 pounds of solid waste per day. The Merced County Regional Waste Management Authority continues to pursue expansion projects to increase landfill disposal capacity. This will ensure the availability of solid waste disposal capacity in Merced County and accommodates for regional growth for the foreseeable future.

The proposed project would not generate a substantial amount of solid waste and, therefore, there is no evidence to suggest that the solid waste disposal demand of the project would trigger the need to develop additional landfill capacity. The proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	☐	☐	☐	☒
c.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Comments:

According to the California Department of Forestry and Fire's Fire Hazard Severity Zone Viewer, the entire 50-acre project site is located in a state responsibility area and its land is classified primarily as a moderate fire hazard severity zone, with portions of the southwestern edges in a high fire hazard severity zone (CalFire 2023). The project site is gently sloping to the adjacent hills and is covered with grasses and various vegetation, which dries out in the spring, summer, and fall. Existing electrical transmission power lines border the 164-acre property boundary to the north and intersect the southeastern corner.

a. The proposed project involves the use of a cemetery and, therefore, would not substantially impair an adopted emergency response plan or emergency evacuation plan.

b. The project site is sloping and is located at the base of the hills, which could increase the speed and intensity of wildfires exacerbating wildfire risks. However, the proposed project is a cemetery and, therefore, would not expose people to pollutant concentrations from a wildfire or the uncontrolled spread of wildfires.

c. The project is primarily vacant site with a lot of dry vegetation, no trees, and existing power lines crossing the property boundary. The proposed cemetery does not require paved roads or fuel breaks that could exacerbate fire risk, the site contains existing power

lines and a water well, and the project's proposed septic system would not exacerbate fire risk. Therefore, the project does not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

d. Although the project site is located at the base of the hills, landslide risks are not likely in the project area (U.S. Geological Survey 2023). The proposed cemetery would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

21. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Does the project have the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	☒	☐
c.	Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Comments:

a. As discussed in Section 4.0, Biological Resources, Mitigation Measures BIO-1 through BIO-6 would reduce the potential adverse impact on American badger, San Joaquin kit fox, burrowing owl, foraging golden eagle, foraging Swainson's hawk, and nesting birds during construction of the proposed project to a less-than-significant level.

As described in Section 5.0, Cultural Resources, the project site does not consist of historic structures onsite and is not known to contain any historic or prehistoric resources. However, it is possible that these resources could be accidentally uncovered during grading and construction activities. In the event this should occur, implementation of Mitigation Measure CUL-1 would ensure that the potential impacts would not be significant.

b. Proposed project impacts that contribute to cumulative project impacts are required to be lessened per the mitigation measures presented in this initial study. With implementation of the mitigation measures, standards and policies identified herein, the project's contribution to cumulative project impacts would not be considerable.

c. Based on the analysis provided in this initial study, the proposed project could indirectly cause substantial adverse effects to human beings through soil erosion, expansivity, seismic ground-shaking, and soils incapable of supporting septic tanks. However, as discussed throughout this initial study, the impacts would not be significant. Therefore, the proposed project would not result in significant environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

E. SOURCES

Environmental Setting

EMC Planning Group. Site Visits, June 6, 2023 and July 11, 2023

Google Earth. 2023.

Project Description

Applicant's Application Submittal. 2023.

Renteria, Valeria, Planner I, Merced County Community and Economic Development Department. Email message to consultant, 3 October 2023.

Aesthetics

Caltrans. "California State Scenic Highway System Map." Accessed on June 27, 2023. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

EMC Planning Group. Site Visits, June 6, 2023 and July 11, 2023

Google Earth. 2023.

Merced County. December 2013. *2030 Merced County General Plan*. Merced, CA.

Renteria, Valeria, Planner I, Merced County Community and Economic Development Department. Email message to consultant, 3 October 2023.

Agriculture

California Department of Conservation. "California Important Farmland Finder." Accessed on June 19, 2023. https://maps.conservation.ca.gov/DLRP/CIFF/

Google Earth. 2023

Merced County. November 2012. *2030 Merced County General Plan Update Draft Program Environmental Impact Report – State Clearinghouse #2011041067*. Merced, CA.

Merced County. County Code. Current through Ordinance 2029 and the June 2023 code supplement. https://library.qcode.us/lib/merced_county_ca/pub/county_code

Air Quality

California Air Pollution Control Officers Association. 2022. *California Emission Estimator Model User Guide Version 2022.1*. April 2022. https://caleemod.com/documents/user-guide/01_User%20Guide.pdf Accessed July 7, 2023

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guide for Assessing Air Quality Impacts. March 19, 2015. https://www.valleyair.org/transportation/GAMAQI.pdf. Accessed July 7, 2023.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2018. PM2.5 Plan for the San Joaquin Valley. https://ww2.valleyair.org/plans/2018-pm-2-5-plan-for-the-san-joaquin-valley/. Accessed July 7, 2023.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2020. *Guidance for Assessing and Mitigating Air Quality Impacts for Small Project Analysis Levels*. November 30, 2020. https://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF. Accessed July 7, 2023.

Biological Resources

California Burrowing Owl Consortium (CBOC). 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines.*

California Department of Fish and Game (CDFG). 1994. *Staff Report regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California.*

California Department of Fish and Wildlife (CDFW). 2012. *Staff Report on Burrowing Owl Mitigation.* State of California Natural Resources Agency.

California Department of Fish and Wildlife (CDFW). 2023a. Biogeographic Information and Observation System (BIOS) online database. http://bios.dfg.ca.gov

California Department of Fish and Wildlife (CDFW). 2023b. California Natural Diversity Database (CNDDB) online database. https://wildlife.ca.gov/data/cnddb

California Department of Fish and Wildlife (CDFW). 2023c. California Essential Habitat Connectivity Project. Sacramento, California. https://wildlife.ca.gov/Conservation/Planning/Connectivity/CEHC

California Native Plant Society (CNPS). 2023a. Inventory of Rare and Endangered Plants of California online database. http://www.rareplants.cnps.org

California Native Plant Society (CNPS). 2023b. Manual of California Vegetation Online. https://vegetation.cnps.org/

Cornell Lab of Ornithology. 2023. *All About Birds* online database. Cornell Lab of Ornithology, Ithaca, New York. https://www.allaboutbirds.org

County of Merced. 2013. *2030 Merced County General Plan.* Merced, CA.

Harrison et. al. 2011. *Resource use overlap between urban carnivores: Implications for endangered San Joaquin kit foxes (Vulpes macrotis mutica).* Urban Ecosystems (2011) 14:3030-311.

H.T. Harvey & Associates. 2001. *Agua Fria Multi-Species Conservation Bank Final Habitat Management Plan.*

Jameson, E. W., and Hans J. Peeters. 2004. *Mammals of California.* University of California Press.

Nafis, G. 2023. *California Herps: A Guide to the Amphibians and Reptiles of California* online database. Accessed May 2023. http://www.californiaherps.com/

Renteria, Valeria, Planner I, Merced County Community and Economic Development Department. Email message to consultant, 3 October 2023.

Swainson's Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley.*

U.S. Fish and Wildlife Service (USFWS). 2011. *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance.*

U.S. Fish and Wildlife Service (USFWS). 2023a. Endangered Species Program online database. Species list for Merced County. Washington, D.C. http://www.fws.gov/endangered/

U.S. Fish and Wildlife Service (USFWS). 2023b. National Wetlands Inventory online database. U.S. Department of the Interior. Washington, D.C. http://www.fws.gov/wetlands/\

U.S. Fish and Wildlife Service (USFWS). 2023c. Critical Habitat for Threatened and Endangered Species online mapper. https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77

Cultural Resources

Applicant's Application Submittal. 2023.

Energy

California Energy Commission. Energy Consumption Data Management System. 2021. *Electricity Consumption by County.* http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbycounty.aspx. Accessed July 13, 2023.

------ 2021B. *Gas Consumption by County.* 2021. http://www.ecdms.energy.ca.gov/gasbycounty.aspx. Accessed July 13, 2023.

County of Merced. 2013. *2030 Merced County General Plan.* December 10, 2013. https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed July 13, 2023.

Geology and Soils

California Department of Conservation. "Earthquake Zones of Required Investigation." Accessed on June 26, 2023. https://maps.conservation.ca.gov/cgs/EQZApp/app/

Mendenhall, Charles, Supervising Building Inspector, Merced County Building and Safety Division. Application comment letter, no date.

Merced County. "Merced County Environmental Data Viewer." Accessed on June 26, 2023. https://mercedcounty.maps.arcgis.com/apps/webappviewer/index.html?id=3bf01b1ed7904f2dbba7e8582ec3f175

Soil Conservation Service. 1983. *Soil Survey of Merced County, California, Western Part.*

Greenhouse Gas Emissions

Association of Environmental Professionals. 2016. *Final Whitepaper - Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California.* October 2016. https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf. Accessed July 13, 2023

Bay Area Air Quality Management District. 2017. *California Environmental Quality Act Air Quality Guidelines.* May 2017. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed July 13, 2023

California Office of Planning and Research. 2018. *Discussion Draft CEQA and Climate Change Advisory.* December 2018. https://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf . Accessed July 13, 2023

California Office of Planning and Research. 2018b. *Technical Advisory on Evaluating Transportation Impacts in CEQ.* April 2018. https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf. Accessed July 13, 2023

Merced County Association of Governments. November 2022. *VMT Thresholds and Implementation Guidelines.* Merced, CA. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.mcagov.org/DocumentCenter/View/3872/MCAG-SB-743-VMT-Thresholds-and-Implementation-Guidelines_11-10-2022?bidId=

Hazards and Hazardous Materials

CalFire. "FHSZ Viewer." Accessed on June 14, 2023. https://egis.fire.ca.gov/FHSZ/

California Environmental Protection Agency. "List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit (PDF)." Accessed on June 26, 2023a. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf

California Environmental Protection Agency. "List of "active" CDO and CAO from Water Board (MS Excel, 1,453 KB)." Accessed on June 26, 2023b. https://calepa.ca.gov/sitecleanup/corteselist/

California Environmental Protection Agency. "List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC." Accessed on June 26, 2023c. https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/?emrc=63f01af3d8806

California Department of Toxic Substances Control. "Envirostor." Accessed on June 26, 2023. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=

Google Earth. 2023.

State Water Resources Control Board. "GeoTracker." Accessed on June 26, 2023. https://geotracker.waterboards.ca.gov/map/?myaddress=California&from=header&cqid=9235730826

Hydrology and Water Quality

City of Los Banos. July 2009. *City of Los Banos 2030 General Plan Update*. Los Banos, CA. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://losbanos.org/wp-content/uploads/2013/09/plan_gp_entire.pdf

Department of Water Resources. "Groundwater Basin Boundary Assessment Tool." Accessed on July 7, 2023. https://gis.water.ca.gov/app/bbat/

FEMA. "FEMA Flood Map Service Center: Search By Address." Accessed on June 26, 2023. https://msc.fema.gov/portal/search#searchresultsanchor

Google Earth. 2023.

Mendenhall, Charles, Supervising Building Inspector, Merced County Building and Safety Division. Application comment letter, no date.

Merced County. County Code. Current through Ordinance 2029 and the June 2023 code supplement. https://library.qcode.us/lib/merced_county_ca/pub/county_code

Land Use and Planning

Applicant's Application Submittal. 2023.

Mineral Resources

Merced County. November 2012. *2030 Merced County General Plan Update Draft Program Environmental Impact Report – State Clearinghouse #2011041067*. Merced, CA.

Noise

Google Earth. 2023.

Merced County. November 2012. *2030 Merced County General Plan Update Draft Program Environmental Impact Report – State Clearinghouse #2011041067*. Merced, CA.

Merced County. December 2013. *2030 Merced County General Plan*. Merced, CA.

Merced County. December 2022. County Code. https://library.qcode.us/lib/merced_county_ca/pub/county_code

Population and Housing

Applicant's Application Submittal. 2023.

Public Services

Applicant's Application Submittal. 2023.

Recreation

Applicant's Application Submittal. 2023.

Transportation

Mendenhall, Charles, Supervising Building Inspector, Merced County Building and Safety Division. Application comment letter, no date.

Tribal Cultural Resources

Renteria, Valeria, Planner I, Merced County Community and Economic Development Department. Email message to consultant, 3 October 2023 and 25 October 2023.

Utilities and Service Systems

CalRecycle. "SWIS Facility/Site Activity Details – Billy Wright Landfill (24-AA-0002)." Accessed on June 27, 2023a. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2909?siteID=1864

CalRecycle. "Commercial Sector Generation Rates." Accessed on June 27, 2023b. https://www2.calrecycle.ca.gov/wastecharacterization/general/rates

Department of Water Resources. "Groundwater Basin Boundary Assessment Tool." Accessed on July 7, 2023. https://gis.water.ca.gov/app/bbat/

Wildfire

CalFire. "FHSZ Viewer." Accessed on June 14, 2023. https://egis.fire.ca.gov/FHSZ/

U.S. Geological Survey. "U.S. Landslide Inventory." Accessed on June 15, 2023. https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=ae120962f459434b8c904b456c82669d

Mandatory Findings of Significance

Applicant's Application Submittal. 2023.

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CalEEMod Results

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APPENDIX

Garden of Peace Cemetery Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Garden of Peace Cemetery
Construction Start Date	11/6/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	21.4
Location	17205 Jasper Sears Rd, Los Banos, CA 93635, USA
County	Merced
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2312
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.14

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

Place of Worship	1.50	1000sqft	0.03	1,500	0.00	0.00	—	—
Other Non-Asphalt Surfaces	0.18	Acre	0.18	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	2.13	1.79	17.0	18.3	0.03	0.79	5.38	6.17	0.73	2.58	3.31	—	3,095	3,095	0.13	0.03	0.69	3,107
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.57	1.32	12.6	11.8	0.02	0.60	5.37	5.97	0.55	2.58	3.13	—	1,773	1,773	0.07	0.02	0.01	1,780
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.49	0.44	3.87	4.24	0.01	0.18	1.07	1.25	0.16	0.51	0.68	—	720	720	0.03	0.01	0.04	723
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.08	0.71	0.77	< 0.005	0.03	0.19	0.23	0.03	0.09	0.12	—	119	119	< 0.005	< 0.005	0.01	120
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	10.0	10.0	100	27.0	—	—	15.0	—	—	15.0	—	—	—	—	—	—	—

Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.13	1.79	17.0	18.3	0.03	0.79	5.38	6.17	0.73	2.58	3.31	—	3,095	3,095	0.13	0.03	0.69	3,107
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.57	1.32	12.6	11.8	0.02	0.60	5.37	5.97	0.55	2.58	3.13	—	1,773	1,773	0.07	0.02	0.01	1,780
2024	1.45	1.23	11.4	11.1	0.02	0.53	5.37	5.90	0.49	2.58	3.07	—	1,771	1,771	0.07	0.02	0.01	1,778
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.11	0.09	0.83	0.90	< 0.005	0.04	0.18	0.22	0.04	0.06	0.10	—	137	137	0.01	< 0.005	0.01	137
2024	0.49	0.44	3.87	4.24	0.01	0.18	1.07	1.25	0.16	0.51	0.68	—	720	720	0.03	0.01	0.04	723
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.02	0.02	0.15	0.16	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	22.6	22.6	< 0.005	< 0.005	< 0.005	22.7
2024	0.09	0.08	0.71	0.77	< 0.005	0.03	0.19	0.23	0.03	0.09	0.12	—	119	119	< 0.005	< 0.005	0.01	120

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.	0.25	0.26	0.28	1.83	< 0.005	0.01	0.27	0.28	< 0.005	0.07	0.07	4.61	409	413	0.54	0.02	1.53	435

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.23	0.32	1.50	< 0.005	0.01	0.27	0.28	< 0.005	0.07	0.07	4.61	381	386	0.55	0.03	0.05	407
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	0.24	0.30	1.54	< 0.005	0.01	0.27	0.28	< 0.005	0.07	0.07	4.61	388	393	0.54	0.02	0.66	414
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.04	0.06	0.28	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	0.76	64.3	65.0	0.09	< 0.005	0.11	68.6
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	10.0	10.0	100	27.0	—	—	15.0	—	—	15.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

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	0.23	0.22	0.27	1.75	< 0.005	< 0.005	0.27	0.28	< 0.005	0.07	0.07	—	379	379	0.02	0.02	1.52	387
Area	0.01	0.05	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.27	0.27	< 0.005	< 0.005	—	0.27
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.6	29.6	< 0.005	< 0.005	—	29.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	0.06	< 0.005	—	1.76
Waste	—	—	—	—	—	—	—	—	—	—	—	4.61	0.00	4.61	0.46	0.00	—	16.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.25	0.26	0.28	1.83	< 0.005	0.01	0.27	0.28	< 0.005	0.07	0.07	4.61	409	413	0.54	0.02	1.53	435

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.21	0.19	0.30	1.49	< 0.005	< 0.005	0.27	0.28	< 0.005	0.07	0.07	—	351	351	0.02	0.02	0.04	359
Area	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.6	29.6	< 0.005	< 0.005	—	29.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	0.06	< 0.005	—	1.76
Waste	—	—	—	—	—	—	—	—	—	—	—	4.61	0.00	4.61	0.46	0.00	—	16.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.21	0.23	0.32	1.50	< 0.005	0.01	0.27	0.28	< 0.005	0.07	0.07	4.61	381	386	0.55	0.03	0.05	407
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.21	0.20	0.29	1.49	< 0.005	< 0.005	0.27	0.28	< 0.005	0.07	0.07	—	358	358	0.02	0.02	0.66	367
Area	0.01	0.04	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.13	0.13	< 0.005	< 0.005	—	0.13
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.6	29.6	< 0.005	< 0.005	—	29.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	0.06	< 0.005	—	1.76
Waste	—	—	—	—	—	—	—	—	—	—	—	4.61	0.00	4.61	0.46	0.00	—	16.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.22	0.24	0.30	1.54	< 0.005	0.01	0.27	0.28	< 0.005	0.07	0.07	4.61	388	393	0.54	0.02	0.66	414
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.05	0.27	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	59.3	59.3	< 0.005	< 0.005	0.11	60.7
Area	< 0.005	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.02	0.02	< 0.005	< 0.005	—	0.02
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.91	4.91	< 0.005	< 0.005	—	4.93
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.01	0.01	0.01	< 0.005	—	0.29
Waste	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.67
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.04	0.04	0.06	0.28	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	0.76	64.3	65.0	0.09	< 0.005	0.11	68.6

3. Construction Emissions Details

3.1. Site Preparation (2023) - 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	0.64	0.54	5.02	5.57	0.01	0.27	—	0.27	0.25	—	0.25	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
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	0.07	0.06	0.55	0.61	< 0.005	0.03	—	0.03	0.03	—	0.03	—	94.0	94.0	< 0.005	< 0.005	—	94.3
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.6	15.6	< 0.005	< 0.005	—	15.6

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.03	0.03	0.03	0.29	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.9	39.9	< 0.005	< 0.005	0.01	40.5
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	—	4.51	4.51	< 0.005	< 0.005	0.01	4.58
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	—	0.75	0.75	< 0.005	< 0.005	< 0.005	0.76
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

3.3. Grading (2023) - 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	1.52	1.28	12.6	11.4	0.02	0.60	—	0.60	0.55	—	0.55	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.27	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.9	36.9	< 0.005	< 0.005	—	37.0
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
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	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.10	6.10	< 0.005	< 0.005	—	6.13
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	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	0.05	0.04	0.04	0.43	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	59.8	59.8	< 0.005	< 0.005	0.01	60.7
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	—	1.33	1.33	< 0.005	< 0.005	< 0.005	1.35
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	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.22
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

3.5. Grading (2024) - 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	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719

Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.25	2.12	< 0.005	0.11	—	0.11	0.10	—	0.10	—	339	339	0.01	< 0.005	—	340
Dust From Material Movement	—	—	—	—	—	—	1.05	1.05	—	0.51	0.51	—	—	—	—	—	—	—
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	0.05	0.04	0.41	0.39	< 0.005	0.02	—	0.02	0.02	—	0.02	—	56.1	56.1	< 0.005	< 0.005	—	56.3
Dust From Material Movement	—	—	—	—	—	—	0.19	0.19	—	0.09	0.09	—	—	—	—	—	—	—
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	0.05	0.04	0.03	0.52	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	65.3	65.3	< 0.005	< 0.005	0.28	66.4
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.40	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	58.2	58.2	< 0.005	< 0.005	0.01	59.1
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	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
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	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.00
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 (2024) - 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	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.38	1.72	< 0.005	0.06	—	0.06	0.06	—	0.06	—	322	322	0.01	< 0.005	—	323
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	0.03	0.03	0.25	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	53.3	53.3	< 0.005	< 0.005	—	53.4
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	5.49	5.49	< 0.005	< 0.005	0.02	5.58
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.50	6.50	< 0.005	< 0.005	0.02	6.80
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.26
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.60	1.60	< 0.005	< 0.005	< 0.005	1.67
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	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.28
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 (2024) - 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	0.63	0.53	4.52	5.32	0.01	0.21	—	0.21	0.19	—	0.19	—	823	823	0.03	0.01	—	826
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.19	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.8	33.8	< 0.005	< 0.005	—	34.0
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	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.60	5.60	< 0.005	< 0.005	—	5.62
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.07	1.21	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	152	152	0.01	0.01	0.65	155
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.76	5.76	< 0.005	< 0.005	0.01	5.85
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	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.97
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 (2024) - 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	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.61	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	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
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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	1.12
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
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	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
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

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.23	0.22	0.27	1.75	< 0.005	< 0.005	0.27	0.28	< 0.005	0.07	0.07	—	379	379	0.02	0.02	1.52	387
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	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	0.23	0.22	0.27	1.75	< 0.005	< 0.005	0.27	0.28	< 0.005	0.07	0.07	—	379	379	0.02	0.02	1.52	387

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.21	0.19	0.30	1.49	< 0.005	< 0.005	0.27	0.28	< 0.005	0.07	0.07	—	351	351	0.02	0.02	0.04	359
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	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	0.21	0.19	0.30	1.49	< 0.005	< 0.005	0.27	0.28	< 0.005	0.07	0.07	—	351	351	0.02	0.02	0.04	359
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.04	0.04	0.05	0.27	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	59.3	59.3	< 0.005	< 0.005	0.11	60.7
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	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	0.04	0.04	0.05	0.27	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	59.3	59.3	< 0.005	< 0.005	0.11	60.7

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	9.95	9.95	< 0.005	< 0.005	—	10.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.95	9.95	< 0.005	< 0.005	—	10.0

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	9.95	9.95	< 0.005	< 0.005	—	10.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.95	9.95	< 0.005	< 0.005	—	10.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	1.65	1.65	< 0.005	< 0.005	—	1.66
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1.65	1.65	< 0.005	< 0.005	—	1.66

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.7	19.7	< 0.005	< 0.005	—	19.8
Other Non-Asphalt Surfaces	0.00	0.00	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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.7	19.7	< 0.005	< 0.005	—	19.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Place of Worship	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.7	19.7	< 0.005	< 0.005	—	19.8
Other Non-Asphalt Surfaces	0.00	0.00	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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.7	19.7	< 0.005	< 0.005	—	19.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.26	3.26	< 0.005	< 0.005	—	3.27
Other Non-Asphalt Surfaces	0.00	0.00	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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.26	3.26	< 0.005	< 0.005	—	3.27

4.3. Area Emissions by Source

4.3.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.27	0.27	< 0.005	< 0.005	—	0.27
Total	0.01	0.05	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.27	0.27	< 0.005	< 0.005	—	0.27

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.02	0.02	< 0.005	< 0.005	—	0.02
Total	< 0.005	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.02	0.02	< 0.005	< 0.005	—	0.02

4.4. Water Emissions by Land Use

4.4.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	0.06	< 0.005	—	1.76

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	0.06	< 0.005	—	1.76
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	0.06	< 0.005	—	1.76
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	0.06	< 0.005	—	1.76
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.00	0.01	0.01	0.01	< 0.005	—	0.29
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.01	0.01	0.01	< 0.005	—	0.29

4.5. Waste Emissions by Land Use

4.5.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	4.61	0.00	4.61	0.46	0.00	—	16.1

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.61	0.00	4.61	0.46	0.00	—	16.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	4.61	0.00	4.61	0.46	0.00	—	16.1
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.61	0.00	4.61	0.46	0.00	—	16.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.67
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.76	0.00	0.76	0.08	0.00	—	2.67

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	10/25/2023	12/20/2023	5.00	40.0	—
Grading	Grading	12/21/2023	4/10/2024	5.00	80.0	—
Building Construction	Building Construction	4/10/2024	8/13/2024	5.00	90.0	—
Paving	Paving	8/13/2024	9/2/2024	5.00	15.0	—
Architectural Coating	Architectural Coating	9/4/2024	9/24/2024	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
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
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
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	10.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.27	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	10.9	LDA,LDT1,LDT2
Grading	Vendor	—	8.27	HHDT,MHDT

Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.63	10.9	LDA,LDT1,LDT2
Building Construction	Vendor	0.25	8.27	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	10.9	LDA,LDT1,LDT2
Paving	Vendor	—	8.27	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.13	10.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.27	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	0.00	0.00	2,250	750	470

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	20.0	0.00	—
Grading	—	—	60.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.18

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
Place of Worship	0.00	0%
Other Non-Asphalt Surfaces	0.18	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	204	0.03	< 0.005
2024	0.00	204	0.03	< 0.005

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
Place of Worship	45.0	45.0	45.0	16,425	381	381	381	139,020

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

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)
0	0.00	2,250	750	470

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

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)
Place of Worship	17,796	204	0.0330	0.0040	61,458
Other Non-Asphalt Surfaces	0.00	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)
Place of Worship	46,933	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Place of Worship	8.55	—
Other Non-Asphalt Surfaces	0.00	—

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
Place of Worship	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Place of Worship	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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

5.16. 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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	29.5	annual days of extreme heat
Extreme Precipitation	1.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	27.9	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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
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	3	0	0	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	55.4
AQ-PM	12.0
AQ-DPM	19.2
Drinking Water	99.0
Lead Risk Housing	48.2
Pesticides	80.8
Toxic Releases	5.71
Traffic	54.8
Effect Indicators	—
CleanUp Sites	59.0
Groundwater	97.3
Haz Waste Facilities/Generators	7.35
Impaired Water Bodies	96.3
Solid Waste	93.2
Sensitive Population	—
Asthma	93.0
Cardio-vascular	67.6
Low Birth Weights	23.7
Socioeconomic Factor Indicators	—
Education	85.2
Housing	46.5

Linguistic	84.5
Poverty	69.3
Unemployment	95.7

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	18.76042602
Employed	36.78942641
Median HI	22.76401899
Education	—
Bachelor's or higher	6.236365969
High school enrollment	12.44706788
Preschool enrollment	26.60079559
Transportation	—
Auto Access	36.01950468
Active commuting	66.59822918
Social	—
2-parent households	2.55357372
Voting	40.85717952
Neighborhood	—
Alcohol availability	69.80623637
Park access	6.13370974
Retail density	0.384960862
Supermarket access	15.46259464
Tree canopy	6.608494803

Housing	—
Homeownership	38.3036058
Housing habitability	67.2783267
Low-inc homeowner severe housing cost burden	45.47670987
Low-inc renter severe housing cost burden	89.54189657
Uncrowded housing	37.31553959
Health Outcomes	—
Insured adults	31.25882202
Arthritis	0.0
Asthma ER Admissions	15.6
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	19.6
Cognitively Disabled	52.2
Physically Disabled	42.3
Heart Attack ER Admissions	12.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	96.5
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	0.0
SLR Inundation Area	0.0
Children	16.3
Elderly	81.3
English Speaking	12.7
Foreign-born	56.9
Outdoor Workers	2.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	91.3
Traffic Density	26.9
Traffic Access	0.0
Other Indices	—
Hardship	81.4
Other Decision Support	—
2016 Voting	63.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	85.0
Healthy Places Index Score for Project Location (b)	16.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
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	Lot acreage adjusted to match project description.
Construction: Construction Phases	No demolition required. Project timeframe adjusted to match project description
Operations: Water and Waste Water	Wastewater will be treated through an onsite septic system.
Operations: Vehicle Data	There will be no more than 30 daily vehicle trips and the project would operate 7 hours per day , 7 days a week, and 365 days per year with no more than one ceremony per day.

Special-Status Species with Potential to Occur in the Project Vicinity

B

APPENDIX

Appendix B Special-Status Plant Species with Potential to Occur in the Project Vicinity

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
Arburua Ranch jewel-flower *(Streptanthus insignis* ssp. *lyonii)*	--/--/1B.2	Coastal scrub, endemic to Merced County. Serpentine slopes, also on non-serpentine; elevation 230-850m. Blooming Period: March - May	Unlikely. Suitable scrub habitat not found at the project site.
California alkali grass *(Puccinellia simplex)*	--/--/1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernally mesic. Sinks, flats, and lake margins; elevation 1-915m. Blooming Period: March - May	Unlikely. Suitable alkaline habitat not found at the project site.
Chaparral harebell *(Campanula exigua)*	--/--/1B.2	Chaparral (rocky, usually serpentine); elevation 275-1250m. Blooming Period: May - June	Unlikely. Suitable serpentine habitat not found at the project site.
Chaparral ragwort *(Senecio aphanactis)*	--/--/2B.2	Cismontane woodland and coastal scrub. Prefers drying alkaline flats; elevation 20-575m. Blooming Period: January - April	Unlikely. Suitable alkaline habitat not found at the project site.
Colusa grass *(Neostapfia colusana)*	FT/SE/1B.1	Vernal pools, usually in large or deep vernal pool bottoms, adobe soils; elevation 5-110m. Blooming Period: May - August	Unlikely. Suitable vernal pool habitat not found at the project site.
Coulter's goldfields *(Lasthenia glabrata* ssp. *coulteri)*	--/--/1B.1	Coastal salt marshes and swamps, playas, and vernal pools; elevation 1-1220m.	Unlikely. Suitable vernal pool habitat not found at the project site
Fleshy owl's-clover *(Castilleja campestris ssp. succulenta*)	FT/--	Vernal pools. Moist places, often in acidic soils. 20-705 m.	Unlikely. Suitable vernal pool habitat not found at the project site.
Greene's tuctoria *(Tuctoria greenei)*	FE/SR/1B.1	Vernal pools, valley and foothill grassland. Dry bottoms of vernal pools in open grasslands, 30-1065m. Blooming Period: May - September	Unlikely. Suitable vernal pool habitat not found at the project site.
Hairy orcutt grass *(Orcuttia pilosa)*	FE/SE/1B.1	Vernal pools; elevation 25-125m. Blooming Period: May - September	Unlikely. Suitable vernal pool habitat not found at the project site
Hall's bush-mallow *(Malacothamnus hallii)*	--/--/1B.2	Chaparral, some populations on serpentine; elevation 10-550m. Blooming Period: May - September	Unlikely. Suitable chaparral habitat not found at the project site.
Hartweg's golden sunburst (*Pseudobahia bahiifolia*)	FE/--	Valley and foothill grassland, cismontane woodland. Clay soils, often acidic. Predominantly on the northern slopes of knolls, but also along shady creeks or near vernal pools. 60-170 m.	Unlikely. Suitable habitat not found at the project site.
Heartscale *(Atriplex cordulata* var. *cordulata)*	--/--/1B.2	Chenopod scrub, valley and foothill grassland, and meadows. Prefers alkaline flats and scalds in the Central Valley, on sandy soils; elevation 1-150m. Blooming Period: April - October	Unlikely. Suitable alkaline habitat not found at the project site.
Hispid's bird's-beak *(Cordylanthus mollis* ssp. *hispidus)*	--/--/1B.1	Meadows, playas, valley and foothill grassland. In damp alkaline soils, especially in alkaline meadows and alkali sinks with *Distichlis* sp.; elevation 10-155m. Blooming Period: June - September	Unlikely. Suitable alkaline habitat not found at the project site.
Hoover's spurge *(Chamaesyce hooveri)*	FT/--/1B.2	Vernal pools, and valley and foothill grassland; pools on volcanic mudflow or clay substrates; elevation 25-140m. Blooming Period: July - August	Unlikely. Suitable vernal pool habitat not found at the project site.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
Hospital Canyon larkspur *(Delphinium californicum* ssp. *interius)*	--/--/1B.2	Cismontane woodland and chaparral, in wet, boggy meadows, openings in chaparral, and in canyons; elevation 225-1060m. Blooming Period: April - June	Unlikely. Suitable boggy meadow habitat not found at the project site.
Keck's checkerbloom *(Sidalcea keckii)*	FE/--/1B.1	Cismontane woodland, and valley and foothill grassland. Prefers grassy slopes in blue oak woodland; elevation 180-425m. Blooming Period: April - May	Unlikely. Suitable sloping habitat not found at the project site.
Lemmon's jewel-flower *(Caulanthus coulteri* var. *lemmonii)*	--/--/1B.2	Pinyon-juniper woodland, valley and foothill grassland; elevation 80-1220m. Blooming Period: March - May	Unlikely. Suitable grassland habitat not found at the project site.
Lesser saltscale *(Atriplex minuscula)*	--/--/1B.1	Chenopod scrub, playas, and valley and foothill grassland. In alkali sinks in sandy, alkaline soils; elevation 20-100m. Blooming Period: May - October	Unlikely. Suitable alkaline habitat not found at the project site.
Lime Ridge navarretia *(Navarretia gowenii)*	--/--/1B.2	Chaparral, on calcium carbonate-rich soil with high clay content; elevation 180-305m. Blooming Period: May - June	Unlikely. Suitable calcium soil habitat not found at the project site.
Lost Hills crownscale *(Atriplex vallicola)*	--/--/1B.2	Chenopod scrub, valley and foothill grassland, vernal pools. In powdery, alkaline soils that are vernally moist with Frankenia, Atriplex spp. and Distichlis; elevation 0-605m. Blooming Period: April - August	Unlikely. Suitable alkaline habitat not found at the project site.
Northern slender pondweed *(Stuckenia filiformis ssp. alpina)*	--/--/2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. 5-2325 m.	Unlikely. Suitable marsh habitat not found at the project site
Recurved larkspur *(Delphinium recurvatum)*	--/--/1B.2	Alkaline sites in chenopod scrub, cismontane woodland, and valley and foothill grassland; elevation 3-750m. Blooming Period: March - May	Unlikely. Suitable alkaline habitat not found at the project site.
San Joaquin Valley Orcutt grass *(Orcuttia inaequalis)*	FT/SE/1B.1	Vernal pools, endemic to the San Joaquin Valley; elevation 30-755m. Blooming Period: April - September	Unlikely. Suitable vernal pool habitat not found at the project site
Sanford's arrowhead *(Sagittaria sanfordii)*	--/--/1B.2	Marshes and swamps. Found in standing or slow-moving freshwater ponds, marshes, and ditches; elevation 0-610m. Blooming Period: May - October	Unlikely. Suitable riparian habitat not found at the project site.
Shining navarretia *(Navarretia nigelliformis* ssp. *radians)*	--/--/1B.2	Cismontane woodland, valley and foothill grassland, and vernal pools; elevation 200-1000m. Blooming Period: May - July	Unlikely. Suitable undisturbed or vernal pool habitat not found at the project site.
Slender-leaved pondweed *(Stuckenia filiformis* ssp. *alpina)*	--/--/2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels; elevation 15-2310m. Blooming Period: May - July	Unlikely. Suitable riparian habitat not found at the project site.
Spiny-sepaled button-celery *(Eryngium spinosepalum)*	--/--/1B.2	Vernal pools within valley and foothill grassland. Some sites on clay soils of granitic origin; elevation 100-420m. Blooming Period: April - May	Unlikely. Suitable vernal pool habitat not found at the project site

SOURCE: CDFW 2023, CNPS 2023
NOTE: Status Codes:
Federal (USFWS)
FE: Listed as Endangered under the Federal Endangered Species Act.
FT: Listed as Threatened under the Federal Endangered Species Act.
FC: A Candidate for listing as Threatened or Endangered under the Federal Endangered Species Act.
FSC: Species of Special Concern.
FD: Delisted under the Federal Endangered Species Act.

State (CDFW)
SE: Listed as Endangered under the California Endangered Species Act.
ST: Listed as Threatened under the California Endangered Species Act.
SR: Listed as Rare under the California Endangered Species Act.
SC: A Candidate for listing as Threatened or Endangered under the California Endangered Species Act.
SSC: Species of Special Concern.
SFP: Fully Protected species under the California Fish and Game Code.
SD: Delisted under the California Endangered Species Act.

CNPS Rare Plant Ranks and Threat Code Extensions
1B: Plants that are considered Rare, Threatened, or Endangered in California and elsewhere.
2B: Plants that are considered Rare, Threatened, or Endangered in California, but more common elsewhere.
.1: Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat).
.2: Fairly endangered in California (20-80% occurrences threatened).
.3: Not very endangered in California (<20% of occurrences threatened or no current threats known).

Appendix B Special-Status Wildlife Species with Potential to Occur in the Project Vicinity

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
American badger *(Taxidea taxus)*	--/SSC	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats. Need sufficient food and open, uncultivated ground with friable soils to dig burrows. Prey on burrowing rodents.	Potential to occur on project site due to presence of open shrub habitat. CNDDB occurrences recorded within the project site vicinity.
Bald eagle *(Haliaeetus leucocephalus)*	FD/SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water. Nests in large, old-growth, or dominant live tree with open branches.	Unlikely. Suitable old-growth forest habitat not found at the project site.
Blunt-nosed leopard lizard *(Gambelia sila)*	FE/SE	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts.	Unlikely. Suitable alkali scrub habitat not found at the project site.
Burrowing owl *(Athene cunicularia)*	--/SSC	Open, dry, annual or perennial grasslands, desert, or scrubland, with available small mammal burrows.	Potential to occur on project site due to presence of open shrub habitat and small mammal burrows. CNDDB occurrences recorded within the project site vicinity.
California condor *(Gymnogyps californianus)*	FE/SE	Requires vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Unlikely. Suitable nesting habitat not found at the project site.
California horned lark *(Eremophila alpestris actia)*	--/SSC	Coastal regions, chiefly from Sonoma County to San Diego County, also within the main part of the San Joaquin Valley and east to the foothills. Prefers short-grass prairie, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Unlikely. Suitable prairie/meadow habitat not found at the project site.
California linderiella *(Linderiella occidentalis)*	FSC/--	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools typically has very low alkalinity, conductivity, and total dissolved solids.	Unlikely. Suitable seasonal pool habitat not found at the project site.
California red-legged frog *(Rana draytonii)*	FT/SSC	Rivers, creeks, and stock ponds with pools and overhanging vegetation. Requires dense, shrubby or emergent riparian vegetation, and prefers short riffles and pools with slow-moving, well-oxygenated water. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter.	Unlikely. Suitable wetland or upland habitat not found at the project site.
California tiger salamander *(Ambystoma californiense)*	FT/ST	Grasslands and oak woodlands near seasonal pools and stock ponds in central and coastal California. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter. Requires seasonal water sources that persist into late March for breeding habitat.	Unlikely. Suitable nearby wetland habitat not found at the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Conservancy fairy shrimp *(Branchinecta conservatio)*	FE/--	Endemic to the grasslands of the northern two-thirds of the central valley; found in large, turbid pools. Also occurs in swales formed by old, braided alluvium filled by winter/spring rains.	Unlikely. Suitable riparian habitat not found at the project site.
Ferruginous hawk *(Buteo regalis)*	--/SSC	(Wintering) Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitats. Mostly consumes flat lagomorphs, ground squirrels, and mice.	Unlikely. Nesting habitat not found at the project site.
Fisher *(Pekania pennanti)*	FE/--	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Unlikely. Suitable large-tree stand habitat not found at the project site.
Foothill yellow-legged frog *(Rana boylii)*	--/SSC	Partly shaded, shallow streams and riffles with rocky substrate in a variety of habitats. Requires at least some cobble-sized substrate for egg-laying and 15 weeks of available water to attain metamorphosis.	Unlikely. Suitable riparian habitat not found at the project site.
Fresno kangaroo rat *(Dipodomys nitratoides exilis)*	FE/--	Alkali sink-open grassland habitats in western Fresno County. Bare alkaline clay-based soils subject to seasonal inundation, with more friable soil mounds around shrubs and grasses.	Unlikely. Suitable alkali grassland habitat not found at the project site.
Giant garter snake *(Thamnophis gigas)*	FT/ ST	Prefers freshwater marsh and low gradient streams. Adapted to drainage canals and irrigation ditches. The most aquatic garter snake in California.	Unlikely. Suitable wetland habitat not found at the project site.
Giant kangaroo rat *(Dipodomys ingens)*	FE/SE	Annual grasslands on the western side of the San Joaquin Valley, marginal habitat in alkali scrub. Needs level terrain and sandy loam soils for burrowing.	Unlikely. Suitable alkali habitat not found at the project site.
Golden eagle *(Aquila chrysaetos)*	--/SFP	Rolling foothill mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range. Also uses large trees in open areas.	Unlikely. Suitable nesting habitat not found at the project site.
Loggerhead shrike *(Lanius ludovicianus)*	--/SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Unlikely. Suitable nesting habitat not found at the project site.
Long-horn fairy shrimp *(Branchinecta longiantenna)*	FE/--	Endemic to the eastern margin of the Central Coast mountains in seasonally astatic grassland vernal pools. Inhabits small, clear-water depressions in sandstone and clear to turbid clay/grass-bottomed pools in shallow swales.	Unlikely. Suitable vernal pool habitat not found at the project site.
Monarch butterfly *(Danaus plexippus)*	FC/--	Winter roost sites. Wind protected tree groves (Eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Unlikely. Suitable tree grove habitat not found at the project site.
Northern california legless lizard *(Anniella pulchra)*	--/SSC	Sandy or loose loamy soils under sparse vegetation, moist soils. Anniella pulchra is traditionally split into two subspecies: *A. pulchra pulchra* (silvery legless lizard) and *A. pulchra nigra* (black legless lizard), but these subspecies are typically no longer recognized.	Unlikely. Suitable sandy soil habitat not found at the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Northern harrier *(Circus cyaneus)*	--/SSC	Found near coastal salt and freshwater marshes. Nests and forages in grasslands. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Unlikely. Suitable marsh habitat not found at the project site.
Prairie falcon *(Falco mexicanus)*	--/SSC	Nesting Habitats. Open terrain, either level or hilly breeding sites located on cliffs. Forages far distances, including to marshlands and ocean shores.	Unlikely. Nesting habitat not found at the project site.
San Joaquin coachwhip *(Masticophis flagellum ruddocki)*	--/SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Requires mammal burrows for refuge and oviposition sites.	Unlikely. Suitable habitat not found at the project site.
San Joaquin kit fox *(Vulpes macrotis mutica)*	FE/ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing, and suitable prey base.	Potential to occur at the project site due to the presence of suitable burrowing and foraging habitat. CNDDB occurrences recorded within the project vicinity.
Swainson's hawk *(Buteo swainsoni)*	--/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas, such as grasslands or agricultural fields supporting rodent populations.	Potential to occur at the project site due to the presence of suitable foraging habitat.
Tricolored blackbird *(Agelaius tricolor)*	--/SE	Areas adjacent to open water with protected nesting substrate, which typically consists of dense, emergent freshwater marsh vegetation.	Unlikely. Suitable nesting habitat not found at the project site.
Valley elderberry longhorn beetle *(Desmocerus californicus dimorphus)*	FT/--	Elderberry shrubs, usually in Central Valley riparian habitats.	Unlikely. Suitable host plant not found at the project site.
Vernal pool fairy shrimp *(Branchinecta lynchi)*	FT/--	Endemic to the grasslands of the Central Valley, Central Coast Mtns., and South Coast Mtns. in astatic rain-filled pools. Inhabits small, clear-water sandstone depression pools and grass swale, earth slump, or basalt-flow depression pools.	Unlikely. Suitable astatic pool habitat not found at the project site.
Vernal pool tadpole shrimp *(Lepidurus packardi)*	FE/--	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in swales of unplowed grasslands.	Unlikely. Suitable vernal pool habitat not found at the project site.
Western mastiff bat *(Eumops perotis californicus)*	--/SSC	Many open, semi-arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Unlikely. Suitable roosting habitat not found at the project site.
Western pond turtle *(Emys marmorata)*	--/SSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites (such as rocks or partially submerged logs) and suitable upland habitat for egg-laying (sandy banks or grassy open fields).	Unlikely. Suitable riparian habitat not found at the project site.
Western spadefoot *(Spea hammondii)*	--/SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands, breeds in winter and spring (January - May) in quiet streams and temporary pools.	Unlikely. Suitable aquatic habitat not found at or near the project site.

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