RESOLUTION NO. 16-027

A RESOLUTION OF THE PLANNING COMMISSION
OF THE CITY OF EL PASO DE ROBLES
RECOMMENDING APPROVAL TO THE CITY COUNCIL
OF A MITIGATED NEGATIVE DECLARATION FOR
GENERAL PLAN AMENDMENT 13-002, REZONE 13-001,
SPECIFIC PLAN AMENDMENT 13-001 AND A MASTER DEVELOPMENT PLAN
APPLICANT – WES WILLHOIT/ESTRELLA ASSOCIATES
RIVER OAKS II EXPANSION - APN: 025-390-009

WHEREAS, Wes Willhoit, on behalf of Estrella Associates, has filed an application requesting consideration of the following land use changes and entitlements in connection with the development of a project known as River Oaks II Expansion (the "Project"):

- **General Plan Amendment 13-002:**

  (a) Amend the General Plan Land Use Element Map to re-designate approximately 85 acres of land from Agriculture (AG) to Residential Single Family (RSF-4),

  (b) Amend the General Plan Circulation Element to eliminate a 2-lane arterial road connection (Dry Creek Road) from Buena Vista Drive to North River Road,

- **Rezone 13-001:** Rezone property currently zoned Agricultural to: Residential Single Family (R-1) - 85 acres, Parks and Open Space (POS) - 18 acres, and add a Resort Lodging Overlay (R/L) on approximately 26 acres.

- **Specific Plan Amendment 13-001:**

  (a) Amend the existing Borkey Area Specific Plan Map – Subarea A, Exhibit B, page 4 to change approximately 85 acres of the plan area from the Agricultural designation to Residential Single-Family (RSF).

  (b) Amend the Borkey Area Specific Plan text for Subarea A.

  (c) Amend the Borkey Area Specific Plan, Conceptual Development Plan for Subarea A, Exhibit B, page 14, to the River Oaks II Master Development Plan, and incorporate by reference the River Oaks II Master Development Plan Design Manual.

WHEREAS, pursuant to the Statutes and Guidelines of the California Environmental Quality Act (CEQA), Public Resources Code, Section 21000, et seq., and the City's Procedures for Implementing CEQA, an Initial Study and a Draft Mitigated Negative Declaration ("MND") was prepared and circulated for a 30-day public review period beginning on April 11, 2016 through May 10, 2016. The Draft MND/Initial Study dated April 11, 2016 is on file at the Paso Robles Community Development Department and available on line at http://www.prcity.com/government/departments/commdev/; and

WHEREAS, mitigation measures have been incorporated into the MND and will be imposed on the project through the City's adoption of a Mitigation Monitoring and Reporting Program (MMRP) in compliance with CEQA Guideline 15074(d). These mitigation measures are imposed on the project to address potential environmental effects from: air quality; agricultural resources, aesthetics, biological resources; cultural resources, greenhouse gas emission, hydrology, transportation, and noise. With the implementation of this mitigation, all potential environmental effects will be reduced to a less than significant level; and

WHEREAS, mitigation measures set forth in the MMRP are specific and enforceable. The MMRP adequately describes implementation procedures, monitoring responsibility, reporting actions, compliance schedule, and verification of compliance in order to ensure that the Project complies with the adopted mitigation measures; and

WHEREAS, the mitigation measures contained in the MMRP will also be imposed as enforceable conditions of approval; and

WHEREAS, the applicant has executed a Mitigation Agreement whereby the applicant has agreed to incorporate all of the mitigation measures into the project. A copy of the executed Mitigation Agreement is on file in the Community Development Department; and

WHEREAS, public notice of the proposed Draft MND was posted as required by Section 21092 of the Public Resources Code; and

WHEREAS, in response to comments received on the proposed Draft MND that was publically noticed, circulated and posted as required by Section 21092 of the Public Resources Code, the Planning Commission has determined that mitigation measure AG-1, (related to agricultural buffer setbacks), may be modified to reduce the agricultural buffer setback on the applicants' property from 100 feet to 75 feet, based on site-specific circumstances whereby <u>in certain areas</u> there is an existing 25-foot wide service road on the adjacent agricultural property which would create <u>additional agricultural buffering</u>. The Planning Commission has determined that a 75-foot onsite setback on the applicants' property would provide an adequate buffer to reduce potential land use conflicts and protect future residents from potential health and safety risks associated with nearby agricultural operations.

WHEREAS, public hearings were conducted by the Planning Commission on May 24, 2016, to consider the Initial Study and the draft MND prepared for the proposed Project, and to accept public testimony on the proposed entitlements and environmental determination;

NOW, THEREFORE, BE IT RESOLVED, by the Planning Commission of the City of Paso Robles, as follows:

Section 1. All of the recitals above are true and correct and incorporated herein.

Section 2. Based on the information and analysis contained in the Mitigated Negative Declaration prepared for this project, the comments received during the public review period, and testimony received at the public hearing, the Planning Commission finds that there is no substantial evidence supporting a fair argument that there would be a significant impact on the environment with mitigation measures imposed on the Project. These findings are based on an independent review of the Initial Study, the Mitigated Negative Declaration, and all comments received regarding the Mitigated Negative Declaration, and based on the whole record. The Planning Commission finds that mitigation measure AG-1, (related to agricultural buffer setbacks), may be modified to reduce the agricultural buffer setback on the applicants' property from 100 feet to 75 feet, based on site-specific circumstances whereby in certain areas there is an existing 25-foot wide service road on the adjacent agricultural property, which would create additional agricultural buffering. The Planning Commission has determined that a 75-foot onsite setback on the applicants' property would provide an adequate buffer to reduce potential land use conflicts and protect future residents from potential health and safety risks associated with nearby agricultural operations. The Planning Commission further finds that the Mitigated Negative Declaration was prepared in compliance with CEQA and the CEQA Guidelines, that there is no substantial evidence that the Project will have a significant effect on the environment with the incorporation of mitigation measures provided in the MMRP, and the Mitigated Negative Declaration reflects the independent judgment and analysis of the Planning Commission.

Section 3. The Planning Commission, based on its independent judgment and analysis, recommends the City Council adopt the Mitigated Negative Declaration for the River Oaks II Expansion Project, attached hereto as Exhibit A, including the comments received and responses thereto, attached hereto as Exhibit B, and the Mitigation Monitoring and Reporting Program, attached hereto as Exhibit C, and imposes each mitigation measure as a condition of approval of the Project, in accordance with the Statutes and Guidelines of the California Environmental Quality Act (CEQA) and the City's Procedures for Implementing CEQA. Exhibits A, B, and C are hereby incorporated into this resolution.

PASSED AND ADOPTED THIS 24TH day of May, 2016, by the following roll call vote:

AYES: Commissioners Donaldson, Barth, Davis, Agredano, Rollins and Burgett
NOES:
ABSENT:
ABSTAIN: Commissioner Brennan

BOB ROLLINS, CHAIRMAN

ATTEST:

WARREN FRACE, SECRETARY OF THE PLANNING COMMISSION

Exhibit A - Mitigated Negative Declaration for the River Oaks II Expansion project
Exhibit B – Response to Comments Received
Exhibit C - Mitigation Monitoring and Reporting Program

Exhibit A - Mitigated Negative Declaration for the River Oaks II expansion project

Refer to Attachment 12 at the end of the staff report.

Attachment 12
Exhibit A - Draft Resolution A

CALIFORNIA ENVIRONMENTAL QUALITY ACT
CITY OF PASO ROBLES - INITIAL STUDY
RIVER OAKS II EXPANSION
PUBLIC REVIEW PERIOD: APRIL 11, 2016 – MAY 10, 2016

1. **PROJECT TITLE:** River Oaks II Expansion – General Plan Amendment (GPA 13-002), Rezone (RZ 13-001), and Specific Plan Amendment (SPA 13-001)

2. **LEAD AGENCY:** City of Paso Robles
1000 Spring Street
Paso Robles, CA 93446

Contact: Susan DeCarli
Phone: (805) 237-3970
Email: sdecarli@prcity.com

3. **PROJECT LOCATION:**

The project site is located in the northeastern area of the City of Paso Robles, within the Borkey Area Specific Plan area, north of State Route 46 East, west of Buena Vista Drive, and east of the Salinas River. See Attachment 1 – Project Location Map.

4. Assessor Parcel Numbers: 025-390-009

5. **GENERAL PLAN DESIGNATION:** Agriculture (AG)

6. **ZONING:** Agriculture (AG)

7. **PROJECT DESCRIPTION:** The proposed project includes amendments to the City General Plan – Land Use and Circulation Elements, Zoning Map, and the Borkey Area Specific Plan.

General Plan Amendment:
The proposed project includes an amendment to the General Plan Land Use Element Map to re-designate the subject property from Agriculture (AG) to Residential Single Family (RSF-4). An approximately seven (7) acre area of the property would retain the existing AG land use designation. A portion of the property is located adjacent to the Salinas River (to the west of North River Road). This area of the project is designated as Parks and Open Space (POS), and is proposed to remain POS. See Attachment 2 – General Plan Land Use Map Amendments.

The project also includes an amendment to the General Plan Circulation Element to eliminate a planned 2-lane arterial road connection (Dry Creek Road) with a future road alignment shown through the River Oaks II planning area, from Buena Vista Drive to North River Road. See Attachment 3 – Circulation Element Master Plan Map Amendment.

Zoning Amendment:
The proposed Zoning Map amendment is a request to amend the existing Agriculture (AG) zoning of the site to Residential Single Family (R-1), with a Resort Lodging Overlay (R/L). The area adjacent to the river would be rezoned from AG to POS for consistency with the General Plan designation. Additionally, a seven (7) acre area of land within the development area will remain zoned Agriculture (AG) for consistency with the General Plan. See Attachment 4 – Zoning Map Amendment.

Specific Plan Amendment:
The project includes adoption of a master plan and design guidelines. An amendment to the existing Borkey Area Specific Plan (BASP) Subarea A, is proposed, to reflect the proposed changes to the existing land use designation and zoning. See Attachment 5 – Borkey Area Specific Plan, Subarea A Amendment. The proposed project includes numerous amendments to development standards in the BASP for Chapters 2, 3, and 4. The proposed amendments to the Specific Plan also includes several text amendments. See Attachment 6 – BASP Text Amendments. Most of the changes proposed are to provide for consistency for changing the zoning from AG to R1 uses, and to provide for continuity between the existing development pattern of the River Oaks development to the south and the proposed project. The Specific Plan Amendment will include adoption of a project “design manual”.

The Specific Plan Amendment also proposes a request to deviate from the Grading Ordinance in the Zoning Code. Due to the hilly terrain on the east side of the project site, the amendment would include provisions to allow “mass” grading in this area of the project.

Site Development Master Plan:
The proposed amendments allow for master planning of the project site for the future development of 271 single-family residential (sfr) units on 113 acres. This includes 144 age-restricted sfr units, which would provide an extension of an existing neighborhood development, the “Traditions”. The neighborhood design characteristics would match the existing Traditions development. The remaining 127 sfr units are proposed on the eastern portion of the site. The neighborhoods in this area will be similar to existing subdivisions located to the south of the site, such as the existing “Classics” and “Vineyard Estates” neighborhoods, with lot sizes ranging between 8,000 sf to 10,000 sf, and 15,000 sf to 20,000 sf, respectively. Lots in this area are proposed to be “mass” graded. No development is proposed in the POS or AG areas of the project site. See Attachment 7 – Site Development Master Plan.

The master plan also includes a common area and the existing resort on approximately 7 acres of land adjacent to an existing lake feature and pavilion gathering area. The pavilion is proposed to be enclosed to provide for expanded uses, such as special events. The project includes an agricultural growing area within the common area referred to as an “agri-hood”. It is intended that this area be used for a neighborhood-serving crop production and a farmstand.

Project General Plan Use Table

Land Use	Acres	Density	Proposed Units
RSF	85	4 units/acre	271
AG	28		
POS	18		
TOTAL	**131**		**271**

The circulation network includes a connected system of streets, sidewalks, lanes, bicycle paths, multi-purpose paths, and walking trails. Streets within the age-restricted Traditions area are proposed to private and gated. The remaining streets are proposed to be open to the public. A private nature blufftop walking trail is proposed along the western boundary of the Traditions neighborhood connecting to an existing blufftop trail system to the south of the planning area. This trail area will only be accessible to the Traditions neighborhoods. Another publicly accessible walking trail system is proposed to extend throughout the open space common area on the eastern side of the project, and would connect to walking trails along the northernmost property boundary. The planned street and sidewalk network is designed to the connect to existing circulation network in the existing River Oaks project. See Attachment 8 – Circulation Plan.

8. SURROUNDING LAND USES AND SETTING:

The project site is located on a bluff top that overlooks the Salinas River and Highway 101 to the west, and undeveloped open space land adjacent to the Salinas River. The City's wastewater treatment plant is located to the southwest of the site on the west side of the Salinas River. The project site is surrounded by residential land uses to the south (including Kermit King Elementary School, and the River Oaks 6-hole golf course and clubhouse). Cuesta Community College is located to the east and southeast, agricultural land with vineyards to the north, and rural residential development is located to the northeast in the unincorporated area of San Luis Obispo County.

The planning area is located in Subarea A of the Borkey Area Specific Plan. The site is mostly undeveloped and has historically been used for dry-crop farming, with the exception of an existing spa and outdoor gazebo and amphitheater area used for public and private gatherings. The site characteristics include rolling hills, grassland, dry-crop farming areas, scattered native oak trees, and an existing 5.93-acre lake/drainage pond.

9. OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (e.g., PERMITS, FINANCING APPROVAL OR PARTICIPATION AGREEMENT):

No other agency approval is needed prior to the City's approval of these amendments. However, there may be the need of other resource agency permits prior to actual development of certain areas. All work that would affect the Salinas River and ephemeral tributaries on the property may be under the permitting jurisdiction of the US Army Corps of Engineers (USACE) (section 4040), the California Department of Fish and Wildlife (CDFW) (code 1603), and the Regional Water Quality Control Board (RWQCB) (section 401). All future work that would affect the bed or banks of the drainages, including culverts and bridges, are likely to require USACE, CDFW, and/or RWQCB authorizations.

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.

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

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.

X 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 (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) 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.

Signature: ______________________ Date ______________

EVALUATION OF ENVIRONMENTAL IMPACTS:

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved. Answers should address 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.

3. “Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must 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.

4. “Negative Declaration: Less Than Significant With Mitigation 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 “Earlier Analyses,” as described in (5) below, may be cross-referenced).

5. Earlier analyses may be 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 should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. The explanation of each issue should identify:
    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 significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	■	☐	☐

Discussion:

In accordance with the City's General Plan, Conservation Element, the project site is not identified or designated as a visual corridor, gateway to the City or a natural landmark or open space viewshed. However, the entire length of Highway 101 is identified as a visual corridor, and the Salinas River is identified as a natural landmark open space viewshed in the Conservation Element.

Visibility of the site is limited as viewed from public right-of-ways, which includes Highway 101, North River Road and Buena Vista Drive. However, the site has general scenic qualities of rolling hills, oak trees, and open farmland. Therefore, an assessment of how visible the project would be from various prominent viewpoints and its relative impact on scenic qualities was conducted.

A. Project Visual Setting:

The project location is set in northern San Luis Obispo County, on the rural, northern edge of the City. The property is located at the top of a bluff that overlooks the Salinas River and Santa Lucia Coast Range to the west. The Salinas River environment is in a natural river condition (except for the City's wastewater treatment plant to the southwest), and hosts native vegetation, including trees (i.e. willows, cottonwoods, and oak trees), and other riparian vegetation. Highway 101 is located adjacent to the west side of the river, with hills and rural residential development beyond to the west. North River Road is located at the base of the western bluff.

The western edge of the project site is vacant and mostly level (except for a drainage area toward the northern edge of this portion of the planning area). This area has native oak trees along the bluff with savanna grassland on the flatter areas of the site. Property to the south of the site is developed with single-family housing. Property to the north of the site is under agricultural cultivation, including row crops toward the west side and vineyards to the east. The property toward the east has rolling hills that are currently dry-crop farmed, and savanna grassland areas. There is an existing (manmade) lake and spa resort located toward the west/central area of the site. Natural drainages extend through the rolling hills east to west. Property to the east of the site includes vacant land, rural residential development, and Cuesta College to the southeast.

B. Landscape Unit:

The surrounding dominant landscape unit is on the urban edge of the City, and is composed of a mix of farmland and vineyards, rural residential home sites, with production housing (to the south). The area represents a distinct boundary between town and country, as defined in the City's Gateway Design Standards. The project site is presently on the City boundary and functions as a rural-urban interface between rural land to the north and urban land to the south. Development of the property would be an expansion of the existing urban/neighborhood fabric northward, moving the "legible" boundary between the City and the County northward, with no "feathering" of low-density development toward the County area.

C. Project Viewshed:

Project viewpoints and viewsheds are identified on Attachment 8. The site is not readily visible from many locations.

- Viewshed V-1. As seen from northbound Highway 101, the site is largely obscured due to trees and vegetation along the highway, vegetation along the bluff, and the view angle of the property, since the property is over 100 feet higher in elevation than the highway.
- Viewshed V-2. The site is most visible from southbound Highway 101 near the southbound Spring

Street exit. However, from this view the project site is a little over a mile away in the distance toward the east. The primary southbound view is of the rolling hills to the east. The hillside area projects approximately 40 to 50 feet above the bluff top elevation, and presents rolling hills of dry crop farming in the distance. The bluff top portion of the site in the foreground is less noticeable due to vegetation, distance and angle from the viewpoint. The length of time to view the project from this vantage is relatively long (several seconds), however the view is far way, and blends in with the surroundings, and does not register as a distinct feature on the landscape.

- Viewshed V-3. Visibility of the site from North River Road is very limited due to the difference in topography of the road located below the bluff. The project is not readily visible from viewers on North River Road, either northbound or southbound.
- Viewshed V-4. The remaining view of the site from a public vantage point is at the project entrance on Buena Vista Drive, which provides a view of the site toward the west. Views from this vantage point include the entry road, undeveloped land in the foreground that is directly adjacent to Buena Vista Road (Cuesta College property), and the project site located approximately 400 feet to the west from the entrance. The visibility of the future development from this view would include neighborhoods planned on the eastern slope of the rolling hillside area of the site. Duration of visibility is relatively long, since Buena Vista Road is a local road, and travel speeds are slow, as compared to the highway.

D. Existing Visual Resources:

- Visual Character – The existing visual character encompasses the setting and the landscape unit characteristics of an urban edge and rolling hills and farmland. The site has limited visibility, and where it is visible, the views are from long vistas, and they are subtle without dramatic changes in character from surrounding development patterns.
- Visual Quality – The visual quality of the project site and viewsheds exhibit high quality, since they are generally undisturbed, however they are limited since the site is not readily visible to the public.
- Vividness – The existing site is not particularly visible from most viewpoints, and is composed of open grassland and dry-crop farming land. It is framed by a strong urban boundary to the south and open farmland and hillsides on the remaining boundaries. The more prominent, memorable aspects of vivid visual quality are the views from the site (rather than of the site) to the north, west and east of rolling vineyards, hillsides and rural land. Therefore, the site does not present strong visual landscape components that provide distinctive visual patterns.
- Intactness – The west side of the property is disturbed by being graded level for a portion of the site, and there are existing older, dilapidated structures and some debris located in this area. Therefore, this area of the site would be determined to be semi-intact. The existing spa, lake, gazebo and pavilion center disturbs the intactness of the central portion of the site. The eastern side of the property has the most undisturbed, intact areas of the site with open, rolling hills and natural terrain. Therefore, in consideration of all these aspects, the overall intactness of the site is reduced
- Unity – The existing unity of the property is largely coherent with the careful siting and integration of the spa and lake into the existing topography and landscape of the site. The existing undisturbed hills rising to the east provide a natural backdrop to the focal point of the spa and lake areas, and provides visual unity to the site.

E. View Sensitivity:

As noted, the site has limited visibility from most viewpoints. Given the surrounding development patterns, with existing development to the south along the bluff top area, which does not

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

significantly stand out from the most prominent viewpoint, and the proposed continuance of this development pattern, it is not anticipated that viewer sensitivity to a continued development pattern in this area would be high. Development on the bluff top area would not likely significantly "register" to viewers driving along Highway 101 since it would continue the existing pattern. Views from Highway 101 of developed hillsides further east would be at a long distance from the prominent viewpoints, and would also continue suburban development patterns, therefore, it would not likely present significant changes in viewer expectations of this area, and sensitivity would be low. Viewer sensitivity from Buena Vista Road is also not sensitive since views from this location would be of continued suburban development set back in the distance toward the west.

F. Viewer Exposure:

Viewer exposure of the site is limited since the site is set back over a mile from the most prominent views and it is obstructed by existing topography and vegetation. Consistency in continuing the existing urban form of neighborhood design themes and architecture will add to reducing viewer exposure.

In conclusion, views of the site from prominent viewpoints would not be significant with use of grading techniques that conform to the landscape, and construction of single-family housing along the bluff area similar to existing development patterns, building forms, and use of materials. Therefore, significant visual impacts to scenic resources such as the Salinas River corridor of Highway 101 would be reduced since the project site has very limited visibility from these locations, and design parameters can help the project blend into the existing landscape. Mitigation Measure AES-1 is incorporated into the Mitigation Monitoring and Reporting Program (MMRP) to ensure potential visual impacts are reduced to a less than significant level through implementation of appropriate grading techniques.

AES-1. Grading. Future site development of the site shall utilize landform, contour grading techniques to reduce the appearance of unnatural, angled slopes to help graded slopes blend in with the surrounding landscape. All exposed graded slopes shall be landscaped to soften the appearance of and camouflage graded slopes to be compatible with the surrounding development pattern and landscape.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	■	☐

Discussion:

Existing scenic resources of the site within the viewshed of Highway 101 are primarily of the bluff, oak trees and hillsides in the distance to the east. The oak trees along the bluff and within the site are not proposed to be removed with future development of the project and will be maintain their scenic quality afforded to the site. There are no significant rock outcroppings or historic resources on the project site. Therefore, the project would result in less than significant damage to scenic resources within a state scenic highway.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	■	☐

Discussion:

The project site has limited visibility from public right-of-ways, and it is proposed to continue the existing development pattern of neighborhood development, blending in and being compatible with the surrounding

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

landscape. Therefore, the project would not substantially degrade the existing visual character or quality of the site or surroundings, and potential impacts would be less than significant.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Sources: 1, 2, 10)	☐	☐	■	☐

Discussion:

Currently, the existing site produces minimal nighttime lighting with only safety lighting for the existing spa, pavilion, and access road. The undeveloped areas of the site do not currently produce any light or glare.

The proposed project includes single-family residential development with common open space, streets, and walking paths. This type of development would include street lights and low-scale lighting for homes. The street light fixtures are proposed to continue the existing style of street lights in the existing River Oaks neighborhood which are designed with wooden standards, which are approximately 25 feet in height, and are oriented with light fixtures downcast to reduce "night-sky" effects of ambient night lighting. Exterior home lighting fixtures would need to be consistent with the City's adopted Zoning Code standards, which require all exterior lighting fixtures to be shielded and downcast. This will help reduce potential light and glare to the minimum necessary for nighttime security. As a single-family development, the density of the project would not create significant light or glare. Therefore, the proposed project would result in less than significant potential impacts from light and glare.

II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. 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:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	■	☐

Discussion:

In accordance with the California Department of Conservation agricultural soil assessment methodology, a Land Evaluation and Site Assessment (LESA) model was prepared for this project. A copy of the LESA study is provided in Attachment 10. The LESA study includes a land evaluation, which identifies the site soil land use capability classification and Store Index, both of which are used to measure soil resource quality, such as prime and non-prime soil classifications. The study also includes a site assessment which identifies other factors that contribute to the suitability of property for agriculture and relative impacts that the property location may have on agricultural resources. These factors include size the property, water availability, the amount of agricultural lands surrounding the site, and the amount of surrounding lands that are under agreements or other methods for land resource protection. Together, the land evaluation and site assessment help determine the overall suitability of land for agricultural purposes, and potential impacts of converting it to urban development.

The LESA study indicates that the project site has six different types of soil classifications, with two types of soil that are classified as "prime"/Class I soil (when irrigated). The total acreage of the site is 132 acres and the total acreage of prime soil is 31.5 acres (24%). When considering all of the factors noted above, the "threshold of significance" established in the LESA protocol is as follows:

California LESA Model Scoring Thresholds

Total LESA Score	Determination of Significance
0 -39	Not considered significant
40 – 59	Considered significant only if the Land Evaluation **and** Site Assessment subscores are greater than or equal to 20 points
60 – 79	Considered significant unless **either** Land Evaluation or Site Assessment subscore is less than 20 points
80 – 100	Considered significant
Source: California Department of Conservation, 1997.	

The overall score of the LESA assessment (with a land evaluation score of 32.68 and a site assessment score of 12.55) equals 45.23. According to the thresholds, this score indicates that conversion of the project site to non-agricultural uses would be less than significant, since the site assessment score is less than 20.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	■	☐

Discussion:

This application includes a request to amend the General Plan agricultural land use designation and applicable zoning from Agriculture to Residential Single-Family, for internal consistency. The Master Plan is designed to include an agricultural buffer of 100 feet from the existing agriculturally zoned property to the north of the site. Trees, hedgerows, fencing and landscaping are proposed along the norther boundary of the property to help screen the adjacent vineyard (and associated impacts such as dust, tractor lights, noise, etc.) from future home sites in this area of the project. The agri-hood area of the site would be managed by the homeowners association thereby ensuring that onsite crop production does not disturb residents, and that residential uses near it do not conflict with agricultural practices. A mitigation measure establishing an agricultural buffer setback and requirements will be implemented to reduce potential agricultural conflicts. Therefore, the project would not conflict with agricultural zoning or uses, with mitigation measures implemented.

The project site is currently not under a Williamson Act contract.

AG-1. Agricultural Buffer. An agricultural buffer setback from the northern property line of 100 feet and a requirement to plant a dense row of trees and a hedgerow to reduce dust along the northern property line, shall be recorded on the property title with recordation of all subdivision maps.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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	☐	☐	☐	■

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	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?	☐	☐	☐	■

Discussion:

There are no forest land resources, as defined, within the City of Paso Robles, nor does the City border forest land resources.

e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	■	☐	☐

Discussion: II c. & d.

The LESA study referenced in item II a. above includes an analysis of the amount of surrounding agricultural land within a ¼ mile (area of influence) from the site. Of all the land that is within this area of influence (480 acres), approximately 242 acres/44% is in agriculture (including 39 acres that are under a Williamson Act contract). The criteria (e.g. potential to convert land) is a component of the factors evaluated in the overall LESA score. Under the overall LESA score, potential impacts (including of pressure to convert land to non-agricultural uses) is not considered significant.

Per the City's Purple Belt Program, it should be noted that the property located directly to the north of the site (220 acres), which was formally in a Williamson Act Contract, is within the City limits and is designated and zoned as Agriculture. Approximately 2/3 of this land is planted in vineyards, and the remainder is either planted in row crops or is presently fallow. Potential land use conflicts between residential uses and agriculture may occur. This may occur as a result of farming practices including tilling soil and dust, use of pesticide and fungicide sprays, tractor headlights and noise, and other factors. The City has an adopted "right-to-farm" ordinance to help address potential land use conflicts. This will be implemented through a mitigation measure, to ensure it is implemented and that property owners are informed to help reduce the potential for complaints by residents related to nearby farm-related activities.

> **AG-2. "Right-to-Farm" Notice.** A "right-to-farm" notice shall be recorded on the deed of each property within this project area.

Complaints and enforcement activities may result in pressure to modify and/or discontinue farming practices, which may result in pressure to convert this land to non-agricultural land uses in the future. However, as noted in II b. above, mitigation requiring an agricultural buffer and landscaping will be required to reduce potential agricultural related impacts between the project site the property to the north. Additionally, the City's adopted General Plan, identified that build-out of the City would result in potential Class I impacts resulting from conversion of prime agricultural land to urban development. The City adopted a Statement of Overriding Considerations which included this topic and potential impacts.

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

a.	Conflict with or obstruct implementation of the applicable air quality plan? (Source: 11)	☐	☐	■	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Discussion: A consistency analysis to determine if a project would conflict with or obstruct implementation of the local San Luis Obispo County Clean Air Plan (CAP) must evaluate the following questions:

- Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?

  The most recent CAP was adopted in 2001. The City's 2003 General Plan build-out population of 44,000 has not changed since it was adopted. The proposed project density is within the City's planned build-out scenario. In approving the General Plan, and adopting the General Plan EIR, the City included adoption of a Statement of Overriding Considerations, regarding specific potential environmental impacts, including City growth projections (above 35,300 population), and consistency with the CAP. Therefore, the project can be determined to be consistent with the most recent CAP, and would not conflict or obstruct implementation of the CAP.

- Is rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?

  The City's 2011 General Plan Circulation Element and transportation impact mitigation program is based on the build-out growth scenario of 44,000 people in the 2003 General Plan Land Use Element. The proposed project density is within the build-out scenario of both the Land Use and Circulation Elements of the General Plan. Therefore, the project would not result in a rate of increase in vehicle trips or miles traveled than the rate of population growth within the City, and the project would be consistent with the population growth planned for the City.

- Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?

  The project incorporates numerous land use and transportation control measures to ensure consistency with the CAP. These include the following:

  T2A. Local Transit System Improvements. The proposed project allows for the potential to include a transit stop within the project area.

  T3. Bicycling and Bikeway Enhancements. The project includes a circulation pattern conducive to safe bicycling opportunities, with connectively to the rest of the City consistent with the City's General Plan Circulation Element and Bike Master Plan, which calls for an extension of a Class II Bikeway into the community from Clubhouse Drive to the south, as well as providing access to a potential regional bikeway system along the Salinas River corridor.

  T6. Traffic Flow Improvements. This control measure refers to implementing traffic calming measures to slow down vehicles and encourage safe alternative modes of transportation. This could be accomplished through a variety of means, including traffic control devices, roadway design appropriate to the proposed land uses, and improvements for pedestrians and bicycles to encourage those modes of transportation. The project implements bikeway connections and roadway design consistent with City standards, and encourages bicycling and pedestrian use relate to access to the centrally located community facilities that are part of the project. Ultimately, the City will determine the appropriate design of circulation improvements on the site to ensure safe multimodal transportation opportunities.

The Clean Air Plan also includes various land use planning strategies to encourage the use of alternative forms of transportation, increase pedestrian access and accessibility to community services and local destinations, reduce vehicle miles traveled within the County, and promote congestion management efforts.

In general, these measures are most appropriate in the context of long-range plans, particularly general plans, where they can be applied communitywide. Relative to the River Oaks project, the proposed development is an extension of the existing land use pattern within the Borkey Area Specific Plan, which plans for orderly development and appropriate residential densities within the northern portion of the City. The degree to which the proposed project implements these land use strategies is discussed below.

L1. Planning Compact Communities. The project concentrates residential development into several neighborhoods, preserving and extending existing recreational open space uses in an orderly fashion.

L2. Providing for Mixed Use. The River Oaks community is centered on a recreationally-oriented facility that is focused on the needs of the proposed and existing River Oaks community. This center is consistent with the mixed use concept that is at the heart to reducing vehicle trips and air emissions. The project is envisioned as a residential development and an extension of the existing River Oaks I development located to the south within the Borkey Area Specific Plan. The proposed land use pattern is appropriate for its location away from the downtown, and toward the urban edge of the City of Paso Robles.

L3. Balancing Jobs and Housing. Balancing jobs and housing is a goal most appropriately implemented on a Citywide basis in the context of the General Plan. The purpose of this goal is to minimize commute distances, vehicle miles traveled, and thus air emissions. The overall land use pattern of the City includes a variety of commercial, industrial and residential uses that provide opportunities for residents to be employed within the community. The River Oaks project is an appropriate extension of the approved Borkey Area Specific Plan, which is an important residentially-oriented component of the General Plan land use pattern intended to provide an overall jobs-housing balance.

L-4. Circulation Management. This strategy is intended to encourage a transportation system that supports alternative travel modes and decreases reliance on the single occupant motor vehicle. In addition to the roadway system, the project includes provisions for transit connections, trails (including a connection to a potential regional trail alignment along the Salinas River), and safe pedestrian access between the proposed neighborhoods.

L-5. Communication, Coordination and Monitoring. This goal is most appropriately directed at the agency level, in that it encourages local and regional jurisdictions to coordinate closely to ensure that adopted land circulation programs related to reducing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

air emission are implemented. The CEQA process for the River Oaks project provides an important avenue to Air Quality and Greenhouse Gas Emissions Analysis.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Source: 11)	☐	■	☐	☐

Discussion: An Air Quality Analysis was prepared for this project, and is provided in Attachment 11. The study includes an analysis of emissions that may result from the proposed development. The impact analysis (provided in Impact AQ-2) indicates that the project may result in short-term construction activities that may result in localized concentrations of pollutants that could adversely affect nearby land uses, that could be considered potentially significant unless mitigated. It also indicates that the project may result in long-term operational emissions from mobile emissions (i.e. cars), which would also be potentially significant unless mitigated.

The project incorporates several site design features that help mitigate these impacts. These include:

- *Increased Density (4 du/ac);*
- *Improve Walkability (16 intersections per square mile of development);*
- *Improve Destination Accessibility (1 mile to Downtown);*
- *Increase Transit Accessibility (2 transit stops within the project site);*
- *Improve Pedestrian Network;*
- *Provide Traffic Calming Measures (roundabouts and intersection improvements);*
- *Landscape Equipment (assumed 25% electric);*
- *High Energy Efficiency Lighting (used throughout site);*
- *Apply Water Conservation Strategies;*
- *Use Reclaimed Water (when available);*
- *Use Grey Water (when available);*
- *Low Flow Fixtures;*
- *Turf Reduction;*
- *Water-Efficient Landscaping;*
- *Water Efficient Irrigation;*
- *Recycling;*

To address short-term construction-related emissions, the project would comply with Mitigation Measure AQ-1, which provides Standard Measures for Construction Activities. These include:

AQ-1. Short-Term Construction-Related Emissions.

- Interior and exterior paints used during project construction shall have a maximum allowable VOC content of 150 grams per liter;
- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation;
- Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;

- Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_X exempt area fleets) may be eligible by proving alternative compliance;
- Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators, discouraging them from idling for more than 5 minutes;
- Diesel idling within 1,000 feet of sensitive receptors shall be discouraged to the extent feasible;
- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
- Electrify equipment when feasible; Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and,
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel. Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on- road compliant engines;
- Repowering equipment with the cleanest engines available; and
- Installing California Verified Diesel Emission Control Strategies. These strategies are listed at: http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

AQ-2. Dust Control Construction Emissions

- Reduce the amount of the disturbed area where possible;
- Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Water could be applied as soon as possible whenever wind speeds exceed 15 miles per hour;
- All dirt-stock-pile areas could be sprayed daily as needed;
- Permanent dust control measures could be identified in the approved project revegetation and landscape plans and implemented as soon as possible following completion of any soil disturbing activities;
- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading could be sown with a fast-germinating native grass seed and watered until vegetation is established;
- All disturbed soil areas not subject to revegetation could be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
- All roadways, driveways, sidewalks, etc., to be paved could be completed as soon as possible. In addition, building pads could be laid as soon as possible after grading unless seeding or soil binders are used;
- Vehicle speed for all construction vehicles could not exceed 15 mph on any unpaved surface at the construction site;
- All trucks hauling dirt, sand, soil or other loose materials could be covered or could maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, and/or rumble strips for trucks and equipment leaving the site;
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water could be used where feasible; and
- Construction personnel should wear protective face masks while grading and excavating soils that contain serpentine soil;

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

- All PM_{10} mitigation measures required shall be shown on grading and building plans; and,
- The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

AQ-3. Mobile Emissions.
Mitigation Measure AQ-3, provides measures to reduce mobile emissions to a less than significant level. These include implementing at least 18 of the 24 measures identified by the local air district, provided below:

1. Provide a pedestrian-friendly and interconnected streetscape to make walking more convenient, comfortable and safe (including appropriate signalization and signage).

2. Provide good access to/from the development for pedestrians, bicyclists, and transit users.

3. Incorporate outdoor electrical outlets to encourage the use of electric appliances and tools.

4. Provide shade tree planting in parking lots to reduce evaporative emissions from parked vehicles. Design should provide 50% tree coverage within 10 years of construction using low ROG emitting, low maintenance native drought resistant trees.

5. Pave and maintain the roads and parking areas

6. No residential wood burning appliances.

7. Incorporate traffic calming modifications to project roads, such as narrower streets, speed platforms, bulb---outs and intersection designs that reduce vehicles speeds and encourage pedestrian and bicycle travel.

8. Increase number of connected bicycle routes/lanes in the vicinity of the project.

9. Provide easements or land dedications and construct bikeways and pedestrian walkways.

10. Link cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel to adjacent land uses.

11. Plant drought tolerant, native shade trees along southern exposures of buildings to reduce energy used to cool buildings in summer.

12. Utilize green building materials (materials which are resource efficient, recycled, and sustainable) available locally if possible.

13. Install high efficiency heating and cooling systems.

14. Utilize high efficiency gas or solar water heaters.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

15. Utilize built---in energy efficient appliances (i.e. Energy Star®).

16. Utilize double---paned windows.

17. Utilize low energy street lights (i.e. sodium).

18. Utilize energy efficient interior lighting.

19. Install door sweeps and weather stripping (if more efficient doors and windows are not available).

20. Install energy---reducing programmable thermostats.

21. Develop recreational facility (e.g., parks, gym, pool, etc.) within one---quarter of a mile from site.

22. If the project is located on an established transit route, provide improved public transit amenities (i.e., covered transit turnouts, direct pedestrian access, covered bench, smart signage, route information displays, lighting etc.).

23. Project provides a display case or kiosk displaying transportation information in a prominent area accessible to employees or residents.

24. Provide vanpool, shuttle, mini bus service (alternative fueled preferred).

With implementation of Mitigation Measures AQ-2 and AQ-3, the proposed project would result in short-term and long-term emissions that would be less than significant, and therefore, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (Source: 11)	☐	■	☐	☐

Discussion: As noted in the Air Quality Study, Table 6, the project may result in short-term construction emissions of DPM/PM_{10}, ROG and NOX, as well as ROG and NO_x from operational emissions. Implementation of Mitigation Measures AQ-2 and AQ-3 (noted above) would reduce these impacts to a less than significant level.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. Expose sensitive receptors to substantial pollutant concentrations? (Source: 11)	☐	■	☐	☐

Discussion: There are sensitive receptors within the near vicinity of the project site, including senior housing and an elementary school that would be downwind from the project, that may be affected during construction. Implementation of Mitigation Measure AQ-4 would reduce the potential impacts to sensitive receptors to a less than significant level, as follows:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

AQ-4. Sensitive Receptors.

a. Prior to issuance of a grading permit, a permit to operate shall be obtained from the SLOAPCD for any diesel emergency back-up generator, 50 hp or greater, that is included as part of the project plans. If the applicant decides to add a permit-required generator to the facility after the occupancy permit, then this mitigation measure is official notice to the applicant that an APCD permit is required prior to the installation of the proposed generator.
b. Prior to any grading activities a geologic evaluation shall be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the SLOAPCD. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM.

   These requirements may include development of an Asbestos Dust Mitigation Plan, which must be approved by the SLOAPCD prior to construction, and Development and approval of an Asbestos Health and Safety Program (potentially required for some projects).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Create objectionable odors affecting a substantial number of people? (Source: 11)	☐	☐	■	☐

Discussion: The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

The proposed project would not result in the installation of any equipment or processes that would be considered a major odor emission source. However, construction of the proposed project would involve the use of a variety of gasoline or diesel powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel exhaust, may be considered objectionable by some people. In addition, pavement coatings and architectural coatings used during project construction would also emit temporary odors. However, construction generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. As a result, short term construction activities would not expose a substantial number of people to frequent odorous emissions. For these reasons, potential exposure of sensitive receptors to odorous emissions would be considered less than significant.

IV. BIOLOGICAL RESOURCES: Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation 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, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Discussion: A Biological Report was prepared by Althouse & Meade in October 2013 (provided in Attachment 12), to assess the biological resources on the project site, potential impacts, and mitigations that may apply to minimize effects to these resources. The study documents site surveys for floralistic and wildlife species, and also considered information from previous biological studies of the site in 1999, 2000, 2001 and 2007.

The 2013 Biological Report indicates that the project could impact common habitat types, wetlands, oak trees, common and special status plants and animals, and nesting birds. The study indicates that there are eight (8) special status plants, and 19 special status animals that have the potential to occur in or near the Study Area. A complete list of all species within the area and those found on the site, and associated status is provided in the report. No special status plants (except for locally protected oak trees) occur on the site. However, the site hosts suitable habitat and soil conditions for four (4) special status plants and 17 special status animals. Wetland habitat is a sensitive natural communities and special aquatic site present on the property.

Potential impacts to sensitive habitat, plant and animal species include:

Habitats: blue oak woodland, riparian, and wetland

Plants: none

Animals: silvery legless lizard, pallid bat, vernal pool fairy shrimp, Western pond turtle, Western spadefoot toad, California steelhead, California red-legged frog, American badger, and San Joaquin kit fox.

Mitigation measures to reduce potential impacts to a less than significant level include the following:

> **Mitigation Measure BR-1.** If impacts to wetlands would occur as a result of proposed project activities, a mitigation, monitoring, and reporting plan should be prepared and approved by the City and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Wetland mitigation will increase the areal extent of wetland habitat on site at a two-to-one ratio (created wetland area to impacted wetland area), or other ratio determined by the permitting agency. Mitigation implementation and success will be monitored for a minimum of three years, depending on the jurisdictional agencies' requirements.
>
> **Mitigation Measure BR-2.** Tree canopies and trunks within 50 feet of proposed disturbance zones should be mapped and numbered by a certified arborist of qualified biologist and a licensed land surveyor. Data for each tree should include date, species, number of stems, diameter at breast height (dbh) of each stem, critical root zone (CRZ) diameter, canopy diameter, tree height, health, habitat notes, and nests observed.
>
> **Mitigation Measure BR-3.** An oak tree protection plan should be prepared by a qualified (City listed) arborist, and approved by the City of Paso Robles.
>
> **Mitigation Measure BR-4.** Impacts to the oak canopy or critical root zone (CRZ) should be avoided where practicable. Impacts to oak trees may result from pruning, ground disturbance within the dripline or CRZ of the tree (whichever distance is greater), and damage to tree trunks.
>
> **Mitigation Measure BR-5.** Impacts to oak trees should be assessed by a licensed arborist. Mitigations for impacted trees should comply with the City of Paso Robles tree ordinance.
>
> **Mitigation Measure BR-6.** Replacement oaks for removed trees must be equivalent to 25% of the diameter of the removed tree(s). For example, the replacement requirement for removal of two trees of 15 inches dbh (30 total diameter inches), would be 7.5 inches (30" removed x 0.25

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

replacement factor). This requirement could be satisfied by planting five 1.5 inch trees, or three 2.5 inch trees, or any other combination totaling 7.5 inches. A minimum of two 24 inch box, 1.5 inch trees should be required for each oak tree removed.

Mitigation Measure BR-7. Replacement trees shall be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least three years. Replacement trees should be of local origin, and of the same species as was impacted or removed.

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).

BR-8. Within one week of ground disturbance or tree removal/trimming activities,
if work occurs between March 15 and August 15, nesting bird surveys shall be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees and grasslands should not be conducted during the breeding season from March 1 to August 31. If construction activities must be conducted during this period, nesting bird surveys shall take place within one week of habitat disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests until chicks are fledged. Construction activities shall observe a 300-foot buffer for occupied raptor *Althouse and Meade, Inc. – 590.01 Biological Report for River Oaks II, Paso Robles, San Luis Obispo County* 50 nests. A 500-foot buffer should be observed from occupied nests of all special status species. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report will detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. Impacts to significant wildlife movement corridors are not anticipated from the proposed project; therefore no mitigation is recommended. Special status plants were not found and are not expected to occur in the Study Area; therefore no mitigation is recommended.

If construction activities are conducted during the nesting season, from March 15 through August 15, pre-construction nesting bird surveys will be conducted (see BR-8). If occupied nests of special status birds (e.g. Cooper's hawk, sharp-shinned hawk, golden eagle, burrowing owl, yellow warbler, white-tailed kite, loggerhead shrike, and least Bell's vireo) are present, the following additional mitigation recommendations will be implemented:

BR-9. All occupied nests of special status bird species will be mapped using GPS or survey equipment. The mapped locations will be placed on a copy of the grading plans with a 500-foot buffer indicated. Work shall not be allowed within the 500-foot buffer while the nest is in use. The buffer zone should be delineated on the ground with orange construction fencing where it overlaps work areas.

BR-10. Occupied nests of special status bird species that are within 500 feet of project work areas will be monitored bi-monthly through the nesting season to document nest success and check for project compliance with buffer zones. Once nests are deemed inactive and/or chicks have fledged and are no longer dependent on the nest, work can commence.

BR-11. Grubbing, grading, and other ground disturbance activities conducted within 50 feet of the Salinas River or the perennial pond will be monitored by a qualified biologist. If pond turtles are found in the project areas, they will be moved to an appropriate safe location on site. The biological monitor must have appropriate permits for handling pond turtles.

Spadefoot toads breed in ephemeral pools in the Paso Robles region. They are known to occur in the vicinity of the subject property. Surveys of the property conducted during the 2006-2007 rainfall year were not definitive due to the extreme below normal rainfall, and ephemeral pools did not adequately fill. Therefore, additional surveys for spadefoot toad in potential ephemeral pool locations should be conducted prior to project construction.

BR-12. Prior to development, a survey of any ephemeral pools should be conducted within three weeks of saturating winter rainfall to determine the presence or absence of spadefoot toad on the property. If spadefoot toad is found, a mitigation plan, which may include avoidance, capture, and relocation, will be developed by a qualified biologist to reduce project effects on this species to a less than significant level.

BR-13. Prior to development, a survey of any ephemeral pools will be conducted within three weeks of saturating winter rainfall to determine the presence or absence of spadefoot toad on the property. If spadefoot toad is found, a mitigation plan, which may include avoidance, capture, and relocation, will be developed by a qualified biologist to reduce project effects on this species to a less than significant level.

BR-13. All construction related activities must observe a 100-foot set-back from the Salinas River, as measured from the outer edge of riparian canopy. A minimum 50-foot set-back will be observed from the ephemeral drainages and flood channels, as measured from the outer edge of riparian vegetation.

BR-14. The project will develop a Stormwater Pollution Prevention Plan (SWPPP) acceptable to the Regional Water Quality Control Board (RWQCB). Appropriate erosion control measures should be implemented at all times in areas that could potentially flow into the Salinas River. Erosion control measures should include, but are not limited to, effective placement of silt fence, straw waddles, hydroseed applications, and erosion control fabric. Project planning should strive for temporary and permanent erosion control.

BR-15. A pre-construction survey will be conducted within thirty days of beginning work on the project to identify if badgers are using the site. The results of the survey will be sent to the project manager, CDFG, and the City of Paso Robles. If the pre-construction survey finds potential badger dens, they should be inspected to determine whether they are occupied. The survey should cover the entire property, and should examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope should be used to examine the den to the end. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers from becoming trapped in burrows during construction activity, no grading will occur within 100 feet of active badger dens between February and July. Between July 1 and February 1 all potential badger dens will be inspected to determine if badgers are present. During the winter, badgers do not truly hibernate but are inactive and asleep in their dens for several days at a time. Because they can be torpid during the winter, they are vulnerable to disturbances that may collapse their dens before they rouse and emerge. Therefore, surveys should be conducted for badger dens throughout the year. If badgers are found on the property from July 1 through February 1, a qualified biologist may capture badgers and relocate them to an appropriate location off the property.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

BR-16. San Joaquin Kit Fox (SJKF) habitat. San Joaquin kit fox could occur in the project area. Future development of the property will result in a net loss of kit fox habitat. The project biologist prepared a SJKF habitat evaluation form, which indicates that the mitigation ratio for loss of SJKF habitat is a 2:1 ratio, which requires two acres of habitat to be preserved for every acre of habitat lost to site disturbance. The proposed mitigation strategy, which is provided in Attachment 13, provides for purchase of land bank credits through the Palo Prieto Conservation bank or by paying in-lieu fees through the Nature Conservancy. (Fees shall be paid prior to issuance of permits for ground disturbance/grading.) This strategy was circulated to the California Department of Fish and Wildlife (CDFW), and CDFW is satisfied that this is an acceptable mitigation strategy, if the City of Paso Robles, as “Lead Agency” is satisfied that these measures provide adequate mitigation.

As a modification to the City’s standard mitigation program, it is recommended that kit fox mitigation be partially fulfilled by habitat enhancements for San Joaquin kit fox on the property. These enhancements can include: kit fox friendly fencing, and artificial dens and escape structures in open space areas, drainage basins, and on the golf course, and signage and information to increase public awareness regarding San Joaquin kit fox. Areas of the existing golf course on the project to the south could also be included in this kit fox habitat area.

With implementation of the above biological resource mitigation measures, potential effects to that may have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species would be mitigated to a less than significant level.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Have a substantial adverse effect on any identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	■	☐	☐

Discussion: Riparian habitat and other potentially sensitive natural communities located on the project site were evaluated in the Biological Report referenced in (a) above, and it was determined that potential effects to these resources can be reduced with mitigation measures implemented, as provided above. (BR-1 – BR-16)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	■	☐	☐

Discussion: The wetland area (i.e. existing pond) located on the project site, will not be significantly impacted by the project since it will not be disturbed or altered with project implementation. Additionally, mitigation measures identified in (a) above (BR-1 – BR-16) , will ensure that potential effects that may result from the project will be reduced to a less than significant level.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	■	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Discussion: Potential migratory species on the site include birds and SJKF specified in the study. Mitigation measures are provided in (a) above (BR-1 – BR-16) that will ensure that the project does not significantly impact or interfere with their movement, nesting or breeding, and that potential effects are reduced to a less than significant level.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	■	☐

Discussion: The only applicable local regulation is the City's Oak Tree Preservation Ordinance. The project intends to preserve all existing oak trees on the property through implementation of standard oak tree protection measures. Should any oak trees be proposed for removal in the future, the applicant would need to apply for an Oak Tree Removal Permit and comply with compensatory oak tree mitigation requirements, as approved by the City Council.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	■

Discussion: There are not local, regional or state habitat conservation plans that apply to property within the City of Paso Robles.

V. CULTURAL RESOURCES: Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	■	☐

Discussion: A Cultural Resource Study was prepared for this project in 2009 (Parker & Associates), provided in Attachment 14. The study included a survey of the entire property (in addition to property located adjacent to the northern property line). The study and did not identify any "significant" historical resources, as defined in §15064.5. Therefore, potential impacts that may result from this project would not likely result in substantial adverse changes in historical resources, and impacts can be determined to be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	■	☐

Discussion: The Cultural Resource Study, noted above, determined that materials found during field inspections were not considered significant cultural resources, as defined by Title 14 PRC, Sec. 4852 (b) & (c). Additionally, an archaeological resource records search was conducted at the City's request by the Central Coast Information Center (March 2016). The records search indicates that there are no recorded archaeological sites mapped on or in the near vicinity of the project site, and no significant prehistoric artifacts were identified from prior studies on the site. Therefore, it can be determined that impacts from this project on archaeological resources, pursuant to §15064.5, would be less than significant. The Native

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

American Tribal Consultation process was conducted in 2014, and formal consultation was not requested by any listed tribes.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	■

Discussion: The Cultural Resource Study prepared for this site, indicates that there are no known paleontological resources on the project site or unique geological features. Therefore, the project would not result in potential impacts to paleontological resources or site or unique geologic feature.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

Discussion: There are no known human remains on the project site, however per mitigation measure CR-1, if human remains are found during site disturbance, all grading and/or construction activities shall stop, and the County Coroner shall be contacted to investigate. Therefore, this project will result in less than significant impacts on cultural resources.

CR-1. Human Remains. if human remains are found during site disturbance, all grading and/or construction activities shall stop, and the County Coroner shall be contacted to investigate.

VI. GEOLOGY AND SOILS: Would the project:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (Sources: 1, 2, & 3)	☐	☐	■	☐

Discussion: The potential for and mitigation of impacts that may result from fault rupture in the project area are identified and addressed in the General Plan EIR, pg. 4.5-8. There are two known fault zones on either side of the Salinas Rivers valley. The Rinconada Fault system runs on the west side of the valley, and grazes the City on its western boundary. The San Andreas Fault is on the east side of the valley and is situated about 30 miles east of Paso Robles. The City of Paso Robles recognizes these geologic influences in the application of the California Building Code (CBC) to all new development within the City. Review of available information and examinations indicate that neither of these faults is active with respect to ground rupture in Paso Robles. Soils and geotechnical reports and structural engineering in accordance with local seismic influences would be applied in conjunction with any new development proposal. Based on standard conditions of approval, the potential for fault rupture and exposure of persons or property to seismic hazards is not considered significant. There are no Alquist-Priolo Earthquake Fault Zones within City limits.

ii. Strong seismic ground shaking? (Sources: 1, 2, & 3)	☐	☐	■	☐

Discussion: The proposed project will be constructed to current CBC codes. The General Plan EIR identified impacts resulting from ground shaking as less than significant and provided mitigation measures that will be incorporated into the design of this project including adequate structural design and not constructing over active or potentially active faults. Therefore, impacts that may result from seismic ground shaking are considered less than significant.

iii. Seismic-related ground failure, including liquefaction? (Sources: 1, 2 & 3)	☐	☐	■	☐

Discussion: In accordance with the General Plan Safety Element and the City Local Hazard Mitigation Plan, the project site is located in an area with low potential for liquefaction. Therefore, impacts that may result from seismic-related ground failure, including liquefaction, are considered less than significant.

b. Landslides?	☐	☐	■	☐

Discussion: In accordance with the General Plan Safety Element and the City Local Hazard Mitigation Plan, the project site is located in an area with low to moderate potential for landslides. Therefore, in compliance with grading and building standards, impacts that may result from landslides are considered less than significant.

c. Result in substantial soil erosion or the loss of topsoil? (Sources: 1, 2, & 3)	☐	☐	■	☐

Discussion: In accordance with the General Plan Safety Element and the City Local Hazard Mitigation Plan, the project site is located in an area with low to moderate potential for erosive soils. Therefore, in compliance with grading and building standards, impacts that may result from erosion are considered less than significant.

d. 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?	☐	☐	■	☐

Discussion: See a.iii above. The applicant prepared a geotechnical Phase I Environmental Site Assessment (GeoSolutions), that included soil borings and analysis, and concluded that the site is suitable for development. See Attachment 16, Phase I Environmental Site Assessment.

e. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	■	☐

Discussion: In accordance with the General Plan Safety Element and the City Local Hazard Mitigation Plan, the project site is located in an area with low to moderate potential for expansive soils. Therefore, in compliance with grading and building standards, impacts that may result from expansive soils are considered less than significant.

f. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? ☐ ☐ ☐ ■

Discussion: Alternative waste water disposal or management systems are not proposed with this project.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ☐ ☐ ■ ☐

Discussion: A Greenhouse Gas Emissions Study was prepared for this project. See Attachment 11. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 from mobile sources. To a lesser extent, other GHG pollutants, such as CH_4 and N_2O, would also be generated. Short-term and long-term GHG emissions associated with the development of the proposed project are discussed in greater detail, as follows:

Short-term Construction GHG Emissions. Estimated increases in GHG emissions associated with construction of the proposed project are summarized in Table 10. Based on the modeling conducted, annual emissions of greenhouse gases associated with construction of the proposed project would range from approximately 686.7 to 1,151.6 million metric tons of carbon dioxide equivalent (MTCO2**e)**. Amortized GHG emissions, when averaged over the assumed 50-year life of the project, would total approximately 96.8 MTCO2**e**/year. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions may vary, depending on the final construction schedules, equipment required, and activities conducted.

Table 10.
Construction-Generated GHG Emissions Without Mitigation

Construction Year	GHG Emissions ($MTCO_2e$/year)
2016	1,151.6
2017	760.9
2018	836.6
2019	700.6
2020	686.7
2021	702.6
Total	*4,839.1*
Amortized Construction Emissions	**96.8**
** Amortized emissions are based on an estimated 50-year project life. See Appendix C for modeling assumptions and results.*	

Long-term Operational GHG Emissions. Estimated long-term increases in GHG emissions associated with the proposed project are summarized in Table 11. Based on the modeling conducted, operational GHG emissions would be predominantly associated with mobile sources and energy use. To a lesser extent, GHG emissions would also be associated with solid waste generation, as well as, water use and conveyance. With amortized construction-generated emissions, annual emissions would total approximately 3,166 MTCO2e/year. However, as described in Impact GHG-2, the project would be consistent with the Greenhouse Gas Reduction Strategy included in the CAP, so both construction and operational impacts would be less than significant.

Table 11.
Operational GHG Emissions Without Mitigation

Source	GHG Emissions ($MTCO_2e$/year)
Area Source	110.9
Energy Use	853.8
Motor Vehicles	1,943.1
Waste Generation	110.8
Water Use and Conveyance	51.0
Total Project-Generated Emissions	*3,069.6*
Construction (amortized annually)	96.8
Total	**3,166.4**
Appendix C for modeling assumptions and results.	

b. Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gasses? ☐ ☐ ■ ☐

Discussion: The City's adopted Climate Action Plan (CAP) is a long-range plan to reduce greenhouse gas (GHG) emissions from City government operations and community activities within Paso Robles and prepare for the anticipated effects of climate change. The CAP will also help achieve multiple community goals such as lowering energy costs, reducing air pollution, supporting local economic development, and improving public health and quality of life (City of Paso Robles, 2013). To help achieve these goals, the CAP includes a "Consistency Worksheet", which identifies various mandatory and voluntary actions designed to reduce GHG emissions. The CAP Consistency Worksheet can be used to demonstrate project-level compliance with the CAP.

A CAP consistency worksheet for the proposed project is included in Appendix B of the Climate Action Plan report. As depicted in the worksheet, proposed land uses would be consistent with proposed Specific Plan designations and zoning, and would implement all applicable mandatory measures identified in the City's CAP, provided in Attachment 15. The proposed project would also include numerous voluntary measures, which would further reduce project-generated GHG emissions. For these reasons, the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be considered less than significant with implementation of GHG reduction measures included in the CAP Consistency Worksheet.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ☐ ☐ ■ ☐

Discussion: The future development project would use industry-standard landscape and building supplies and maintenance products which would be stored in compliance with all applicable safety requirements. The project would not include use of, transport, storage or disposal of hazardous materials that would create a significant hazard to the public or environment.

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?	☐	☐	■	☐

Discussion: See VIII a. above.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	■	☐

Discussion: Kermit King Elementary School is located within one-quarter mile of the project planning area. As a residential project, it will not likely emit hazardous emissions or materials, that could negatively affect Kermit King Elementary School. It is undefined at this time if the community garden/farm area would use agricultural chemicals such as pesticides, however the agricultural area is located farther than one-quarter mile from the elementary school. Therefore, it is unlikely that the project would result in emitting hazardous emissions, materials, or substances, that would negatively affect the school, and potential affects can be determined to be less than significant.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■

Discussion: A Phase I Environmental Site Assessment (ESA) was conducted on the project site (which previously included additional acreage), in 2005. This study is provided in Attachment 18. The ESA includes field surveys to determine if the site has existing or the potential for Recognized Environmental Conditions (RECs). The study indicates that no RECs were observed on any of the properties proposed with this project.

In accordance with the California Department of Toxic Substances Control (DTSC), under Government Code Section 65962.5(a), none of the properties proposed for this project are listed in the database of hazardous substance release sites as having record of hazardous materials located there. Therefore, it is unlikely that the project would result in exposing or creating a hazard to the public or 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 public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	■	☐

Discussion: The proposed project site is not located within the Paso Robles Airport planning area of the Paso Robles Airport Land Use Plan. Therefore, the project will not likely result in a safety hazard for people residing or working in the project area from airport traffic.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■

Discussion: There are no private airstrips within the City of Paso Robles city limits, therefore, the project could not result in a safety hazard for people residing or working in the project area from air traffic due to a private airstrip.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■

Discussion: The City does not have an adopted emergency response plan or emergency evacuation plan. Therefore, the project will not impair or interfere with adopted emergency response routes or plans.

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	■

Discussion: The project site is not located within the vicinity of wildlands, therefore it could not expose people or structures to risks associated with wildland fires.

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a. Violate any water quality standards or waste discharge requirements?	☐	☐	■	☐

Discussion: The proposed project is intended for future residential development, with a limited amount hot spring spa related uses. The nature of these uses do not typically use or create substances that require water or wastewater treatment beyond what is required for domestic uses, and would not likely violate water quality standards.

The project is intended to be designed with stormwater management basins where water quality will be enhanced through settlement of the suspended particles, filtered and infiltrated through the site using bioswales along streets and in open spaces. Design of the basins, with the primary basin being Basin #1 - the existing lake on the east side of the project, will incorporate storm water control measures to meet the Regional Water Quality Control Board requirements, by incorporating low-impact development features. This will include structural improvements, including, but not limited to: pervious concrete, gravel reservoirs, and infiltration trenches, and other “best management” practices. Therefore, with stormwater quality management features incorporated into the future design of this project, potential water quality impacts will be reduced to a less than significant level.

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., Would the production rate of pre-existing nearby wells drop to a level which would not support existing land uses or planned uses for which permits have been granted)? Would decreased rainfall infiltration or groundwater recharge reduce stream baseflow? (Source: 7)	☐	■	☐	☐

Discussion: A Water Supply Evaluation (WSE) was prepared for this project by the hydro-engineering firm, TODD Groundwater (March, 2016), which is provided in Attachment 17. The WSE estimates the proposed project-related water demand and available water resources to supply the project in the near- and long-term horizon, under normal, drought, and sustained drought conditions. The study then evaluates the ability to serve the projected water needs. The assumptions in the WSE are based on planned the growth scenario through General Plan build-out as documented in the City's adopted 2010 Urban Water Management Plan (UWMP), as well as current water supply availability from the City's water resource allocations of groundwater, Salinas River underflow, treated recycled water, and water from the Nacimiento Water Project. The project proponent also has existing rights to use well water from two existing wells within the Salinas River corridor. These wells provide water to the existing River Oaks golf course, lake, and Spa facility. In accordance with the City's adopted well ordinance, the applicant will be permitted to continue the use private well water for existing uses, as well as land zoned Agricultural, used for agricultural purposes. Well water is proposed to be used on an interim basis for landscaping in the public right-of-way until such time as recycled City water becomes available. The project will be plumbed with "purple pipe" for this purpose.

Water demand includes water necessary to serve each home, as well and landscaping in the public right-of-way, open space areas, lake, and the expanded spa facility. Current total potable water use is 18 acre-feet per year (AFY), and the total water use, including potable, recycled, private well and geothermal wells is approximately 363 AFY, see Attachment 19, Table 2.

The 2010 UWMP estimated the potable water demand for the site to be 64 AFY. The potable water demand estimated for the proposed residential use is estimated to be 105 AFY, with total potable demand (including the spa, and other community facilities) is estimated to be 132 AFY (which includes unaccounted for water, i.e. leaks, meter error, etc.). The overall estimated future water use (including all sources) is 498 AFY, see Table 3 in the WSE. As noted in the conclusions of the WSE, the additional water supply needed for this project is accounted/planned for in the General Plan.

As demonstrated in Table 14 of the WSE, the report indicates that the City has an adequate potable water supply to provide a reliable long-term water supply for the project, and as shown in Table 15, it concludes that the same determination under normal and drought conditions through build-out of the City under the existing General Plan build-out scenario. Therefore, as demonstrated the proposed project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level as a result of this project. Therefore, the project would result in less than significant impacts to use of water resources.

Additionally, through implementation of post-construction hydromodification low-impact development features and best practices, the project will be designed to infiltrate all new stormwater runoff on the project site, and will not result in decreased rainfall infiltration or groundwater recharge that may reduce stream baseflow. The applicant is not proposing a specific development plan application, therefore general mitigation measures for future development is appropriate. With incorporation of these measures the proposed project will result in less than significant impacts to groundwater recharge capacity, with stormwater management mitigation measures incorporated into the future project design.

HYD-1. Recycled Water. The project shall use recycled water when it becomes available for landscape irrigation and agricultural purposes.

HYD-2. Well Metering. All on- and off-site wells permitted for use with this project shall have well meters installed per Public Works standards prior to recordation of the first subdivision map.

c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (Source: 10)	☐	■	☐	☐

Discussion: The historic stormwater runoff of the site flows from the western side of the property to the Salinas River. The proposed preliminary drainage design will include implementation of onsite decentralized drainage basins, (including use of the existing lake), to will maintain the overall historic drainage pattern and maintain post-construction hydromodification on the project site. All stormwater control measures will be in compliance with the Regional Water Quality Control Board requirements. Additionally, the project would not alter the course of any stream or river on the site, since neither features exists on the site, and storm water runoff will not add to or exacerbate historic flows to the Salinas River with implementation of the proposed site drainage features. Therefore, with implementation of mitigation measure HDY-3 and HYD-4, the project will be mitigated to a less than significant level.

HYD-3. Low-impact development.

Incorporate all storm water control measures to meet the Regional Water Quality Control Board requirements by incorporating low-impact development features into the future project design.

HYD-4. Post-Construction Hydromodification.

Incorporate all storm water control measures to manage potential post-construction hydromodification per the Regional Water Quality Control Board requirements into the future project design.

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Source: 10)	☐	■	☐	☐

Discussion: See IX b. and c. above. With implementation of HYD-3 and HYD-4 above, the project could not result in flooding on- or off-site since it would not increase or modify historic drainage flows, therefore, potential impacts from this project that would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, would be less than significant.

e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Source: 10)	☐	■	☐	☐

Discussion: See IX b. and c. above. With implementation of HYD-3 and HYD-4 above, the project could not result in creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, potential impacts to the existing and/or planned stormwater drainage systems and water quality would be less than significant.

f. Otherwise substantially degrade water quality?	☐	☐	■	☐

Discussion: The proposed project does not propose land uses or other activities that could otherwise substantially degrade water quality, therefore, potential impacts from this project on water quality would be less than significant. As noted in IX b. and c. above, site drainage will be managed onsite.

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■

Discussion: In accordance with the City's General Plan Safety Element, Flood Hazard Maps, the future development area of the project site is not within or near a 100-year flood hazard area. Therefore, the proposed project could not result in impacts by placing housing within a 100-year flood hazard area.

h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■

Discussion: See IX g. above. The proposed project could not result in impacts by structures that would impede or redirect flood flow within a 100-year flood hazard area.

i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	■

Discussion: See IX g. above. Additionally, in accordance with the General Plan Safety Element, the project does not include structures that would be within the dam inundation flood hazard zone.

j. Inundation by mudflow?	☐	☐	☐	■

Discussion: See IX g. above. Additionally, in accordance with the General Plan Safety Element, the project does not include structures that would be within an area subject mudflow.

k. Conflict with any Best Management Practices found within the City's Storm Water Management Plan?	☐	☐	☐	■

Discussion: As noted in IX b. above, the project will incorporate BMPs for stormwater management which are consistent with the City's Stormwater Management Plan, and in compliance with requirements of the Regional Water Quality Control Board.

l. Substantially decrease or degrade watershed storage of runoff, wetlands, riparian areas, aquatic habitat, or associated buffer zones?	☐	☐	☐	■

Discussion: As noted in IX a. b. & c. above, the project will incorporate low-impact development features to maintain stormwater on the project site. New stormwater runoff will therefore not impact watershed storage, wetland, riparian areas, aquatic habitat or buffer zones.

X. LAND USE AND PLANNING: Would the project:

a. Physically divide an established community?	☐	☐	☐	■

Discussion: The proposed project would expand existing neighborhoods located to the south the of project site, and would not physically divide an established community.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with	☐	☐	☐	■

jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Discussion: The proposed project scope includes amendments to the General Plan Land Use Plan and applicable zoning, to change the majority of the site from Agriculture to Single-Family Residential. The project also includes an amendment to the Borkey Area Specific Plan to provide for increased density of the property. These amendments will be internally consistent, and consistent with the General Plan and Zoning Code. The future project is intended to be consistent with surrounding land uses.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■

Discussion: There are no habitat conservation or natural community conservation plans that are applicable within the City of Paso Robles, therefore, the project could not conflict with these types of plans.

XI. MINERAL RESOURCES: Would the project:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (Source: 1)	☐	☐	☐	■

Discussion: There are no known mineral resources located within the project area.

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (Source: 1)	☐	☐	☐	■

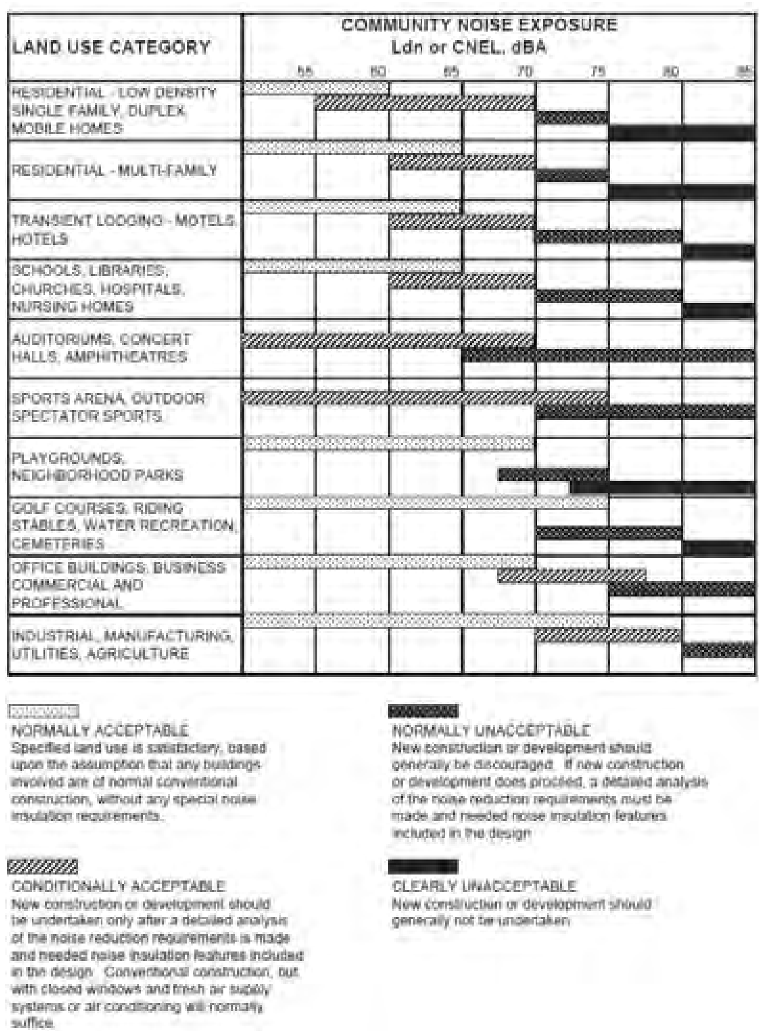
Discussion: See XI a. above.

XII. NOISE: Would the project result in:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Source: 1)	☐	■	☐	☐

Discussion:

Noise is generally defined as unwanted or objectionable sound. Noise levels are measured on a logarithmic scale because of the physical characteristics of sound transmission and reception. Noise energy is typically reported in units of decibels (dB). The duration of noise and the time of day at which it occurs are important factors in determining the impact on communities. Noise is more disturbing at night and noise indices have been developed to account for the time of day and duration of noise generation. The Community Noise Equivalent (CNEL) and Day Night Average Level (DNL or Ldn) are such indices. According to the Paso Robles General Plan Noise Element, noise exposure thresholds are as provided in the table below.



Implementation of this expansion project would result in additional vehicle traffic on area roadways, increasing the ambient noise along those corridors, and would increase the number of residences exposed to noise in the planning area. In reviewing the General Plan Noise Element existing and future roadway and railroad noise contour figures (see Attachment 18, Figures N-2a and N-3a), demonstrate that due to the location of the property the noise from the highway or the railroad line would not exceed the thresholds established for residential development (as indicated in the table above). Additionally, construction methods also help attenuate noise through glazing and insulation materials. Therefore, potential impacts from highway and railroad noise would be less than significant on future development of this project.

Construction activity would result in localized noise within the planning area which may temporarily exceed standards. Noise sensitive land uses generally include: residential development; schools; health care services; and convalescent homes, churches, libraries and museums, and hotels. There are existing residences and an elementary school located adjacent to and/or near the project site which, as sensitive land uses, would be exposed to construction-related noise. Construction of this project would be phased. Construction-related noise typically occurs intermittently, and varies depending upon the nature or phase of construction (e.g., land clearing, grading, excavation, and paving). Noise generated by construction equipment including earth movers, material handlers, and portable generators, can reach high levels. Although noise ranges are generally similar for all construction phases, the initial site preparation phase tends to involve the most heavy-duty equipment, having a higher noise-generation potential. Noise levels associated with individual construction equipment is summarized in the table below. As depicted, noise levels generated by individual construction equipment typically range from approximately 74 dBA to 89 DBA Lmax at 50 feet (FTA 2006). Construction activities occurring during the more noise-sensitive nighttime hours would be of particular concern given the potential for increased levels of annoyance. However, construction noise is typically short-term in duration, and the project will include mitigation measures to limit hours and days of construction to reduce exposure of noise to sensitive land uses. Mitigations including the following measures:

> **N-1: Construction Hours.** Unless otherwise provided for in a validly issued permit or approval, noise-generating construction activities shall be limited to the hours of 7:00am and 7:00pm. Noise-generating construction activities shall not occur on Sundays or City holidays.
>
> **N-2: Construction Equipment Noise.** Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhausted mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds should be closed during equipment operation.

With the mitigation measures identified, construction activities would be limited to the daytime hours. The proper maintenance of construction equipment and use of mufflers would reduce equipment noise levels by approximately 10 dB. With these mitigation measures this impact is considered less than significant.

Table 9
Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA Lmax) 50 feet from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Truck	88
Paver	89
Pneumatic Tool	85
Roller	74
Saw	76

Sources: FTA 2006

Additionally, the adopted General Plan Environmental Impact Report (EIR), identified cumulative development and construction-related noise impacts as Class I, potentially significant and unavoidable, and adopted a Statement of Overriding Considerations to accept future development consistent with the General Plan.

b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐

Discussion: Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction activities associated with the proposed project would likely require the use of various off-road equipment, such as tractors, concrete mixers, and haul trucks. The use of major groundborne vibration-generating construction equipment, such as pile drivers, is not anticipated to be required for this project. Groundborne vibration levels associated with this project by construction equipment would not be anticipated to exceed City standards. As a result, this impact would be considered less than significant.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☐ ■ ☐

Discussion: See XII a. above.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☐ ■ ☐

Discussion: See XII b. above.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (Sources: 1, 4) ☐ ☐ ■ ☐

Discussion: The proposed project site is located just over one (1) mile from the Paso Robles Airport Land Use Plan planning area boundary, and therefore, would not expose people residing in the project area in the future to airport-related noise that would be excessive. Additionally, all property within the City limits are subject to a citywide avigation easement which acknowledges that residential development may be exposed to a limited amount of airport-related noise at times. Therefore, potential exposure to airport-related noise for this project would be less than significant.

XIII. POPULATION AND HOUSING: Would the project:

a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (Source: 1) ☐ ☐ ■ ☐

Discussion: The proposed project which includes construction of 271 homes, is anticipated to result in a population increase of approximately 721 people (e.g. 2.66 persons per household). The project is consistent with the City's General Plan build-out scenario of 44,000 people, and represents less than 2 percent growth (0.016) for residential development, which is planned to occur in several phases over the next decade. The extension of infrastructure proposed to serve this project includes utilities and roads, and represent an orderly development pattern connecting the project area to existing City neighborhoods and services.

The adjacent vacant property to the north of the project site is zoned Agriculture, and is privately owned. This property was recently planted in vineyards. The vacant property to the east of the site is owned by Cuesta College and is zoned for Public Facilities. It is intended for future development of the college. Neither property is planned for future residential development in the General Plan designation. If future development were proposed for either of these two properties, they would require General Plan, Zoning and Specific Plan amendments to expand the City's population growth and build-out scenario, and the capacity serve them. This would be a significant deterrent from future development, thereby reducing the potential for the currently proposed project to induce substantial growth beyond what is already planned for in the General Plan. Therefore, given the proposed growth and limited capacity to expand the City's build-out planned in the General Plan, the project would not likely induce substantial growth in the area, or extension of major infrastructure.

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☐ ■

Discussion: The subject site does not currently have any existing housing located on it, therefore, the project could not displace housing. Thus, the project could not result in an impact on housing displacement.

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☐ ■

Discussion: See XIII b. above.

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

a. Fire protection? (Sources: 1,10) ☐ ☐ ■ ☐

Discussion: The Paso Robles Emergency Services (EMS) Department reviewed the project for consistency with access standards, and considered the City's ability to serve the project. The EMS Department is satisfied with the conceptual site layout and access for emergency services. Since this application does not include development plans, specific details on emergency access will be closely reviewed by EMS when those plans are submitted.

According to the Fire Chief, Ken Johnson, the City has adequate capacity to serve this project, and the project would not result in the need to construct new facilities. Payment of development impact fees and future annexation to the City's Community Facilities District (CFD) will ensure the City has adequate resources to provide emergency services and be in compliance with the City's General Plan Safety Element policies. Therefore, implementation of future project conditions of approval which require payment of development impact fees and annexation to the CFD, for emergencies services and facilities would reduce the potential impact of this development to a less than significant level.

b. Police protection? (Sources: 1,10) ☐ ☐ ■ ☐

Discussion: In accordance with the City's General Plan and impact fee program, payment of development impact fees and annexation to the City's CFD, adequately mitigates impacts from development and ensures the City has adequate resources to provide police protection for new development. Therefore, future payment of development impact fees and participation in the CFD would reduce potential impacts to police services to a less than significant level.

c. Schools? ☐ ☐ ■ ☐

Discussion**:** According to Government Code 65995(h), and consistent with the City's General Plan EIR, the payment of school fees charged with building permits mitigates school impacts, and potential impacts would be determined to be less than significant. Additionally, according to the Paso Robles Unified School District, Kermit King Elementary School has adequate capacity to accommodate new students that may be generated by future development.

d. Parks?	☐	☐	■	☐

Discussion: The proposed project is consistent with the projected build-out scenario of the General Plan, which includes projected demand for construction and improvements of park facilities (i.e. 7 acres per 1,000 population). The project will not require construction of new park facilities to accommodate the recreational needs of the proposed development.

The City has provided several new park facilities in recent years, including the new Uptown Park in the north end of the City. Additionally, the City and County established a Salinas River Trail Master Plan, which provides for a multi-purpose trail system along the river corridor. The City has improved over two miles of recreational river trail facilities. The Salinas River Trail Master Plan includes future trail improvements adjacent to the proposed project on the applicants' property. The project will be conditioned to dedicate land to extend this segment of the trail for the City, consistent with the Salinas River Trail Master Plan to continue trail improvements in the future. See Section XVI (f), for transportation-related trail mitigation measure, TR-3.

The proposed project includes a significant amount of open space area for passive park uses, onsite multi-purpose trails, and bike lanes. The project also includes expanding recreational facilities at the existing spa with pools, tennis courts and other amenities. The applicant will also be required to pay future development impact fees. With the proposed recreational improvements, existing City recreational amenities available, and future payment of development impact fees, potential impacts from development of this project would be less than significant level.

e. Other public facilities? (Sources: 1,10)	☐	☐	☐	■

Discussion: No other public facilities impacts have been identified that would result from this project.

XV. RECREATION

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?	☐	☐	■	☐

Discussion: As noted in XIV d. Future residents would use City recreational facilities, however, the project incorporates substantial recreational amenities that would reduce the potential impact of residents using City facilities to the extent that they would result in physical deterioration. In addition, the applicant will be required to pay development impact fees to offset the incremental impacts of the proposed development to a less than significant extent.

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?	☐	☐	■	☐

Discussion: See XV a. above. The project would not result in adverse physical effect on the environment.

XVI. TRANSPORTATION/TRAFFIC: Would the project:

a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	■	☐	☐

Discussion: The proposed project circulation plan is consistent with the City's General Plan Circulation Element, goals, policies and actions. The project incorporates a well-connected multi-modal street network and circulation plan. The primary access for the project is from an extension of Clubhouse Drive. The "active adult" neighborhood is proposed to be developed on relatively flat land, and provides a grid-style street network. The larger lot area on the east side of the project has significant topography, however, the streets are proposed to connect to the existing neighborhood to the south, the proposed open space areas, incorporates several internally connected streets, and provides a second access to Buena Vista Drive. The circulation plan also includes several intersection traffic circles. The project includes two transit stops, however specific locations will be determined when the applicant submits applications for development.

The proposed circulation plan is not consistent with the Circulation Element, Circulation Master Plan Map. The Master Plan Map includes a connection of Dry Creek Road through the project site connecting to North River Road. Due to the topographic constraints of the property and the feasibility of this road connection through other properties in the County, the applicant has requested, as part of the General Plan amendment to eliminate this road connection. The traffic study demonstrates that since this road would carry a minimal volume of traffic, that elimination of the road connection would not result in significant traffic impacts on the surrounding circulation network. Therefore, with this amendment to the Master Plan, impacts from this component of the project would be less than significant.

A Transportation Impact Analysis (TIA) was prepared for this project to determine if future development of the project would conflict with measures of performance of the City circulation system (see Attachment 19). Traffic counts were collected for weekday AM and PM peak hour conditions at the study intersections in May 2014 and October 2015, when schools were in session.

The following intersections were evaluated during the weekday morning (7-9 AM) and evening (4-6 PM) time periods:

(1) North River Road/River Oaks Drive;
(2) Buena Vista Drive/River Oaks Drive;
(3) State Route 46 E/Buena Vista Drive (Caltrans intersection); and
(4) State Route 46 E/Golden Hill Road (Caltrans intersection).

The study intersections were evaluated under the following analysis scenarios:

(1) Existing Conditions - reflects recently collected traffic counts and the existing transportation network;
(2) Existing Plus Project Conditions - adds project generated traffic to Existing Conditions volumes;
(3) Near Term Conditions - adds approved and pending projects in the study area to Existing Conditions volumes;
(4) Near Term Plus Project Conditions - adds project traffic to Near Term Conditions volumes;

(5) Cumulative Conditions - reflects future traffic conditions developed using the City's Travel Demand Model;
(6) Cumulative Plus Project Conditions - adds project traffic to Cumulative Conditions volumes.

The study concludes that existing conditions for all study intersections operate at a Level of Service (LOS) of "C" or better during weekday peak hours. Queue lengths for existing conditions for study intersections operate acceptably. The study analyzes the "existing plus project conditions", which includes trip generation, trip distribution and assignment, and a deficiency analysis of roadways and intersections, for vehicles, bicycles, pedestrians, transit and onsite circulation. The project is expected to generate 2,128 trips per day (160 AM peak hour, and 207 PM peak hour), as noted in Table 5 from the TIA below.

Table 5: Project Trip Generation

		Number of Trips						
			AM			PM		
Land Use	Size	Daily	In	Out	Total	In	Out	Total
Active Adult Single Family[1]	144 units	654	19	35	54	36	23	59
Single Family Residential[2]	127 units	1309	25	74	99	82	48	130
Fitness & Wellness Center[3]	5,000 s.f.	165	4	3	7	5	13	18
	Total Trips	2128	48	112	160	123	84	207

1. ITE Lane Use Code 251, Senior Adult Housing-Detached. Fitted curve equations used
3. ITE Land Use Code 492, Health/Fitness Club. Average rates used.
Source: Trip Generation, 9th Edition, ITE (2012) and CCTC, 2013

The directions of approach and departure for project trips were estimated using the City's Travel Demand Model, existing trip patterns, and the locations of complementary land uses. Project trips were assigned to individual intersections based on the trip distribution percentages, and were then added to the existing traffic volumes to establish Existing Plus Project Conditions. The report concludes that all of the study intersections operate acceptably at LOS "C" or better with the addition of project traffic. It also indicates that there would be no queuing deficiencies with existing plus project traffic. See Tables 6 and 7 from the TIA below.

Table 6: Existing & Existing Plus Project Intersection Levels of Service

		Existing		Existing Plus Project	
Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]	Delay[1] (sec/veh)	LOS[2]
1. North River Road/	AM	4.7 (11.0)	A (B)	4.9 (11.2)	A (B)
River Oaks Drive	PM	5.0 (10.3)	A (B)	5.0 (10.5)	A (B)
2. Buena Vista Drive/	AM	11.8	B	13.9	B
River Oaks Drive	PM	8.6	A	9.5	A
3. State Route 46 E/	AM	14.8	B	16.6	B
Buena Vista Drive	PM	7.2	A	10.3	B
4. State Route 46 E/	AM	20.0	C	20.1	C
Golden Hill Road	PM	21.3	C	21.7	C

1. HCM 2010 average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections (i.e. N River Road/River Oaks Drive) the worst approach's delay is reported in parenthesis.

Table 7: Existing Plus Project Queues					
Intersection	Peak Hour	Movement	Storage (ft)	Existing 95% Queue (ft)	Existing Plus Project 95% Queue (ft)
1. North River Road/ River Oaks	AM	NBR	200	30	35
	PM			25	25
2. Buena Vista Drive/ River Oaks	AM	NBL	90	58	78
	PM			8	15
3. State Route 46 E/ Buena Vista	AM	EBL	720	194	225
	PM			86	146
4. State Route 46 E/ Golden Hill Road	AM	EBL	550	72	73
	PM			76	77
	AM	SBL	130	54	54
	PM			79	79

The study indicates that additional improvements for bicycles on Clubhouse Drive and Buena Vista Drive are necessary to ensure deficiencies would not occur, and that the project is consistent with the City's Bike Master Plan. In accordance with the proposed Site Master Plan, bike lanes are proposed to be included on those streets. The project indicates proposed pedestrian connections throughout the site, however the study provides specifications to ensure this, and that there would be direct connections to transit and Cuesta College.

The study indicates that the plan provides for planning-level (conceptual) designs for bike, pedestrian and internal site circulation but that further review of all street networks, sidewalks, bike lanes, multi-purpose paths, roundabouts, etc. will be conducted to ensure compliance with City standards when final designs for the project are reviewed.

The traffic study evaluates "Near Term Traffic Conditions", which includes traffic from the existing conditions, the proposed project, and approved and pending development applications (list provided on page 17 of the TIA, Appendix 19), that will be completed in the near future that would affect traffic operations. The study indicates that the level of service at all study intersections and queuing would remain at LOS "C" or better, and that queuing would be acceptable.

Table 8: Near Term & Near Term Plus Project Intersection Levels of Service					
		Near Term		Near Term Plus Project	
Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]	Delay[1] (sec/veh)	LOS[2]
1. North River Road/ River Oaks Drive	AM	5.1 (11.5)	A (B)	5.3 (11.8)	A (B)
	PM	5.1 (10.6)	A (B)	5.2 (10.8)	A (B)
2. Buena Vista Drive/ River Oaks Drive	AM	12.2	B	14.5	B
	PM	8.8	A	9.7	A
3. State Route 46 E/ Buena Vista Drive	AM	21.2	C	22.9	C
	PM	12.6	B	16.1	B
4. State Route 46 E/ Golden Hill Road	AM	20.2	C	22.8	C
	PM	23.2	C	23.5	C

1. HCM 2010 average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections (i.e. N River Road/River Oaks Drive) the worst approach's delay is reported in parenthesis.

Table 8: Near Term & Near Term Plus Project Intersection Levels of Service					
		Near Term		Near Term Plus Project	
Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]	Delay[1] (sec/veh)	LOS[2]
1. North River Road/	AM	5.1 (11.5)	A (B)	5.3 (11.8)	A (B)
River Oaks Drive	PM	5.1 (10.6)	A (B)	5.2 (10.8)	A (B)
2. Buena Vista Drive/	AM	12.2	B	14.5	B
River Oaks Drive	PM	8.8	A	9.7	A
3. State Route 46 E/	AM	21.2	C	22.9	C
Buena Vista Drive	PM	12.6	B	16.1	B
4. State Route 46 E/	AM	20.2	C	22.8	C
Golden Hill Road	PM	23.2	C	23.5	C

1. HCM 2010 average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections (i.e. N River Road/River Oaks Drive) the worst approach's delay is reported in parenthesis.

The TIA also analyzed "Cumulative Traffic Conditions", which reflect future traffic volumes and planned roadway improvements and "Cumulative Plus Project" conditions. The Cumulative conditions analysis reflects planned roadway capacity expansions identified in the City's Circulation Element. While numerous capacity expansions are planned in the vicinity of the project, including widening State Route 46 east of Airport Road and the Airport Road Extension among others, no improvements are planned at the four study intersections. Therefore, the study intersection lane configurations have not been changed from Existing conditions.

The City's Travel Demand Model was developed to forecast future travel patterns in the City. The Model incorporates future improvements identified in the Circulation Element and projected land uses both locally and regionally to output future year traffic forecasts. The Model was applied to develop Cumulative forecasts using the difference method, where the model's projected growth of future year volumes over base year volumes was added to the recently collected traffic counts. Project traffic was added to Cumulative conditions volumes to yield Cumulative Plus Project conditions. The cumulative conditions analysis indicates that the intersection of SR46E and Golden Hill Road is expected to operate at LOS D and E at AM and PM peak hours, **both with and without the project.** There are also some projected queuing deficiencies in the cumulative scenario, as noted in the following Tables 10 and 11.

Table 10: Cumulative & Cumulative Plus Project Intersection Levels of Service					
		Cumulative		Cumulative Plus Project	
Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]	Delay[1] (sec/veh)	LOS[2]
1. North River Road/	AM	5.0 (11.1)	A (B)	5.2 (11.3)	A (B)
River Oaks Drive	PM	5.5 (11.4)	A (B)	5.6 (11.6)	A (B)
2. Buena Vista Drive/	AM	12.3	B	14.3	B
River Oaks Drive	PM	10.5	B	11.8	B
3. State Route 46 E/	AM	29.2	C	33.2	C
Buena Vista Drive	PM	25.4	C	33.4	C
4. State Route 46 E/	AM	**39.4**	**D**	**40.0**	**D**
Golden Hill Road	PM	**60.4**	**E**	**62.6**	**E**

1. HCM 2010 average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections (i.e. N River Road/River Oaks Drive) the worst approach's delay is reported in parenthesis.

Table 11: Cumulative Plus Project Queues					
Intersection	Peak Hour	Movement	Storage (ft)	Cumulative 95% Queue	Cumulative Plus Project 95% Queue
1. North River Road/ River Oaks Drive	AM	WBL	200	48	38
	PM			40	43
2. Buena Vista Drive/ River Oaks Drive	AM	NBL	90	48	63
	PM			8	18
3. State Route 46 E/ Buena Vista Drive	AM	EBL	720	#384	#447
	PM			#284	#450
	AM	WBT	>1000	#838	#838
	PM			#1097	#1097
	AM	SBL	>1000	#294	#334
	PM			181	#214
4. State Route 46 E/ Golden Hill Road	AM	EBL	550	#154	#157
	PM			#171	#174
	AM	WBT	>1000	705	706
	PM			#839	#845
	AM	SBL	130	**158**	**158**
	PM			**#319**	**#319**

Bold indicates unacceptable operations.

Mitigation measures are proposed to reduce the proportional share of the projects cumulative impacts to deficient intersections and vehicles queuing delays.

TR-1 State Route 46/Buena Vista Drive

Add a second eastbound left-turn lane. This maintains LOS C conditions during the AM/PM peaks. Queue lengths would be reduced to acceptable levels with the second left-turn lane. This project is included in the City's Traffic Impact Fee program; funding from cumulative projects will be used to ensure that this improvement is implemented. The timing for this improvement depends on growth in the area, particularly increases in staffing and enrollment at Cuesta College North. Payment of the City's impact fees would address these deficiencies.
MM TR-2

TR-2 State Route 46/Golden Hill Road:

Improve the North River Road/River Oaks Drive intersection with safety improvements, including but not limited to, traffic calming features, enhanced "line-of-sight" visibility, stormwater management, and landscape enhancements, as part of parallel route improvements. This is consistent with the Caltrans SR 46 Corridor System Management Plan, which notes that Golden Hill Road remains a low-priority for location improvement and that local road improvements are a high priority within the corridor. The City's Traffic Impact Fee program funds improvements to parallel local routes. The City has developed plans to improve the intersection of North River Road/River Oaks Drive to reduce delay for the predominant vehicle flows at this intersection. The applicant shall construct improvements at this intersection prior to issuance of the 90th sfr building permit.

With mitigation measures implemented to reduce the projects' impacts under cumulative conditions, and with other improvements proposed with the project, the project would not conflict with the City's Circulation Element of the General Plan and potential impacts would be less than significant.

b. Conflict with an applicable congestion management program, including but not limited to a level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? ☐ ■ ☐ ☐

Discussion: As noted in XVI a. above, the project would result in cumulative impacts that could affect congestion and the level of service at Buena Vista and Golden Hill Roads at SR 46E. However, with mitigation measures implemented the project would be consistent with applicable congestion management programs and standards.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? ☐ ☐ ☐ ■

Discussion: The proposed project area is not within the Paso Robles airport influence area, or included within the Paso Robles Airport Land Use Plan. Therefore, it is unlikely that the proposed project could result in changes to air traffic patterns or pose air traffic related safety risks.

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ☐ ☐ ☐ ■

Discussion: The proposed project is an extension of an existing residential neighborhood. The traffic study did not identify any traffic related hazards or incompatible traffic-related uses. The project circulation system is not proposed to be connected to the agriculturally zoned property to the north, which reduces the potential to conflict between agricultural and residential land uses.

The project mitigation includes improving an existing intersection that has traffic conflicts to increase safety and improve the parallel route system, which will be a benefit to the community. Therefore, the project will not result in hazards due to design features or incompatible land uses.

e. Result in inadequate emergency access? ☐ ☐ ■ ☐

Discussion: The proposed project has adequate emergency access through connection to Buena Vista Drive and SR 46E and North River Road via River Oaks Drive. The neighborhoods are planned to have two (2) or more points of access, which satisfies emergency service requirements.

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? ☐ ■ ☐ ☐

Discussion: The project incorporates active multi-modal transportation facilities within the project, including, bike lanes, sidewalks, multi-purpose pathways, trails, and transit stops. However, the project is not consistent with the City's Circulation Element and Bicycle Master Plan regarding planned bicycle facilities, or with the Salinas River Trail Master Plan regarding multi-purpose trail planning. To be consistent, and not conflict with adopted policies and plans in the Circulation Element and Bicycle Master Plan, bicycle facilities ("Class II" bike lane improvements) and sidewalks would need to be extended on Buena Vista Drive, connecting the east entrance of the project site to the existing bike lanes on Buena Vista Drive that end at the City limits. This would facilitate bike and pedestrian connections to Cuesta College and commercial uses in the vicinity.

Additionally, the bike plan includes future bike lane improvements on River Road from the intersection of River Oaks Drive and River Road, north to the City limits. Improvements necessary for consistency include either a "Class I" bike lane (or multi-purpose pathway) along the river corridor adjacent to River Road.

Specific policies related to bicycle facility improvements that apply to this project in the City's Circulation Element include:

POLICY CE-1A: Circulation Master Plan. Revise/update the City's Circulation Master Plan to address the mobility needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors as follows:

d. Establish safe pedestrian and bicycle paths, for children and their parents to schools and other major destinations such as downtown, retail and job centers;

Action Item 2. Set conditions of approval of development applications to provide access for all modes of travel and to make appropriate improvements to the transportation system serving subject sites including frontage improvements and all improvements needed to mitigate transportation impacts.

Action Item 16. View all transportation improvements, new or retrofit, as opportunities to improve safety, access, and mobility for all travelers and recognize bicycle, pedestrian, and transit modes as integral elements of the transportation system.

Action tem 19. Transportation improvements shall improve accessibility and promote physical activity.

POLICY CE-1B: Reduce Vehicle Miles Traveled (VMT). The City shall strive to reduce VMT generated per household per weekday by making efficient use of existing transportation facilities and by providing direct routes for pedestrians and bicyclists through the implementation of sustainable planning principles.

Action Item 2. Develop well connected routes for bicycles throughout the City in accordance with the most current council adopted Bike Master Plan.

POLICY CE-1F: Pedestrian and Bicycle Access. Provide safe and convenient pedestrian and bicycle access to all areas of the city.

Action Item 3. Provide safe and convenient pedestrian, bicycle and vehicle access to the Cuesta College North County Campus, through the following means:

- Incorporate access to and from the campus in City circulation, pedestrian, bicycle, and transit planning.
- Implement appropriate signage and vehicle speed controls to ensure safety to pedestrians in the vicinity of the campus.
- Encourage distribution of trip reduction information, including transit and ridesharing information, to Cuesta College students, faculty, and staff.
- Work with Caltrans and SLOCOG to construct bicycle-pedestrian under-crossings of State Route 46E per the adopted BMP and the Caltrans Corridor Study.

The City's Bicycle Master Plan identifies specific policies that apply to this project, as follows:

- The City shall provide safe bicycle routes between major destinations such as, commercial areas for shopping, entertainment and services, and employment centers, neighborhoods, schools and parks - consistent with this plan and the City's Circulation Element.

- The City shall create bicycle facilities that are focused on the scenic qualities of Paso Robles such as the Salinas River.

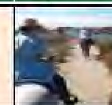
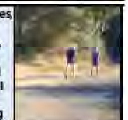
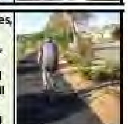
- The City shall design new and rehabilitated streets consistent with the "Complete Streets" program of the City's General Plan Circulation Element, addressing a variety of transportation needs including vehicle, bicycle and pedestrian.

- The City shall develop an integrated multi-modal public transportation system that has an emphasis on the ability to use bicycles as a viable means for commuting so that commuters are not reliant on use of automobiles.

The City's Bicycle Master Plan Map 2, identifies future bike lanes along Buena Vista Road and River Road.

The regional Salinas River Trail Master adopted by the San Luis Obispo Council of Governments in 2015, and formally endorsed by the Paso Robles City Council, (November 19, 2013), also identifies a future alignment of a multi-use trail system along the project frontage within the Salinas River Corridor. This plan was adopted after the City's Bicycle Master Plan. Since the trail plan integrates multiple user groups, including pedestrians and bicycle, it would be appropriate to implement a multi-use trail within the river corridor, then to provide additional bike lane improvements on River Road, as shown below.

Salinas River Trail improvement specifications are noted below for the various types of trails applicable to the proposed project (1B & 3A).

Trail Type	Location Relative to River	Experience Focus	Category	Bicycle Facility Type	Trail Width		Surface Type	Trail Users Supported							Inundation	Trail Form	Amenities	Sample Image
					Ideal	Minimum		Commuter and Club Cyclists	Recreation and Family Cyclists	Mountain and BMX Bikers	Nature Walkers and Hikers	Speed and Dog Walkers	Strollers and Skaters	Equestrians				
1A Explorer Experience	***"On the River"*** *(Within Channel)*	Exploring an area, finding open water, crossing the river	Unimproved natural surface path	N/A	6'	3'	Native sand or soil				✔			✔	Damaged annually, 1-2 year event likely to remove some portions	Braided, linear or looped, cross river	None	
1B Natural Experience	***"Along the River Floor"*** *(Lower Terrace)*	Exploring an area, being under tree canopy, smells and views of nature	Improved firm natural surface path	N/A	6'	3'	Compacted soil and/or decomposed granite (May employ binder)			✔	✔	✔		✔	Overtopped by 2 year event, damaged by 5 year event	Braided, linear or looped	Flexible trail markers (i.e. Carsonite* posts)	
2A Linear Experience	***"On the River Banks"*** *(Between Upper and Lower Terraces)*	Views, exercise, movement, socializing, conversation	Multi-use hard surface trail	Class 1 multi-use path with wide, natural surface, side trail	2'+12'+4'	1'+10'+3'	Asphalt, concrete or concrete soil (Native soil with binder)	✔	✔	✔	✔	✔	✔	on side path	Overtopped by 5 year event, requires maintenance after flooding, damaged by 10 year event	Point-to-point backbone	Kiosks, benches, trash receptacles, bike racks, educational signage, trail markers, landscaping	
2B Near River Experience	***"Above the River Bank"*** *(Upper Terrace)*	Views, exercise, movement, socializing, conversation	Multi-use, hard surface trail	Class 1 multi-use path with limited width, natural surface, side trail	2'+10'+2'	May be split: One-way = 6' Two-way = 10'	Asphalt, concrete or concrete soil (Native soil with binder)	✔	✔	✔	✔	✔	✔		May be overtopped by 10 year event, damaged by 25 year event	Point-to-point backbone	Kiosks, benches, trash receptacles, bike racks, educational signage, trail markers, landscaping	
3A Alternative Path Experience	***"Path Near the River Valley"***	Connecting through community, following the corridor, getting to the trail	Hard surface, separated-use, off-street path and adjacent firm natural surface trail	Class 1 multi-use path	Trail = 8' Class 1 = 2'+12'+2'	Trail = 4' Class 1 = 2'+10'+2'	Asphalt or concrete	✔	✔	✔		✔	✔		Not likely to be flooded except by 100 year event	Combined with on-street routes and lanes, bypass loops or direct connections	Kiosks, benches, trash receptacles, bike racks, educational signage, trail markers, landscaping	
3B Alternative Road Route Experience	***"Road Near the River Valley"***	Exploring an area, finding open water, crossing the river	Hard surface, on-street route and adjacent off-street firm natural surface trail	Class 2 lane or Class 3 route	Trail = 8' Class 2 = 6' Class 3 = 14' (Curb lane)	Trail = 4' Class 2 = 5' Class 3 = 12' (Curb lane)	Asphalt or concrete	✔	✔	✔		✔	✔			Combined with on-street routes and lanes, bypass loops or direct connections	None other than route signage or markings	

With implementation of mitigations measures T-3 and T-4 below, the project would not conflict adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and potential policy conflict impacts would be reduced to a less than significant level. These facilities will be designed for public safety and comply with all applicable codes and standards, and will therefore, not decrease the performance or safety of these facilities.

TR-3 Buena Vista Drive. Buena Vista Drive shall be widened and improved to accommodate "Class 2" bike lane improvements on both sides of the street, extending from the project entrance on Buena Vista Drive south to the City boundary. The improvements will be installed concurrently with the connection of street improvements to Buena Vista Drive.

TR-4 River Trail. The applicant shall dedicate a 25-foot wide easement to the City along the Salinas River corridor west of River Road (the precise alignment to be determined upon implementation of this mitigation measure based upon suitability, such as terrain, vegetation and other constraints) to accommodate a public multi-use trail within the river corridor, consistent with the Salinas River Trail Master Plan. The applicant shall construct said trail improvements, and may enter into a reimbursement agreement for AB 1600 Park and Recreation Impact Fees. Said trail improvements shall be constructed prior to issuance construction permits for the 144th residential unit of the project development.

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	■	☐

Discussion: The project will comply with all applicable wastewater treatment requirements as required by the City, the Regional Water Quality Control Board, and the State Water Board. Therefore, there will be less than significant impacts resulting from wastewater treatment from this project.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐

Discussion: Discussion: Per the City's General Plan EIR, Urban Water Management Plan, and Sewer System Management Plan (SSMP), the City's water and wastewater treatment facilities are adequately sized, including new and planned facility upgrades, to provide water needed for this project and to treat resulting effluent. The applicant will be required to pay for utility connections and associated improvements, as well as development impact fees. Therefore, this project will not result in the need to construct new facilities.

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐

Discussion: Discussion: All new stormwater resulting from this project will be managed on the project site, and will not enter existing storm water drainage facilities or require expansion of new drainage facilities. Therefore, the project will not impact the City's storm water drainage facilities.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	■	☐

Discussion: As noted in section IX on Hydrology, the project can be served with existing water resources available and will not require expansion of new water resource entitlements.

e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?	☐	☐	■	☐

Discussion: Per the City's SSMP, the City's newly upgraded wastewater treatment facility has adequate capacity to serve this project as well as with existing water service commitments.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	■	☐

Discussion: Per the City's Landfill Master Plan, the City's landfill has adequate capacity to accommodate construction-related and operational solid waste disposal for this project.

g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐

Discussion: The project will comply with all federal, state, and local solid waste regulations.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a. Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	■	☐

Discussion: As noted within this environmental analysis, the proposed amendments are intended to allow for future development of a residential Master Plan. Development of the Master Plan may result in potentially significant environmental impacts to biological resources. As provided for the analysis on biological resources, mitigation measures are proposed to be incorporated to address impacts related to biological resources as a result of future development of the property. With implementation of these mitigation measures, potential impacts to habitat for wildlife species, and impacts to plants and animals will be reduced to a less than significant level. Therefore, the project will not 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, reduce the number or restrict the range of a rare or endangered plant or animal.

Additionally, as noted in the analysis, a Cultural Resource Study was prepared for the site, and no significant cultural resources were identified on the property. Therefore, future development of the property would not 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)?	☐	☐	■	☐

Discussion: The environmental analysis prepared for this project indicates in the Traffic Impact Analysis that future development of the project site could result in cumulative impacts at two intersections, SR46E and Golden Hill Road, and SR46E and Buena Vista Drive. The cumulative conditions analysis indicates that the intersection of SR46E and Golden Hill Road is expected to operate at LOS D and E at AM and PM peak hours, both with and without the project. Mitigation measures are proposed to reduce the proportional share of the projects cumulative impacts to deficient intersections and vehicles queuing delays. With these mitigation measures incorporated cumulatively considerable impacts will be reduced to less than significant levels.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ☐ ☐ ■ ☐

Discussion: With mitigation measures applied as noted in analysis topics on: aesthetics; biological resources; greenhouse gas emissions; agricultural resources; cultural resources; public resources; utilities; air quality; hydrology; and noise, the project will not cause substantial adverse effects on human beings, either directly or indirectly.

EARLIER ANALYSIS AND BACKGROUND MATERIALS.

Earlier analyses may be used where, pursuant to tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D).

Earlier Documents that may have been used in this Analysis and Background / Explanatory Materials

Reference #	Document Title	Available for Review at:
1	City of Paso Robles General Plan	City of Paso Robles Community Development Department 1000 Spring Street Paso Robles, CA 93446
2	City of Paso Robles Zoning Code	Same as above
3	City of Paso Robles Environmental Impact Report for General Plan Update	Same as above
4	2005 Airport Land Use Plan	Same as above
5	City of Paso Robles Municipal Code	Same as above
6	City of Paso Robles Water Master Plan	Same as above
7	City of Paso Robles Urban Water Management Plan 2005	Same as above
8	City of Paso Robles Sewer Master Plan	Same as above
9	City of Paso Robles Housing Element	Same as above
10	City of Paso Robles Standard Conditions of Approval for New Development	Same as above
11	San Luis Obispo County Air Pollution Control District Guidelines for Impact Thresholds	APCD 3433 Roberto Court San Luis Obispo, CA 93401
12	San Luis Obispo County – Land Use Element	San Luis Obispo County Department of Planning County Government Center San Luis Obispo, CA 93408
13	USDA, Soils Conservation Service, Soil Survey of San Luis Obispo County, Paso Robles Area, 1983	Soil Conservation Offices Paso Robles, Ca 93446
14	Bike Master Plan, 2009	City of Paso Robles Community Development Department 1000 Spring Street Paso Robles, CA 93446

Attachments:

1 – Project Location Map
2 - General Plan Land Use Map Amendments
3 - General Plan Circulation Master Plan Map Amendment
4 - Zoning Map Amendments
5 - Borkey Area Specific Plan, Subarea A, Map Amendment
6 - Borkey Area Specific Plan, Subarea A, Text Amendments
7 - Site Development Master Plan
8 - Viewpoint Exhibit
9 - Conceptual Development Circulation Master Plan
10 - Land Evaluation and Site Assessment
11 - Air Quality and Greenhouse Gas Emissions Assessment
12 - Preliminary Biological Assessment
13 - San Joaquin Kit Fox Mitigation Strategy
14 - Cultural Resources Study
15 - Climate Action Plan Checklist
16 - Phase 1 – Environmental Site Assessment
17 - Water Supply Evaluation
18 - General Plan Noise Element Figures N-2a & N-3a
19 - Traffic Impact Assessment

Attachment 13

Mitigation Monitoring and Reporting Plan

Project File No./Name: River Oaks II Expansion – GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001
Approving Resolution No.:___________by: ☐ Planning Commission ☒City Council Date:_______________

The following environmental mitigation measures were either incorporated into the approved plans or were incorporated into the conditions of approval. Each and every mitigation measure listed below has been found by the approving body indicated above to lessen the level of environmental impact of the project to a level of non-significance. A completed and signed checklist for each mitigation measure indicates that it has been completed.

Explanation of Headings:

Type: ....Project, ongoing, cumulative
Monitoring Department or Agency: ....Department or Agency responsible for monitoring a particular mitigation measure
Shown on Plans: ....When a mitigation measure is shown on the plans, this column will be initialed and dated.
Verified Implementation: ....When a mitigation measure has been implemented, this column will be initialed and dated.
Remarks: ....Area for describing status of ongoing mitigation measure, or for other information.

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
Aesthetics					
AES-1. Grading. Future site development of the site shall utilize landform, contour grading techniques to reduce the appearance of unnatural, angled slopes to help graded slopes blend in with the surrounding landscape. All exposed graded slopes shall be landscaped to soften the appearance of and camouflage graded slopes to be compatible with the surrounding development pattern and landscape.	Project	CDD	Apply	To be shown on grading plans	Prior to issuance of grading permits.
AG-1. Agricultural Buffer. An agricultural buffer setback from the northern property line of 100 feet and a requirement to plant a dense row of trees and a hedgerow to reduce dust along the northern property line, shall be recorded on the property title with recordation of all subdivision maps.	Project, ongoing	CDD	Apply	Notes to be shown tract maps, site plans, grading plans and construction documents	Recorded on the property title with recordation of all subdivision maps
AG-2. "Right-to-Farm" Notice. A "right-to-farm" notice	Project	CDD		Tract map	A "right-to-farm" notice

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
shall be recorded on the deed of each property within this project area.					shall be recorded on the deed of each property within this project area.
Air Quality					
AQ-1. Short-Term Construction-Related Emissions. • Interior and exterior paints used during project construction shall have a maximum allowable VOC content of 150 grams per liter; • Maintain all construction equipment in proper tune according to manufacturer's specifications; • Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road); • Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation; • Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; • Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_X exempt area fleets) may be eligible by proving alternative compliance; • Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators, discouraging them from idling for more than 5 minutes; • Diesel idling within 1,000 feet of sensitive receptors shall be discouraged to the extent feasible;	Project	CDD		Submit with site grading and building plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
• Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors; • Electrify equipment when feasible; Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and, • Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel. Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines; • Repowering equipment with the cleanest engines available; and • Installing California Verified Diesel Emission Control Strategies. These strategies are listed at: http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm					
AQ-2. Dust Control Construction Emissions • Reduce the amount of the disturbed area where possible; • Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Water could be applied as soon as possible whenever wind speeds exceed 15 miles per hour; • All dirt-stock-pile areas could be sprayed daily as needed; • Permanent dust control measures could be identified in the approved project revegetation and landscape plans and implemented as soon as possible following completion of any soil disturbing activities; • Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading could be sown with a fast-germinating native grass seed and watered until vegetation is established;	Project; ongoingt	CDD		Submit with site grading and building plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
• All disturbed soil areas not subject to revegetation could be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD; • All roadways, driveways, sidewalks, etc., to be paved could be completed as soon as possible. In addition, building pads could be laid as soon as possible after grading unless seeding or soil binders are used; • Vehicle speed for all construction vehicles could not exceed 15 mph on any unpaved surface at the construction site; • All trucks hauling dirt, sand, soil or other loose materials could be covered or could maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114; • Install wheel washers where vehicles enter and exit unpaved roads onto streets, and/or rumble strips for trucks and equipment leaving the site; • Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water could be used where feasible; and • Construction personnel should wear protective face masks while grading and excavating soils that contain serpentine soil; • All PM_{10} mitigation measures required shall be shown on grading and building plans; and, • The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce shall include holidays and					

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.					
AQ-3. Mobile Emissions. Mitigation Measure AQ-3, provides measures to reduce mobile emissions to a less than significant level. These include implementing at least 18 of the 24 measures identified by the local air district, provided below: 1. Provide a pedestrian-friendly and interconnected streetscape to make walking more convenient, comfortable and safe (including appropriate signalization and signage). 2. Provide good access to/from the development for pedestrians, bicyclists, and transit users. 3. Incorporate outdoor electrical outlets to encourage the use of electric appliances and tools. 4. Provide shade tree planting in parking lots to reduceevaporative emissions from parked vehicles. Design should provide 50% tree coverage within 10 years of construction using low ROG emitting, low maintenance native droughtresistant trees. 5. Pave and maintain the roads and parking areas 6. No residential wood burning appliances.	Project; on-going	CDD		Submit with site grading and building plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
7. Incorporate traffic calming modifications to project roads, such as narrower streets, speed platforms, bulb---outs and intersection designs that reduce vehicles speeds and encourage pedestrian and bicycle travel. 8. Increase number of connected bicycle routes/lanes in the vicinity of the project. 9. Provide easements or land dedications and construct bikeways and pedestrian walkways. 10. Link cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel to adjacent land uses. 11. Plant drought tolerant, native shade trees along southern exposures of buildings to reduce energy used to cool buildings in summer. 12. Utilize green building materials (materials which are resource efficient, recycled, and sustainable) available locally if possible. 13. Install high efficiency heating and cooling systems. 14. Utilize high efficiency gas or solar water heaters. 15. Utilize built---in energy efficient appliances (i.e. Energy Star®). 16. Utilize double---paned windows. 17. Utilize low energy street lights (i.e. sodium). 18. Utilize energy efficient interior lighting. 19. Install door sweeps and weather stripping (if more efficient doors and windows are not available).					

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
20. Install energy---reducing programmable thermostats. 21. Develop recreational facility (e.g., parks, gym, pool, etc.) within one---quarter of a mile from site. 22. If the project is located on an established transit route, provide improved public transit amenities (i.e., covered transit turnouts, direct pedestrian access, covered bench, smart signage, route information displays, lighting etc.). 23. Project provides a display case or kiosk displaying transportation information in a prominent area accessible to employees or residents. 24. Provide vanpool, shuttle, mini bus service (alternative fueled preferred).					
AQ-4. Sensitive Receptors. a. Prior to issuance of a grading permit, a permit to operate shall be obtained from the SLOAPCD for any diesel emergency back-up generator, 50 hp or greater, that is included as part of the project plans. If the applicant decides to add a permit-required generator to the facility after the occupancy permit, then this mitigation measure is official notice to the applicant that an APCD permit is required prior to the installation of the proposed generator. b. Prior to any grading activities a geologic evaluation shall be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the SLOAPCD. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM.	On-going	CDD			Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
These requirements may include development of an Asbestos Dust Mitigation Plan, which must be approved by the SLOAPCD prior to construction, and Development and approval of an Asbestos Health and Safety Program (potentially required for some projects).					
Biology					
Mitigation Measure BR-1. If impacts to wetlands would occur as a result of proposed project activities, a mitigation, monitoring, and reporting plan should be prepared and approved by the City and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Wetland mitigation will increase the areal extent of wetland habitat on site at a two-to-one ratio (created wetland area to impacted wetland area), or other ratio determined by the permitting agency. Mitigation implementation and success will be monitored for a minimum of three years, depending on the jurisdictional agencies' requirements.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
Mitigation Measure BR-2. Tree canopies and trunks within 50 feet of proposed disturbance zones should be mapped and numbered by a certified arborist of qualified biologist and a licensed land surveyor. Data for each tree should include date, species, number of stems, diameter at breast height (dbh) of each stem, critical root zone (CRZ) diameter, canopy diameter, tree height, health, habitat notes, and nests observed.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-3. An oak tree protection plan should be prepared by a qualified (City listed)	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
arborist, and approved by the City of Paso Robles.					
Mitigation Measure BR-4. Impacts to the oak canopy or critical root zone (CRZ) should be avoided where practicable. Impacts to oak trees may result from pruning, ground disturbance within the dripline or CRZ of the tree (whichever distance is greater), and damage to tree trunks.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-5. Impacts to oak trees should be assessed by a licensed arborist. Mitigations for impacted trees should comply with the City of Paso Robles tree ordinance.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-6. Replacement oaks for removed trees must be equivalent to 25% of the diameter of the removed tree(s). For example, the replacement requirement for removal of two trees of 15 inches dbh (30 total diameter inches), would be 7.5 inches (30" removed x 0.25 replacement factor). This requirement could be satisfied by planting five 1.5 inch trees, or three 2.5 inch trees, or any other combination totaling 7.5 inches. A minimum of two 24 inch box, 1.5 inch trees should be required for each oak tree removed.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-7. Replacement trees shall be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least three years. Replacement trees should be of local origin, and of the same species as was impacted or removed. **Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).**	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit; annual report first 3 years

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
BR-8. Within one week of ground disturbance or tree removal/trimming activities, if work occurs between March 15 and August 15, nesting bird surveys shall be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees and grasslands should not be conducted during the breeding season from March 1 to August 31. If construction activities must be conducted during this period, nesting bird surveys shall take place within one week of habitat disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests until chicks are fledged. Construction activities shall observe a 300-foot buffer for occupied raptor *Althouse and Meade, Inc. – 590.01 Biological Report for River Oaks II, Paso Robles, San Luis Obispo County* 50 nests. A 500-foot buffer should be observed from occupied nests of all special status species. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report will detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. Impacts to significant wildlife movement corridors are not anticipated from the proposed project; therefore no mitigation is recommended. Special status plants were not found and are not expected to occur in the Study Area; therefore no mitigation is recommended. **If construction activities are conducted during the nesting season, from March 15 through August 15, pre-construction nesting bird surveys will be conducted (see BR-8). If occupied nests of special status birds (e.g. Cooper's hawk, sharp-shinned hawk, golden eagle, burrowing owl, yellow warbler,**	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
white-tailed kite, loggerhead shrike, and least Bell's vireo) are present, the following additional mitigation recommendations will be implemented:					
BR-9. All occupied nests of special status bird species will be mapped using GPS or survey equipment. The mapped locations will be placed on a copy of the grading plans with a 500-foot buffer indicated. Work shall not be allowed within the 500-foot buffer while the nest is in use. The buffer zone should be delineated on the ground with orange construction fencing where it overlaps work areas.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-10. Occupied nests of special status bird species that are within 500 feet of project work areas will be monitored bi-monthly through the nesting season to document nest success and check for project compliance with buffer zones. Once nests are deemed inactive and/or chicks have fledged and are no longer dependent on the nest, work can commence.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-11. Grubbing, grading, and other ground disturbance activities conducted within 50 feet of the Salinas River or the perennial pond will be monitored by a qualified biologist. If pond turtles are found in the project areas, they will be moved to an appropriate safe location on site. The biological monitor must have appropriate permits for	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
handling pond turtles. Spadefoot toads breed in ephemeral pools in the Paso Robles region. They are known to occur in the vicinity of the subject property. Surveys of the property conducted during the 2006-2007 rainfall year were not definitive due to the extreme below normal rainfall, and ephemeral pools did not adequately fill. Therefore, additional surveys for spadefoot toad in potential ephemeral pool locations should be conducted prior to project construction.		Water Quality Control Board			
BR-12. Prior to development, a survey of any ephemeral pools should be conducted within three weeks of saturating winter rainfall to determine the presence or absence of spadefoot toad on the property. If spadefoot toad is found, a mitigation plan, which may include avoidance, capture, and relocation, will be developed by a qualified biologist to reduce project effects on this species to a less than significant level.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-13. Prior to development, a survey of any ephemeral pools will be conducted within three weeks of saturating winter rainfall to determine the presence or absence of spadefoot toad on the property. If spadefoot toad is found, a mitigation plan, which may include avoidance, capture, and relocation, will be developed by a qualified biologist to reduce project effects on this species to a less than significant level.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
BR-13. All construction related activities must observe a 100-foot set-back from the Salinas River, as measured from the outer edge of riparian canopy. A minimum 50-foot set-back will be observed from the ephemeral drainages and flood channels, as measured from the outer edge of riparian vegetation.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-14. The project will develop a Stormwater Pollution Prevention Plan (SWPPP) acceptable to the Regional Water Quality Control Board (RWQCB). Appropriate erosion control measures should be implemented at all times in areas that could potentially flow into the Salinas River. Erosion control measures should include, but are not limited to, effective placement of silt fence, straw waddles, hydroseed applications, and erosion control fabric. Project planning should strive for temporary and permanent erosion control.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-15. A pre-construction survey will be conducted within thirty days of beginning work on the project to identify if badgers are using the site. The results of the survey will be sent to the project manager, CDFG, and the City of Paso Robles. If the pre-construction survey finds potential badger dens, they should be inspected to determine whether they are occupied. The survey should cover the entire property, and should examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope should be used to examine the den to the end. Inactive dens may be excavated by hand with a shovel to prevent re-use of	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers from becoming trapped in burrows during construction activity, no grading will occur within 100 feet of active badger dens between February and July. Between July 1 and February 1 all potential badger dens will be inspected to determine if badgers are present. During the winter, badgers do not truly hibernate but are inactive and asleep in their dens for several days at a time. Because they can be torpid during the winter, they are vulnerable to disturbances that may collapse their dens before they rouse and emerge. Therefore, surveys should be conducted for badger dens throughout the year. If badgers are found on the property from July 1 through February 1, a qualified biologist may capture badgers and relocate them to an appropriate location off the property.					
BR-16. San Joaquin Kit Fox (SJKF) habitat. San Joaquin kit fox could occur in the project area. Future development of the property will result in a net loss of kit fox habitat. The project biologist prepared a SJKF habitat evaluation form, which indicates that the mitigation ratio for loss of SJKF habitat is a 2:1 ratio, which requires two acres of habitat to be preserved for every acre of habitat lost to site disturbance. The proposed mitigation strategy, which is provided in Attachment 13, provides for purchase of land bank credits through the Palo Prieto Conservation bank or by paying in-lieu fees through the Nature Conservancy. (Fees shall be paid prior to issuance of permits for ground disturbance/grading.) This strategy was circulated to the California Department of Fish and Wildlife (CDFW), and CDFW is satisfied that this is an acceptable mitigation	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
strategy, if the City of Paso Robles, as "Lead Agency" is satisfied that these measures provide adequate mitigation					
Cultural Resources					
CR-1. Human Remains. if human remains are found during site disturbance, all grading and/or construction activities shall stop, and the County Coroner shall be contacted to investigate.	Project	CDD			As needed
Hydrology					
HYD-1. Recycled Water. The project shall use recycled water when it becomes available for landscape irrigation and agricultural purposes.	Project	CDD; PW			Recorded with track maps
HYD-2. Well Metering. All on- and off-site wells permitted for use with this project shall have well meters installed per Public Works standards prior to recordation of the first subdivision map.	Project	CDD; PW			Recorded with track maps
HYD-3. Low-impact development. Incorporate all storm water control measures to meet the Regional Water Quality Control Board requirements by incorporating low-impact development features into the future project design.	Project; ongoing	CDD; PW Regional Water Quality Control Board	Apply	Plancheck	Prior to issuance of grading permits
HYD-4. Post-Construction Hydromodification. Incorporate all storm water control measures to manage potential post-construction hydromodification per the Regional Water Quality Control Board requirements into the future project design.	Project; ongoing	CDD; PW; Regional Water Quality Control Board	Apply	Plancheck	Prior to issuance of grading permits

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
Noise					
N-1: Construction Hours. Unless otherwise provided for in a validly issued permit or approval, noise-generating construction activities shall be limited to the hours of 7:00am and 7:00pm. Noise-generating construction activities shall not occur on Sundays or City holidays.	Project	CDD		Notes shown on construction documents.	Prior to issuing grading permit.
N-2: Construction Equipment Noise. Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhausted mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds should be closed during equipment operation.	Project	CDD		Notes shown on construction documents.	Prior to issuing grading permit.
Transportation					
TR-1 State Route 46/Buena Vista Drive. Add a second eastbound left-turn lane. This maintains LOS C conditions during the AM/PM peaks. Queue lengths would be reduced to acceptable levels with the second left-turn lane. This project is included in the City's Traffic Impact Fee program; funding from cumulative projects will be used to ensure that this improvement is implemented. The timing for this improvement depends on growth in the area, particularly increases in staffing and enrollment at Cuesta College North. Payment of the City's impact fees would address these deficiencies.	On-going	CDD			Prior to issuing grading permit.
TR-2 State Route 46/Golden Hill Road. Improve the North River Road/River Oaks Drive intersection with safety improvements, including but not limited to, traffic calming features, enhanced "line-of-sight"	Project	CDD			Prior to issuance of 91st sfr building

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
visibility, stormwater management, and landscape enhancements, as part of parallel route improvements. This is consistent with the Caltrans SR 46 Corridor System Management Plan, which notes that Golden Hill Road remains a low-priority for location improvement and that local road improvements are a high priority within the corridor. The City's Traffic Impact Fee program funds improvements to parallel local routes. The City has developed plans to improve the intersection of North River Road/River Oaks Drive to reduce delay for the predominant vehicle flows at this intersection. The applicant shall construct improvements at this intersection prior to issuance of the 90th sfr building permit.					
TR-3 Buena Vista Drive. Buena Vista Drive shall be widened and improved to accommodate "Class 2" bike lane improvements on both sides of the street, extending from the project entrance on Buena Vista Drive south to the City boundary. The improvements will be installed concurrently with the connection of street improvements to Buena Vista Drive.	Project	CDD			The improvements will be installed concurrently with the connection of street improvements to Buena Vista Drive.
TR-4 River Trail. The applicant shall dedicate a 25-foot wide easement to the City along the Salinas River corridor west of River Road (the precise alignment to be determined upon implementation of this mitigation measure based upon suitability, such as terrain, vegetation and other constraints) to accommodate a public multi-use trail within the river corridor, consistent with the Salinas River Trail Master Plan. The applicant shall construct said trail improvements, and may enter into a reimbursement agreement for AB 1600 Park and Recreation Impact Fees. Said trail improvements shall be constructed prior to issuance construction permits for the 144th residential unit of the project development.	Project	CDD			Prior to issuance construction permits for the 144th residential unit of the project development

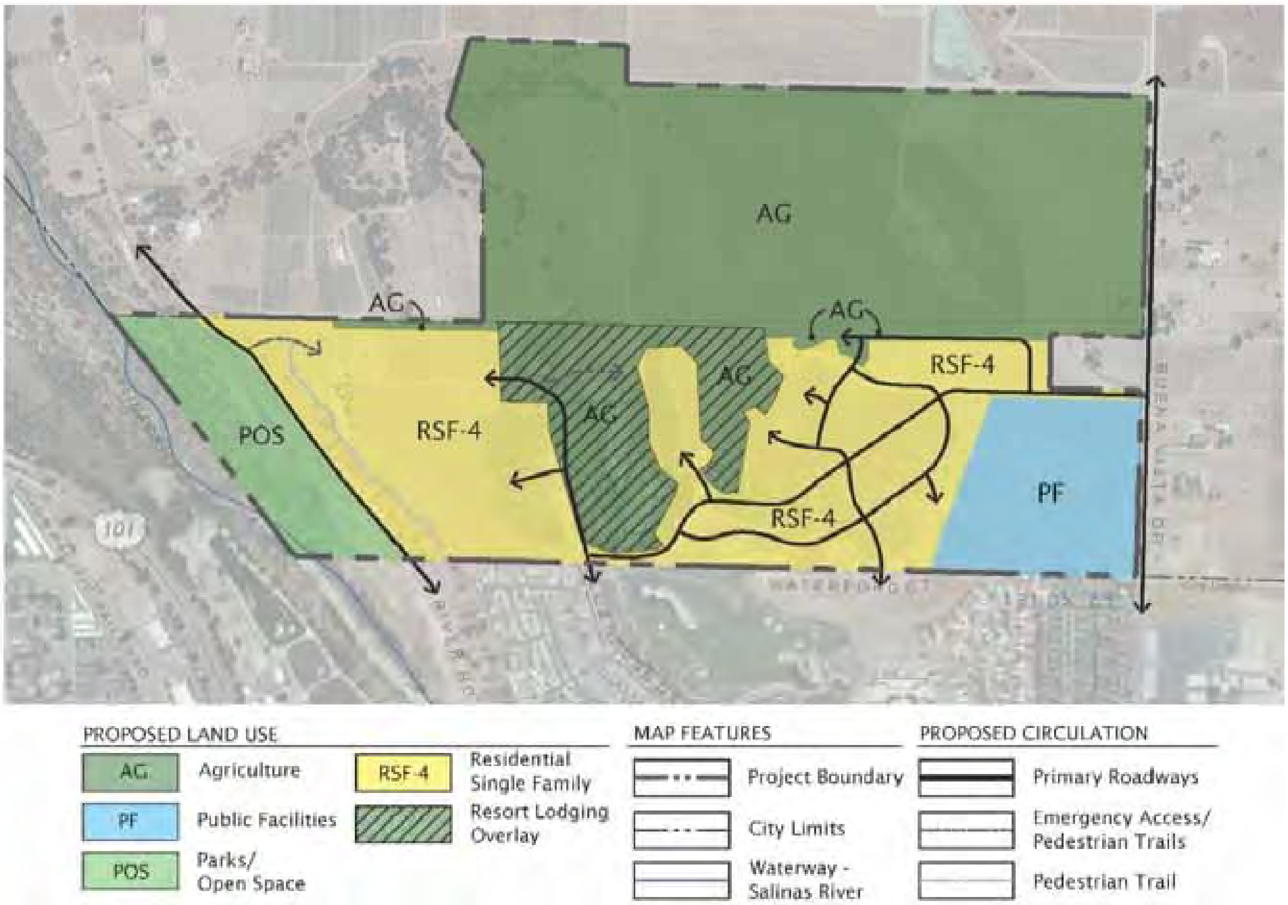
Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**

Explanation of Headings:

Type: ....Project, ongoing, cumulative
Monitoring Department or Agency: ....Department or Agency responsible for monitoring a particular mitigation measure
Shown on Plans: ....When a mitigation measure is shown on the plans, this column will be initialed and dated.
Verified Implementation: ....When a mitigation measure has been implemented, this column will be initialed and dated.
Remarks: ....Area for describing status of ongoing mitigation measure, or for other information.

Attachment 1
Project Location Map

Attachment 2
General Plan Land Use Map

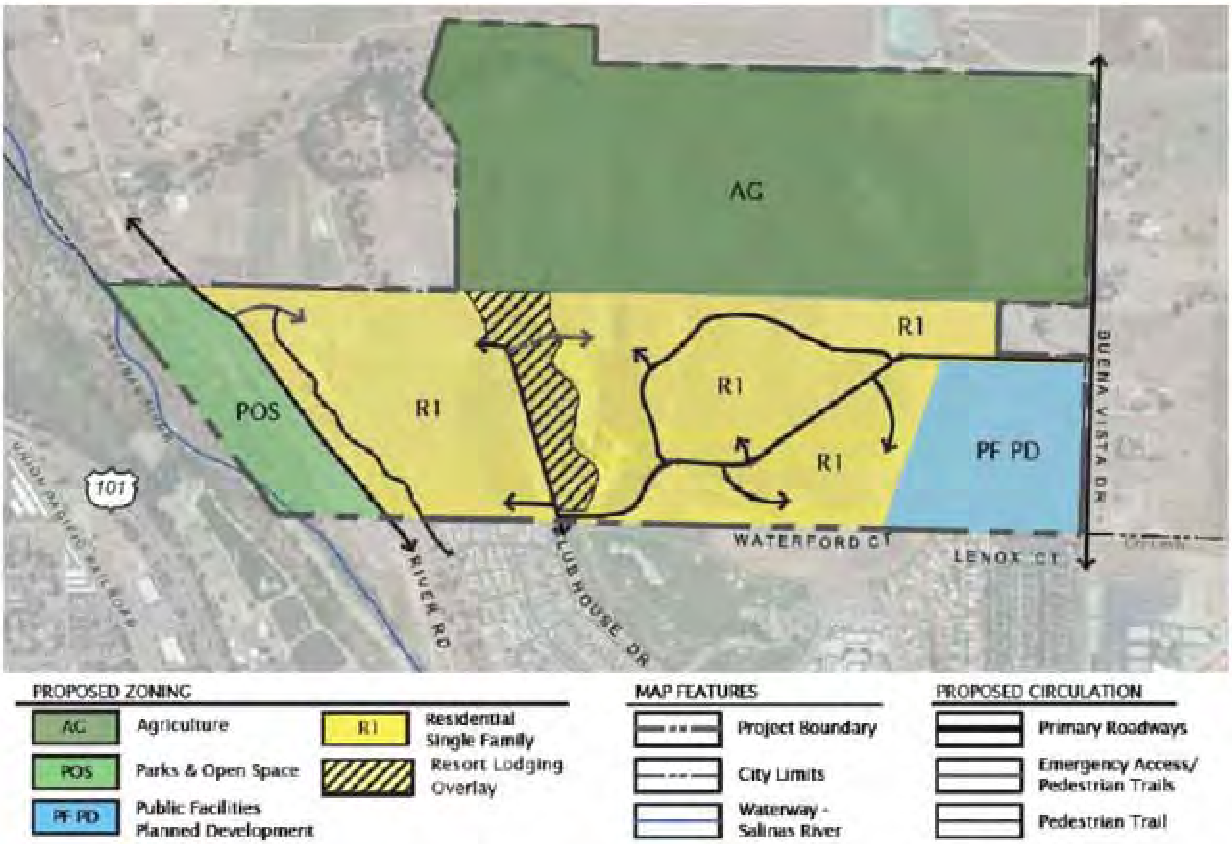


Attachment 3
General Plan Circulation Map

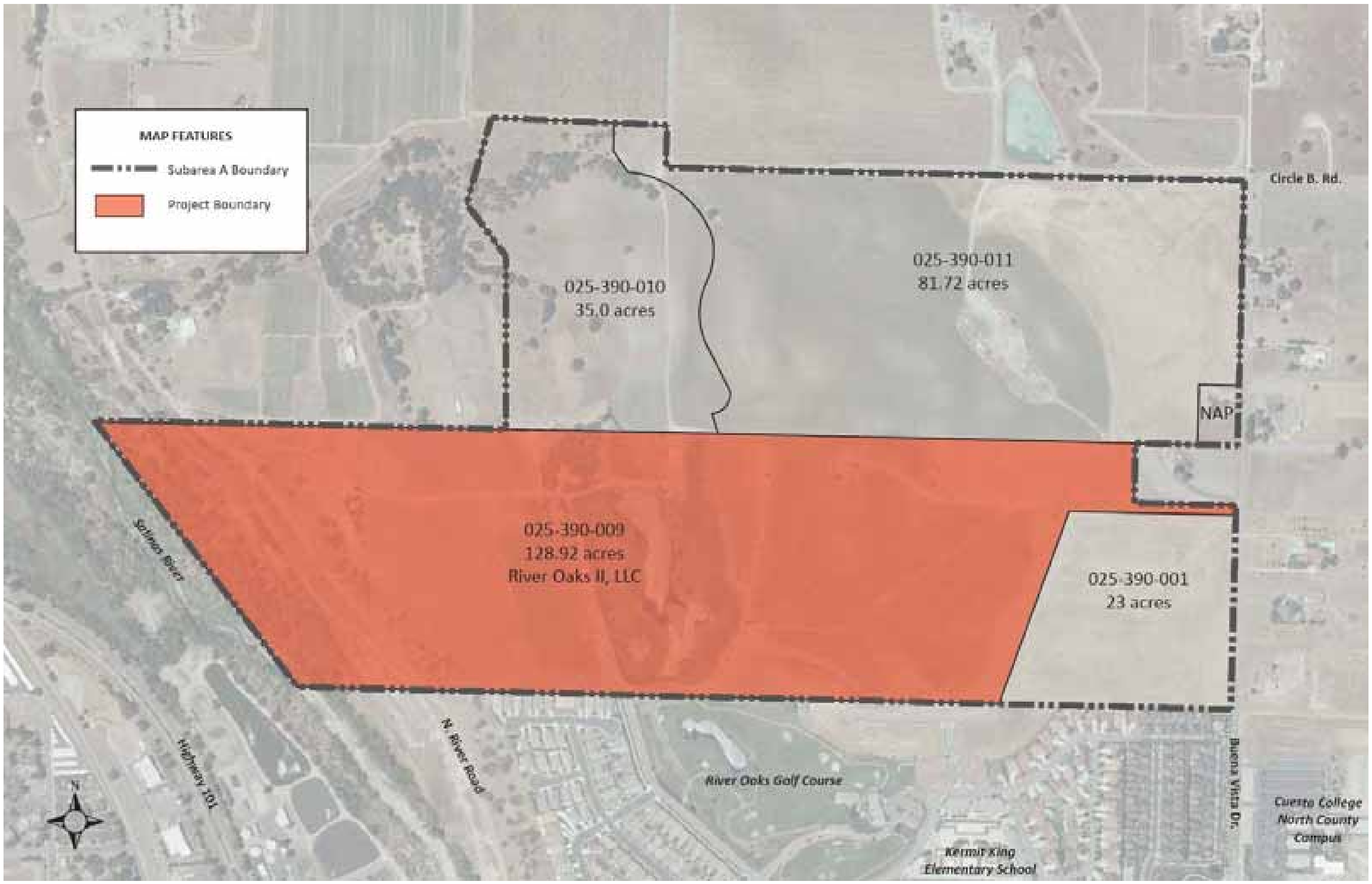
General Plan Circulation Plan Map

Proposed Circulation Plan

Attachment 4
Proposed Zoning Map



Attachment 5
Borkey Area Specific Plan, Subarea A Map



Attachment 6
Borkey Area Specific Plan, Subarea A
Text Amendments

Proposed Text Changes

Chapter 2 – Existing Conditions in Plan Area

- Page II-1: Revise Subarea A, paragraph 2, last sentence as follows:

~~The remaining 232 acres of Subarea A are proposed as an agriculturally compatible, recreational resort development known as the "Paso Robles Hot Springs and Spa."~~

<u>The 113 acres west of the college site are proposed as single family residential (RSF) with the western most portion being an active adult neighborhood. The northern 117 acres of Subarea A will remain agriculture.</u>

Chapter 3 – Development Plan for the Borkey Area

- Page III-5: Revise Subarea A, paragraph 1, as follows:

~~Subareas A is designed by the Specific Plan to accommodate Paso Robles Hot Springs and Spa Resort. This use provides a transition between the suburban and urban land uses south and east of Subarea A to the north where existing unincorporated County land is zoned and used for agricultural purposes. The Paso Robles Hot Springs and Spa Resort includes large areas of agriculture and open space, particularly along the northern, western, and eastern perimeters of the properties providing a buffer from more intensive agricultural uses to the north and east. The development concentrates resort uses and activities on the central and south portions of the site adjoining the existing residential and recreational features of Subarea B.~~

<u>Subarea A is designated to accommodate the completion of the River Oaks Master Plan Community and accommodate the existing hot springs and spa facility. Anticipated development will include an active adult neighborhood consistent with "Traditions" and the extension of "The Classics" conventional residential neighborhoods to the south and emulating both the concepts of "The Classics" and "Vineyard Estates." In addition, the existing River Oaks Hot Springs Spa and pavilion is proposed to be maintained and expanded along the existing lake, and will serve as an amenity feature for the existing and proposed residences. The northern portion of Subarea A will remain agriculture, providing a significant transition to the agricultural uses to the north and east.</u>

• Page III - 6: Revise Table 3 - 1 for Plan Subarea A as follows:

Table- 3-1
Prescribed Land Uses and
Permitted Densities, Parcel Sizes
Borkey Area Specific Plan

Plan Subarea	Permitted Uses	Maximum Development Intensity	Minimum Lot Size
A	Agriculture	-	-
	Resort Overlay		
	• Hot Springs and Spa/Fitness - Wellness Facility	-	-
	• Warm Mineral Water Pool	-	-
	• Fresh Water Pool	-	-
	• Tennis Courts	-	-
	• Pavilion	200 persons	-
	Single Family Residential	±144 active adult units ±127co[illegible]ntional housing units	5,000 sf – 20,000 sf

• Page III - 16: Revise A - 1 as follows:

~~The Paso Robles Hot Springs and Spa resort shall be developed in accordance with a master development plan approved by the City, including improved circulation, drainage, utilities, and provisions for agriculture buffers to the west, north, and east. The resort shall be designed to provide an agriculturally compatible, recreational destination, conference, and tourist facility.~~

The River Oaks Hot Springs Spa resort, if expanded, shall be developed in accordance with a master development plan approved by the City. The facility will be improved in its current location with the potential for expansion along the west side of the lake. The facility will be made available as a private amenity for exclusive use of River Oaks master plan community (Plan Subarea A), and to others for a fee, through the master homeowners association (HOA).

- Page III-49 and following: Revise Subarea A, Project Design Standards as follows:

Subarea A

The following standards shall apply to the northern 117 acres of Subarea A designated Agriculture (AG/PD):

SA-1 The minimum building setback from any public right of way shall be fifty (50) feet.

SA-2 The minimum building setback from any side lot line, except for such a lot line abutting a public right of way, shall be thirty (30) feet.

SA-3 The minimum building setback from any rear lot line, except for such a lot line abutting a public right of way, shall be thirty (30) feet.

~~SA-4 The minimum building setback from the top of the bluffs overlooking the Salinas River shall be fifty (50) feet.~~

~~SA-5 No building shall be placed at a location rendering it visible from the westerly edge of the right of way of North River Road.~~

SA-4 No building intended for human occupation or routine human use shall be erected in the agricultural buffer designated by the Plan Diagram, within three hundred (300) feet of the northerly boundary of Subarea A, of as long as the adjacent parcel(s) to the north are zoned for agricultural use.

SA-5 No principal building shall exceed thirty-five (35) feet above the average natural grade, in height. Architectural or agricultural elements, such as towers, silos, etc. may be approved at heights greater than thirty-five (35) feet after review by the Development Review Committee or the Planning Commission, provided that heights do not exceed those as stated in the City's Zoning Ordinance for Agricultural Districts. On ridges and hills, building designs shall be architecturally compatible to the site.

The following standards shall apply to the creation and/or development of all residential parcels and lots on the southern portion of Subarea A designated Residential Single Family (RSF):

SA-6 The minimum building setback from any front lot line shall be twenty (20) feet to a street facing garage or carport and ten (10) feet to any residence or other building (detached Casita) or side entry garage (See Chapter 3 of River Oaks II Design Manual for additional design considerations). A detached Casita (home office or guest room not for the purposes of a separate dwelling unit) is permitted at front yard setback lines when the design is fully integrated into the architectural style and character of the single family residence. Casitas shall only be permitted when CC&Rs or other reliable constructive notice is established for lot owners to be notified of strict restrictions on the Casitas against rental or related multiple family uses. Conditions shall be imposed at the time of issuance of a building permit that will reduce the potential for such units to be converted for rental use.

SA-7 The minimum building setback from any side lot line shall be that prescribed by the City of Paso Robles zoning ordinance for the R-1 zone district, except that the City may approve a building setback of zero (0) feet for one side line of any lot, if a Planned Development application is processed in conjunction with a subdivision application and findings can be made in accordance with the City's Planned Development Chapter (21.16A), (See Chapter 3 of River Oaks II Design Manual).

SA-8 The minimum building setback from any rear lot line shall be that prescribed by the City of Paso Robles zoning ordinance for the R-1 zone district (20 feet for the residence, 3 feet for accessory structures).

SA-9 Homes placed along the Salinas River Bluff shall match the setback of the existing homes to the south in the "Traditions" neighborhood.

SA-10 All building heights shall conform to the requirements of the City's Zoning Ordinance.

SA-11 No two adjacent residences constructed by the same builder shall be painted or color coated the same color. A minimum ratio of one (1) different house color for each four (4) houses constructed by any builder shall be required.

SA-12 A detailed fence plan shall be submitted to the City at the time of application for any development. Fence style and construction shall be consistent for all residential lots. The erection of any chain link fencing is prohibited within any required building setback.

SA-13 Five (5) foot concrete sidewalks shall be constructed adjacent to each public street, or an eight (8) foot sidewalk may be constructed on one side of the roadway, when the opposite side adjoins a passive/active recreational site. Sidewalks shall be detached (separated from the curb by a landscaped/irrigated parkway) in accordance with the City's engineering standards.

SA-14 All residences shall have driveway aprons extending between required garages and/or carports and the public right-of-way that are consistent with the existing developed phases of the River Oaks master plan community.

SA-15 When practical, residential structures are recommended to be oriented to achieve optimum solar accessibility. The use of active solar systems is encouraged, particularly for domestic water heating, heating of swimming pools and spas, and similar purposes. Passive solar design and orientation is also particularly encouraged, to reduce energy use for residential space heating and cooling.

SA-16 The use of drought-tolerant landscaping is encouraged, to minimize water consumption requirements for irrigation.

SA-17 Residential units shall be required to utilize water-saving fixtures and devices, including those which might be prescribed by the City at the time of development application review in excess of the requirements of applicable building and construction codes.

SA-18 Any appurtenant structure on any residential lot shall be constructed in the same architectural character and style as the primary residential structure on the lot.

SA-19 Landscaped "entry way" shall be constructed on both sides of the east-west collector street crossing Subarea A at its intersection with Buena Vista Road.

SA-20 Landscaping and trail improvements along the bluff shall be environmentally sensitive and be consistent with the existing trail and landscaping to the south. Said landscaping would take into account the existing oak trees and other native vegetation.

SA-21 Street trees shall be provided by the developer or sub divider of any property at the average rate of one tree for each forty (40) feet, or fraction thereof, of public street frontage. Trees may be planted in clusters and should be planted within the street right-of- way (detached parkway) or within the first five (5) feet of the private property adjacent to the right-of-way when a parkway does not exist. Trees shall be selected from the street tree list provided in the "River Oaks II Expansion - Design Manual".
Street trees shall be the maintenance obligation of the adjacent private property owner

either directly (when on private property) or indirectly through a Home Owners Association (when in the parkway).

SA-22 The extension of Clubhouse Drive into Subarea A may be constructed at a local street standard and may be dedicated as a public street or maintained as a private street consistent with the street section shown in the "River Oaks II Expansion – Design Manual", Chapter 6.

SA-23 Reduced width street sections may be proposed within the residential neighborhoods as shown in the "River Oaks II Expansion – Design Manual" (see Exhibits 13-19).

SA-24 Apply the following Low Impact Development (LID) principles into development applications:

- Limit the use of potable water or other natural surface or subsurface water resources available on or near the project site for landscape irrigation.
- Drought-tolerant landscaping is required. Plant selection should be based on the climate and environment of the area, as well as site characteristics such as exposure, light intensity, soil analysis, site drainage and irrigation. Proper plant selection based on site characteristics will enhance the plants' likelihood of becoming established in the site and reduce potential incidences of low vigor, excessive maintenance, disease or death. California native species are preferred for natural landscapes.
- Permeable paving shall be used in parking lots and private driveways where practical.

- All permeable paving surfaces must be Americans with Disabilities Act (ADA) accessible.
- Pervious pavement (pervious concrete, pervious asphalt, pervious pavers, and similar surface and subsurface materials) shall be utilized wherever practical to reduce stormwater runoff and to allow for ground water recharging.
- Site runoff shall be directed to vegetated open areas, planting areas, rain gardens, etc. to improve the quality of stormwater runoff through bio-filtration.
- Detention basins, bioswales (vegetated swales) and rain gardens shall be utilized wherever practical in the storm drainage system to collect, detain, or slow stormwater runoff and improve runoff water quality.
- A point of connection to the underground storm drainage system should be provided to allow use of on-site stormwater best management practice (bmp) features to treat stormwater prior to allowing excess inflows to enter the storm drain.
- Site drainage shall be designed to integrate a decentralized system that distributes stormwater across the project site to replenish groundwater supplies.
- Reduce pollution from construction activities by controlling soil erosion, waterway sedimentation, and airborne dust generation.
- Constructed surfaces on the site should be shaded whenever possible with landscape features and utilize high-reflectance materials and other materials to reduce the heat absorption of hardscape.

SA-25 Existing non-potable water sources have been historically utilized for irrigation, and shall be utilized in the same manner for irrigation within Subarea A.

SA-26 Storm water Plan: Upon tentative tract map submittal the developer shall submit a storm water control plan offering an overall evaluation and assessment of constraints and opportunities for Low Impact Development and corresponding storm water management strategies. The plan must quantify storm water retention in relation to new regulations adopted by the Water Board on July 12, 2013.

Finally, for each subarea of the overall plan area, the design guidelines prescribed by the RO II Expansion Design Manual include specific landscaping requirements, augmenting those already set out in the City's zoning ordinance for the applicable zone districts allocated to the area. Approval of any development application for the plan area will require City approval of an accompanying detailed landscaping plan for the proposed project neighborhood. The above referenced Design Manual is hereby incorporated into this Specific Plan by reference.

Chapter 4 – Plan Implementation and Phasing

- ~~Agricultural District (AG) Planned Development (PD) Overlay Designation for the 223-acre portion. See Chapters 21.16A and J of the City Zoning Ordinance.~~
- Agricultural District (AG) for 117 acres or 113 acres

Attachment 7
Site Development Master Plan

Attachment 8
Viewpoint Photographs for Viewshed Analysis

River Oaks II – Expansion


Northbound Highway 101

Northbound Highway 101


Southbound Highway 101


Northbound River Road


Southbound River Road


Buena Vista Drive


Buena Vista Drive

Attachment 9
Proposed Circulation Master Plan

Figure 6-3 — River Oaks street circulation plan

Proposed Circulation Plan

Figure 6-1 — River Oaks bicycle and pedestrian circulation plan

Proposed Pedestrian and Bicycle Plan

Attachment 10
Land Evaluation and Site Assessment

Land Evaluation and Site Assessment for the

River Oaks II Project

Submitted to:
City of Paso Robles
Community Development Department

May 2014

John F. Rickenbach Consulting
7675 Bella Vista Road
Atascadero, California 93422

Attachment K

Agricultural Impact Analysis

- *LESA (Land Evaluation and Site Assessment) Analysis*
- *Memo on Agricultural Buffers and CEQA (May 16, 2014)*
- *Memo on Ag Buffer Standards in California (February 9, 2015)*

Land Evaluation and Site Assessment

for the

River Oaks II Project

Prepared for:
City of Paso Robles
1000 Spring Street
Paso Robles, California 93446

Prepared by:
John F. Rickenbach Consulting
7675 Bella Vista Road
Atascadero, California 93422

May 2014

JFR
PLANNING AND
ENVIRONMENTAL CONSULTING

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River Oaks II Project
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1. Introduction

Appendix G of the California Environmental Quality Act (CEQA) Guidelines identifies the California Agricultural Land Evaluation and Site Assessment (LESA) Model as an approved approach for assessing impacts on agriculture and farmland, putting the quality of soils in the context of the size of the site, surrounding land uses, water availability, and other factors. The LESA Model was prepared for the proposed River Oaks II Project (or Project) to assess potential impacts.

The LESA Model describes an approach for rating the relative quality of land resources using specific measurable features. The LESA system is a point-based method composed of six different factors: Land Capability Classification, Storie Index, Project Size, Water Resource Availability, Surrounding Agricultural Land and Surrounding Protected Resource Land.

The two Land Evaluation factors (Land Use Capability Classification and Store Index) are based on measures of soil resource quality. The four Site Assessment factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands.

For a given project, each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project. The maximum attainable score is 100 points. This project score becomes the basis for making a determination of a project's potential significance, based upon a range of established scoring thresholds (Department of Conservation, 1997).

There are two appendices attached to this analysis to assist the reader. **Appendix A** includes the Natural Resources Conservation Service (NRCS) Soil Survey for the site, which includes detailed descriptions of the site's soil characteristics. This appendix also includes soils information for the site from the State of California Important Farmlands Mapping and Monitoring Program. **Appendix B** is the *California Agricultural Land Evaluation and Site Assessment Model Instruction Manual*, which forms the basis for the analysis that follows.

2. Project Description

The project is a General Plan Amendment and amendment to the Borkey Area Specific Plan that would facilitate the development of a variety of land uses on a 132-acre site within the City of Paso Robles. The proposed project includes a range of residential housing, related community amenities and open space, which collectively would complete the existing River Oaks master plan community, already developed on land to the south. The proposed project would allow 271 residential units within Subarea A of the Borkey Area Specific Plan area. **Figure 1** shows the study area.

The project site is within the City limits. Agricultural uses are to the north of the project site (mostly within the City), while the Salinas River is to the west. Rural Residential uses and the Cuesta College campus are to the east of the site, east of Buena Vista Drive. Residential suburban, elementary school and recreational uses are developed to the south in the existing River Oaks community, an area that is similar in character to what is planned on the project site. The City's wastewater treatment plant is located southwest of the property, across the Salinas River.

3. LESA Evaluation

The project site was evaluated using the LESA Model to rate the quality and availability of agricultural resources. The Model was also used to identify whether the proposed project would exceed the threshold criteria (see Table 10) established to determine whether a significant impact to Agricultural Resources would occur under CEQA. There are two major components to the LESA Model, Land Evaluation and Site Assessment, which are weighted equally. The factors that comprise these components are evaluated in the following sections.

Land Evaluation

The Land Evaluation portion of the LESA Model focuses on two main components that are separately rated:

- **The Land Capability Classification (LCC) Rating**: The LCC indicates the suitability of soils for most kinds of crops. Soils are rated on a scale from Class 1 to Class 8, with Class 1 being the highest rating. Soils having the fewest limitations receive the highest rating. The concept of "prime" soils is not used in a LESA evaluation, because the quality of the soils must be considered in the context of many other factors before a determination of significance can be made.

- **The Storie Index Rating**: The Storie Index provides a numeric rating (based on a 100 point scale) of the relative degree of suitability or value of a given soil for intensive agriculture use. This rating is based on soil characteristics only. Note that the Storie rating system was recently simplified to numerically rate soils on a scale of 1 to 6, while the LESA model still calls for a numeric rating from 0 to 100. In a LESA analysis, the simplified ratings are now typically translated to the midpoint of the range of each rating from the original scale, as follows:

Revised Storie Index Score	Original Range	Midpoint
1	80-100	90
2	60-79	69.5
3	40-59	49.5
4	20-39	29.5
5	10-19	14.5
6	0-9	4.5

  However, to provide a more conservative result, this LESA analysis will use the highest (not midpoint) point value within each category.

Figure 1. Project Study Area *(outlined in red)*

Figure 2. Onsite Soils *(see Table 1 for descriptions)*

The United States Department of Agriculture survey for the site (see **Appendix A**) found six soil types present on the project site (**Figure 2**). Their characteristics are summarized in **Table 1**.

Table 1. Project Site Soil Capabilities

Map Symbol	Soil Map Unit	Project Acres	% of Project Area	Capability Class (if irrigated; unirrigated in parentheses)	Irrigation Limitations	CA Revised Storie Index
100	Arbuckle fine sandy loam, 0 to 2 percent slopes	23.9	18%	1 (4c)	somewhat limited (rapid water movement)	1
104	Arbuckle-positas complex, 30 to 50 percent slopes	9.4	7%	7e (7e)	very limited (slope; water holding capacity)	3
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	9.1	7%	3e (4e)	somewhat limited (rapid water movement; slope)	1
173	Mocho clay loam, 0 to 2 percent slopes	7.6	6%	1 (4c)	somewhat limited (rapid water movement)	1
177	Nacimiento-Ayar complex, 9 to 30 percent slopes	75.9	57%	4e (4e)	very limited (slope)	3
212	Xerofluvents-Riverwash association	6.1	5%	6w (7w)	not rated	3
	TOTAL	132.0	100%			

Source: NRCS Web Soil Survey, 2014.

Note that the highest quality soils are those with the lowest LCC and Storie Index ratings. There are approximately 31.5 acres of Class 1 soils on the site, if they can be irrigated. However, the NRCS identifies limitations to their irrigation potential, including the concept that irrigation water tends to run off these soils when applied. Historically, these soils have not been irrigated. The remaining soils on the site face even greater limitations to their irrigation potential, including steep slopes and limited water holding capacity.

If these soils are not irrigated, none are considered higher than Class 4 soils.

Table 2 translates the soil capabilities shown in **Table 1** into Land Evaluation scores, based on the criteria set forth in the *California Agricultural Land Evaluation and Site Assessment Model Instruction Manual* (California Department of Conservation, 1997). Note that **Table 2** assumes that all soils can be irrigated, which would present the highest possible scores, even though as noted previously, actual onsite irrigation potential is limited. In this way, this analysis presents a very conservative result and worst-case. If we assume that onsite soils cannot be irrigated, the score would be considerably lower.

Table 2. Land Evaluation Score Summary (assumes irrigated soils)

Map Symbol	Soil Map Unit	Project Acres	% of Project Area	LCC Raw Score	LCC Weighted Score	Storie Index Raw Score	Storie Index Weighted Score
100	Arbuckle fine sandy loam, 0 to 2 percent slopes	23.9	18%	100	18.10	100	18.10
104	Arbuckle-positas complex, 30 to 50 percent slopes	9.4	7%	10	0.71	59	4.20

Table 2. Land Evaluation Score Summary (assumes irrigated soils)

Map Symbol	Soil Map Unit	Project Acres	% of Project Area	LCC Raw Score	LCC Weighted Score	Storie Index Raw Score	Storie Index Weighted Score
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	9.1	7%	70	4.82	100	6.89
173	Mocho clay loam, 0 to 2 percent slopes	7.6	6%	100	5.79	100	5.79
177	Nacimiento-Ayar complex, 9 to 30 percent slopes	75.9	57%	50	28.74	59	33.91
212	Xerofluvents-Riverwash association	6.1	5%	20	0.92	59	2.73
	TOTAL	**132.0**	**100%**		**59.09**		**71.62**

Source: NRCS Web Soil Survey, 2014.

Notes:
LCC Raw Score is derived from Table 2 of the LESA Instruction Manual.
LCC Weighted Score is derived by multiplying the raw score by the % of site in that particular soil type.
Storie Index Raw Score is derived by translating the CA Storie Index to the high end of the 0-100 range from the original Index.
Storie Index Weighted Score is derived by multiplying the raw score by the % of site in that particular soil type.

Table 3 shows what the Land Evaluation Scores would be if the site were assumed not to be irrigable. This may in fact be a reasonable assumption given the site factors described above, especially in the context of the current drought and the fact that irrigation water would come from groundwater wells, for which the City discourages such use. However, while reasonable, this table is only presented for comparative purposes to show how the lack of irrigation would downward revise the score. The actual LESA score will be based on the assumption that soils can be irrigated. Note that whether or not the soil is irrigated has no effect on the Storie Index rating of the soil, just the Land Capability Classification.

Table 3. Land Evaluation Score Summary (assuming non-irrigated soils)

Map Symbol	Soil Map Unit	Project Acres	% of Project Area	LCC Raw Score	LCC Weighted Score	Storie Index Raw Score	Storie Index Weighted Score
100	Arbuckle fine sandy loam, 0 to 2 percent slopes	23.9	18%	40	7.24	100	18.10
104	Arbuckle-positas complex, 30 to 50 percent slopes	9.4	7%	10	0.71	59	4.20
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	9.1	7%	50	3.45	100	6.89
173	Mocho clay loam, 0 to 2 percent slopes	7.6	6%	40	2.31	100	5.79
177	Nacimiento-Ayar complex, 9 to 30 percent slopes	75.9	57%	50	28.74	59	33.91
212	Xerofluvents-Riverwash association	6.1	5%	10	0.46	59	2.73
	TOTAL	**132.0**	**100%**		**42.92**		**71.62**

Source: NRCS Web Soil Survey, 2014.

Notes:
LCC Raw Score is derived from Table 2 of the LESA Instruction Manual.
LCC Weighted Score is derived by multiplying the raw score by the % of site in that particular soil type.
Storie Index Raw Score is derived by translating the CA Storie Index to the high end of the 0-100 range from the original Index.
Storie Index Weighted Score is derived by multiplying the raw score by the % of site in that particular soil type.

Site Assessment

The Site Assessment portion of the LESA Model focuses on four main components that are separately rated:

- Project Size Rating
- Water Resources Availability Rating
- Surrounding Agricultural Land Rating
- Surrounding Protected Resource Land Rating

Project Size Rating

The project size rating recognizes the role of farm size in determining the viability of commercial agricultural operations. Larger farming operations generally can provide greater flexibility in farm management and marketing decisions. In addition, larger operations tend to have greater impacts upon the local economy through direct employment, as well as impacts upon supporting industries and food processing industries (California Department of Conservation, 1997).

With regard to agricultural productivity, the size of the farming operation can be considered not just from its total acreage, but the acreage of different quality lands that comprise the operation. Lands with higher quality soils lend themselves to greater management and cropping flexibility and have the potential to provide greater economic return per acre unit. For a given project, instead of relying on a single acreage figure in the Project Size rating, the project is divided into three acreage groupings based upon the LCC ratings that were previously determined in the Land Evaluation analysis. Under the Project Size rating, relatively fewer acres of high quality soils are required to achieve a maximum Project Size score. Alternatively, a maximum score on lesser quality soils could also achieve a maximum Project Size score.

The analysis is independent of how much land would actually be converted as part of the project, but simply considers the viability of the entire site as a whole. Thus, it implicitly assumes that the entire site might be converted by the project, although in reality, portions of the site will remain undeveloped under the project, and substantial acreage for a new onsite vineyard operation will be included. Thus, this analysis may be considered as a worst-case scenario.

Table 4 summarizes the Project Size score for the proposed project, assuming soils can be irrigated.

Table 4. Project Site Size Score (assumes irrigated soils)

Map Symbol	Soil Map Unit	LCC Class 1-2 Soils	LCC Class 3 Soils	LCC Class 4-8 Soils	TOTAL
100	Arbuckle fine sandy loam, 0 to 2 percent slopes	23.9	-	-	23.9
104	Arbuckle-positas complex, 30 to 50 percent slopes	-	-	9.4	9.4
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	-	9.1	-	9.1
173	Mocho clay loam, 0 to 2 percent slopes	7.6	-	-	7.6
177	Nacimiento-Ayar complex, 9 to 30 percent slopes	-	-	75.9	75.9
212	Xerofluvents-Riverwash association	-	-	6.1	6.1

Table 4. Project Site Size Score (assumes irrigated soils)

Map Symbol	Soil Map Unit	LCC Class 1-2 Soils	LCC Class 3 Soils	LCC Class 4-8 Soils	TOTAL
	TOTAL Acreage	*31.5*	*9.1*	*91.4*	*132.0*
	SCORE	**50**	**0**	**20**	
	HIGHEST SCORE				**50**

Source: NRCS Web Soil Survey, 2014.

Notes:

1. *LCC Class is derived from the numeric value not in parentheses in the fifth column of Table 1 in this report.*
2. *Project Site Size Score is derived from Table 3 of the LESA Instruction Manual.*
3. *Only the highest score from the three columns is used.*

Table 5 summarizes the Project Size score for the proposed project, assuming soils cannot be irrigated. It is presented for comparative purposes only, and is not factored into the final LESA score, because it does not present the most conservative (worst-case) result.

Table 5. Project Site Size Score (assumes non-irrigated soils)

Map Symbol	Soil Map Unit	LCC Class 1-2 Soils	LCC Class 3 Soils	LCC Class 4-8 Soils	TOTAL
100	Arbuckle fine sandy loam, 0 to 2 percent slopes	-	-	23.9	23.9
104	Arbuckle-positas complex, 30 to 50 percent slopes	-	-	9.4	9.4
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	-	-	9.1	9.1
173	Mocho clay loam, 0 to 2 percent slopes	-	-	7.6	7.6
177	Nacimiento-Ayar complex, 9 to 30 percent slopes	-	-	75.9	75.9
212	Xerofluvents-Riverwash association	-	-	6.1	6.1
	TOTAL Acreage	*0*	*0*	*132.0*	*132.0*
	SCORE	**0**	**0**	**40**	
	HIGHEST SCORE				**40**

Source: NRCS Web Soil Survey, 2014.

Notes:

1. *LCC Class is derived from the numeric value not in parentheses in the fifth column of Table 1 in this report.*
2. *Project Site Size Score is derived from Table 3 of the LESA Instruction Manual.*
3. *Only the highest score from the three columns is used.*

Water Resources Availability Rating

The Water Resource Availability Rating is based on the various water sources that may supply a given property, and then determining whether different restrictions in supply are likely to take place in years that are characterized as drought and non-drought. The site would be able to use on groundwater from onsite wells if used for irrigated agriculture, although groundwater use is discouraged by the City as a matter of policy. The region is also in extreme drought, and the long-term reliability of the Paso Robles groundwater basin is questionable. For these reasons, long-term groundwater availability for agricultural irrigation is also questionable.

Much of the project site is subject to other physical restrictions with regard to water use for irrigation, including substantial areas with steeper slopes or within the riverbed, and the fact that some of the site has already been developed as part of the River Oaks Hot Springs complex.

However, to provide the most conservative result, this analysis assumes that irrigation water can be made available to the more level portions of the site without physical or economic restrictions.

Table 6 summarizes the Water Resources Availability score for the project.

Table 6. Water Resources Availability Score

Portion of Site	Water Source	Project Acres	% of Project Area	Irrigation Feasible?	Water Restrictions	Raw Score	Weighted Score
Level Rangeland	Onsite wells	15.9	12%	Yes	Drought	100	12.05
Sloped Rangeland	Onsite wells	76.7	58%	No	Drought; physical (steep slopes)	20	11.62
Existing Development	City supplies	25.0	19%	No	Physical (already developed)	0	0
Riverbed	None required	14.4	11%	No	Physical (riverbed)	0	0
	TOTAL	**132.0**	**100%**				**23.67**

Sources: NRCS Web Soil Survey, 2014; SLO County PermitView, 2014.

Notes:

1. *"Water availability" means for ag uses, not urban development.*
2. *Assumes groundwater for ag irrigation. Urban development would use City supplies.*
3. *Project acres derived from SLO County PermitView (http://www.sloplanning.org/PermitView/MapSearch) for existing development and riverbed. NRCS Soil Survey used for areas with ag potential (see appendix).*
4. *"Existing Development" includes River Oaks Hot Springs and surrounding grounds, including ponds, landscaping and pavement. Also includes other onsite roads and disturbed areas within the project site.*
5. *"Level Rangeland" includes all portions of site less than 2% in slope that are not neither developed nor in the riverbed.*
6. *Raw score derived from Table 5 of LESA Instruction Manual.*
7. *Weighted score is raw score multiplied by % of project area.*

Surrounding Agricultural Land Rating

The Surrounding Agricultural Land Rating is designed to provide a measurement of the level of agricultural land use for lands within the Zone of Influence (ZOI) of the project site. The "Zone of Influence" is the amount of surrounding lands up to a minimum of one-quarter mile from the project site boundary. Parcels that are intersected by the quarter-mile buffer are included in their entirety. Based on the percentage of agricultural land in the ZOI, the project site is assigned a "Surrounding Agricultural Land" score.

The LESA Model rates the potential significance of the conversion of an agricultural parcel that has a large proportion of surrounding land in agricultural production more highly than one that has a relatively small percentage of surrounding land in agricultural production (California Department of Conservation, 1997). **Table 7** summarizes the land uses within one-quarter mile of the project site in each direction, including land use designations and presence of lands under Williamson Act (LCA) contract. **Figures 3 through 6** show the extent of the Zone of Influence in each direction from the project site.

Table 7. Surrounding Land Uses (within one-quarter mile)

Direction	Acres in "Zone of Influence"	% of all Area in ZOI	Land Use	General Plan Designation	Acres in Ag (or Rural Residential)	Acres Under LCA Contract	Acres in Salinas River
North	220	46%	River/AG/RR	POS/AG/RR	194	39	26
South	162	34%	River/Urban	POS; RSF-4; RMF-12; PF	0	0	15
West	50	10%	River/OS	POS	0	0	30
East	48	10%	Res Rural/AG	PF/RR	48	0	0
	480	**100%**			**242**	**39**	**71**

Source: SLO County PermitView, 2014; City of Paso Robles General Plan, 2003.
Notes:
1. *The "Zone of Influence" is a polygon one-quarter mile wide from the project boundary, which created four sectors as indicated in column 1 and shown on Figures 3 through 6.*
2. *Area to the north includes 136 acres in City, with the remainder in the County. Only County area is under LCA.*
3. *Some land to the East is within the County.*
4. *"Acres in Salinas River" includes 35 acres of City-owned land in the Salinas River as well as all private lands in the floodplain of the river.*

The project site is in the City, and is generally bounded by areas within the City limits, with the exception of a small area to the northeast of the site, and directly east. Much of the area to the north (even within the City limits) is in agricultural use, or designated for that purpose. Limited areas of Rural Residential development in the County are to the east (typically on 5-acre parcels), which may contain small areas of cultivation for private use. To provide the most conservative result, this analysis considers these rural residential parcels the same as agriculture. By this measure, 44% of the surrounding area within one-quarter mile is either designated or used for agriculture (including Rural Residential). About 8% of the surrounding area (all to the north within the County) is under LCA contract.

The Surrounding Agricultural Land score for the project site is shown in **Table 8.**

Table 8. Surrounding Land Scores

Total Acres in ZOI	Acres in Ag (or Rural Residential)	% in Ag or RR	Acres in Protected Resource Land	% in Protected Resource Land	Surrounding Ag Land Score	Surrounding Protected Resource Land Score
480	242	44%	115	39%	10	0

Source: SLO County PermitView, 2014; City of Paso Robles General Plan, 2003.
Notes:
1. *"Protected Resource Land" includes lands under LCA Contract and Public lands within the Salinas River from Table 7.*
2. *Scores are derived from Tables 6 and 7 from the LESA Instruction Manual.*

Figure 3. Quarter-Mile Zone of Influence – North (220 acres)

Figure 4. Quarter-Mile Zone of Influence – South (162 acres)

Figure 5. Quarter-Mile Zone of Influence – West (50 acres)

Figure 6. Quarter-Mile Zone of Influence – East (48 acres)

Surrounding Protected Resource Land Rating

The Surrounding Protected Resource Land Rating is essentially an extension of the Surrounding Agricultural Land Rating and is scored in a similar manner. Protected resource lands are those lands with long-term use restrictions that are compatible with or supportive of agricultural uses of land, including:

- *Williamson Act contracted land;*
- *Publicly owned lands maintained as park, forest, or watershed resources; and,*
- *Lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses.*

There are about 74 acres within one quarter mile of the site considered to be Protected Resource Lands, including 39 acres in LCA contract, and about 35 acres of publicly-owned lands within the Salinas River (**Table 7**). However, to provide the most conservative result possible, this analysis expands the river lands to include all 71 acres within the flood plain of the Salinas River within a quarter mile of the project site, even though about half of that area is not within public ownership (or has conservation easements) and thus does not actually qualify as "protected" under the LESA guidelines. Using this more conservative approach, the LESA analysis will assume that 110 acres (39 in LCA; 71 in the Salinas River) are Protected Resource Lands for scoring purposes. This is about 23% of all the land within a quarter mile of the project site. **Figure 7** shows the extent of Protected Resource Lands surrounding the project site.

The Surrounding Protected Resource Land score for the project site is shown in **Table 8**. Note that this score is zero because less than 40% of the surrounding lands are considered "protected resources".

Figure 7. Protected Resource Lands in Zone of Influence

- **Land Conservation Act lands (in green) – 39 acres in ZOI**
- **Salinas River Flood Plain (in blue) – 71 acres; only 35 in public ownership (City WWTP)**

(note that the 71-acre flood plain area shown also includes lands outside the river not in public ownership)

4. Summary and Conclusions

The LESA Model is weighted so that half of the total score is derived from the Land Evaluation and half from the Site Assessment. There are 50 points possible in each category, with a total possible score of 100. As shown in **Table 9**, the Land Evaluation subscore is 32.68 for this project, while the Site Assessment subscore is 12.55. The total LESA score is 45.23.

It should be noted that this result is based on the following very conservative assumptions that tend to skew the score higher than would be the case if more typical assumptions were made:

- ***Storie Index Rating.*** *When converting the Storie index ratings to the revised ratings, a typical LESA approach would be to use the midpoint of the range of the former values (e.g., a Revised Storie Index rating of "1" would typically convert to "90", which is the midpoint in the range of 80 to 100 for that value. However, this study uses the high end of the range when converting values. Thus, a Revised Storie Index of "1" would convert to "100"not "90". This makes the Storie Index rating score higher than in a typical LESA analysis.*
- ***Water Resource Availability.*** The analysis assumes that water is available for irrigating the more level portions of the site, even though there are extreme drought conditions and both physical and regulatory issues that limit the potential use of groundwater. The assumption used in this analysis makes the Water Resource Availability Rating higher than would otherwise be expected.
- ***Surrounding Agricultural Lands.*** The analysis assumes that Residential Rural areas in the County qualify as "Agriculture", even on fully developed 5-acre residential parcels. This makes the "Surrounding Agricultural Land Rating" higher would otherwise be expected.
- ***Surrounding Protected Resource Lands.*** The analysis assumes that all lands within the Salinas River floodplain within a quarter-mile of the site would qualify as "protected resource lands", when a LESA analysis typically assumes only the publicly-owned and protected lands would qualify in this regard.

Table 9. Overall Project LESA Score Summary

Factor	Factor Rating (0-100 points)	Factor Weighting (Total = 100%)	Weighed Score
Land Evaluation (LE)			
1. Land Capability Classification (LCC)	59.09	25%	14.77
2. Storie Index Rating	71.62	25%	17.90
		Land Evaluation Subscore	***32.68***
Site Assessment (SA)			
1.Project Size Rating	50.00	15%	7.50
2.Water Resource Availability Rating	23.67	15%	3.55
3.Surrounding Agricultural Land Rating	10.00	15%	1.50
4.Surrounding Protected Resource Lands Rating	0	5%	0
		Site Assessment Subscore	***12.55***
		TOTAL LESA SCORE	**45.23**

Source: California Department of Conservation, 1997.
Note: Weighted Score is derived by multiplying the Factor rating by the Factor Weighting.

Determination of Significance

As shown in **Table 10**, a final LESA score between 40 and 59 is considered significant unless either the Land Evaluation or the Site Assessment subscore is less than 20. Because the Site Assessment subscore is less than 20, the impact of the conversion of the project site to non-agricultural use is considered **less than significant.**

Table 10. California LESA Model Scoring Thresholds

Total LESA Score	Determination of Significance
0 to 39	Not considered significant
40 to 59	Considered significant only if Land Evaluation **and** Site Assessment subscores are greater than or equal to 20 points
60 to 79	Considered significant unless **either** Land Evaluation or Site Assessment subscore is less than 20 points
80 to 100	Considered significant

Source: California Department of Conservation, 1997.

5. References and Report Preparer

References

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Google Earth.

Report Preparer

This report was prepared by John Rickenbach, AICP, of **John F. Rickenbach Consulting.**

Appendix A

NRCS Soils Report – River Oaks Project

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Luis Obispo County, California, Paso Robles Area

River Oaks Project Site

April 17, 2014

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

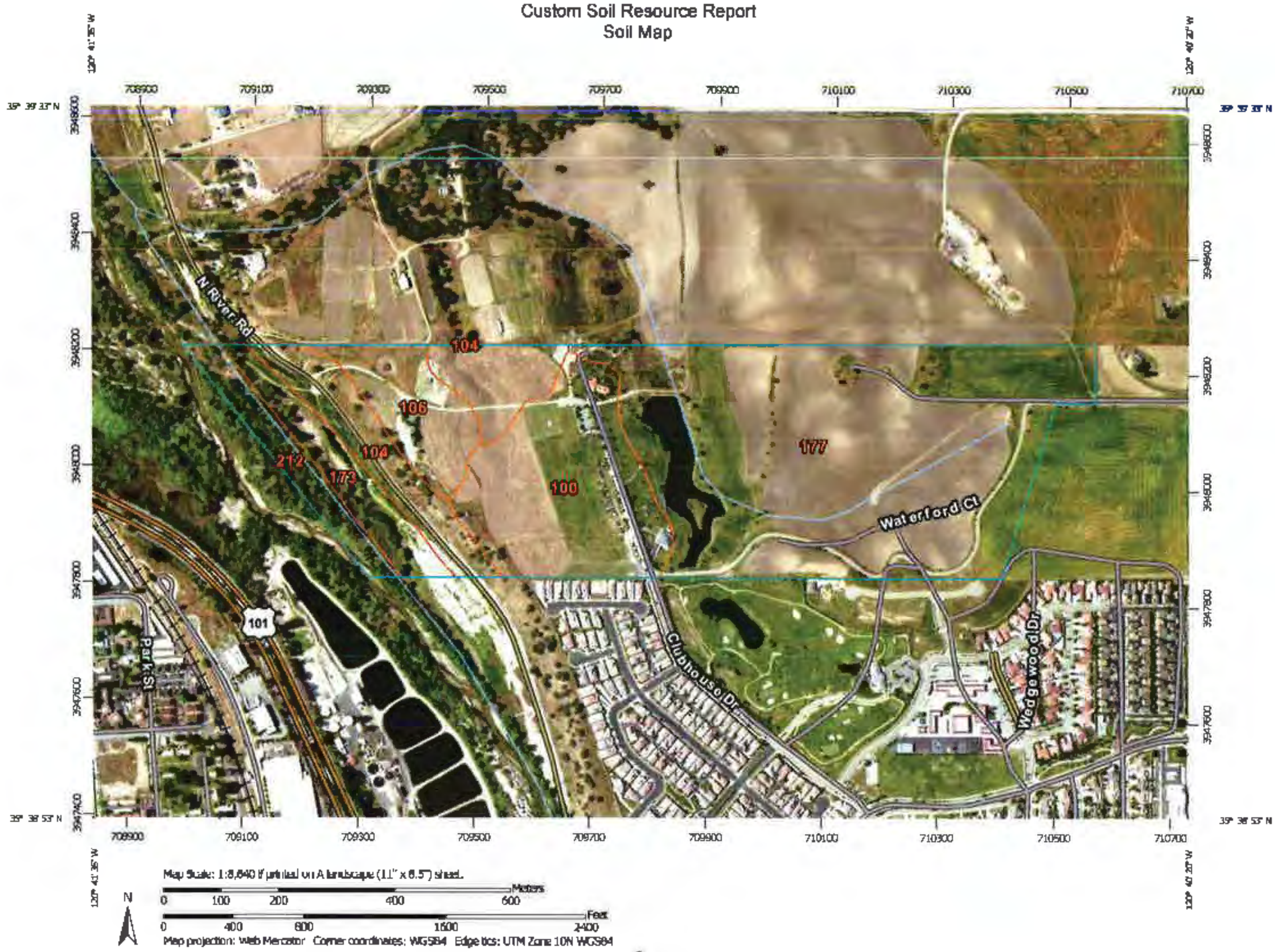
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000

Warning: Soil Map may not be valid at this scale

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale

Please rely on the bar scale on each map sheet for map measurements

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey nrcs usda gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below

Soil Survey Area: San Luis Obispo County, California, Paso Robles Area
Survey Area Data: Version 5, Dec 16, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger

Date(s) aerial images were photographed: May 8, 2010—May 21, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident

Map Unit Legend

San Luis Obispo County, California, Paso Robles Area (CA665)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
100	Arbuckle fine sandy loam, 0 to 2 percent slopes	23.9	18.1%
104	Arbuckle-Positas complex, 30 to 50 percent slopes	9.4	7.1%
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	9.1	6.9%
173	Mocho clay loam, 0 to 2 percent slopes	7.6	5.8%
177	Nacimiento-Ayar complex, 9 to 30 percent slopes	75.9	57.5%
212	Xerofluvents-Riverwash association	6.1	4.6%
Totals for Area of Interest		**132.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series.* Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases.* Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas.* Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Luis Obispo County, California, Paso Robles Area

100—Arbuckle fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 200 days

Map Unit Composition

Arbuckle and similar soils: 85 percent
Minor components: 15 percent

Description of Arbuckle

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium from mixed rock sources

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very high (about 15.8 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 1
Land capability (nonirrigated): 4c
Hydrologic Soil Group: C
Ecological site: COARSE LOAMY (R014XE003CA)

Typical profile

0 to 29 inches: Fine sandy loam
29 to 53 inches: Loam, sandy clay loam, clay loam
53 to 62 inches: Stratified sandy loam to very gravelly sandy clay loam

Minor Components

Unnamed, similar to arbuckle

Percent of map unit: 5 percent

San ysidro, loam

Percent of map unit: 5 percent

Cropley, clay

Percent of map unit: 3 percent

Hanford, fine sandy loam

Percent of map unit: 2 percent

104—Arbuckle-Positas complex, 30 to 50 percent slopes

Map Unit Setting

Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 60 to 61 degrees F
Frost-free period: 200 days

Map Unit Composition

Arbuckle and similar soils: 40 percent
Positas and similar soils: 30 percent
Minor components: 30 percent

Description of Arbuckle

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium from mixed rock sources

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 7e
Land capability (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: COARSE LOAMY (R014XE003CA)

Typical profile

0 to 29 inchas: Fine sandy loam
29 to 53 inches: Sandy clay loam
53 to 62 inches: Stratified sandy loam to very gravelly sandy clay loam

Description of Positas

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium from mixed rock sources

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: 9 to 20 inches to abrupt textural change
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very low (about 1.2 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 7e
Land capability (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: COARSE LOAMY CLAYPAN (R014XE005CA)

Typical profile

0 to 10 inches: Coarse sandy loam
10 to 28 inches: Clay
28 to 40 inches: Sandy clay loam
40 to 60 inches: Stratified sandy loam to gravelly clay loam

Minor Components

Shimmon, loam on north slopes

Percent of map unit: 15 percent
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear

Unnamed, similar to positas

Percent of map unit: 8 percent

Balcom, loam

Percent of map unit: 1 percent

Linne, shaly clay loam

Percent of map unit: 1 percent

Nacimiento, silty clay loam

Percent of map unit: 1 percent

Unnamed, slopes of 50 to 75 percent
Percent of map unit: 1 percent

Badland
Percent of map unit: 1 percent

Greenfield, fine sandy loam
Percent of map unit: 1 percent

Ayar, silty clay
Percent of map unit: 1 percent

106—Arbuckle-San Ysidro complex, 2 to 9 percent slopes

Map Unit Setting

Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 60 to 61 degrees F
Frost-free period: 200 days

Map Unit Composition

Arbuckle and similar soils: 40 percent
San ysidro and similar soils: 20 percent
Minor components: 39 percent

Description of Arbuckle

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium from mixed rock sources

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.8 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability classification (irrigated): 3e
Land capability (nonirrigated): 4e

Hydrologic Soil Group: C
Ecological site: COARSE LOAMY (R014XE003CA)

Typical profile

0 to 29 inches: Fine sandy loam
29 to 38 inches: Sandy clay loam
38 to 62 inches: Stratified sandy loam to very gravelly sandy clay loam

Description of San Ysidro

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed rocks

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: 20 to 37 inches to abrupt textural change
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability classification (irrigated): 3e
Land capability (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: LOAMY CLAYPAN (R014XE029CA)

Typical profile

0 to 23 inches: Loam
23 to 38 inches: Clay loam
38 to 71 inches: Sandy loam

Minor Components

Greenfield, fine sandy loam

Percent of map unit: 14 percent

Unnamed, similar to san ysidro soil

Percent of map unit: 10 percent

Unnamed, simialr to arbuckle

Percent of map unit: 5 percent

Hanford, fine sandy loam

Percent of map unit: 5 percent

Cropley, clay

Percent of map unit: 2 percent

Rincon, clay loam

Percent of map unit: 2 percent

Unnamed

Percent of map unit: 1 percent
Landform: Drainageways

173—Mocho clay loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 60 degrees F
Frost-free period: 200 days

Map Unit Composition

Mocho and similar soils: 75 percent
Minor components: 25 percent

Description of Mocho

Setting

Landform: Alluvial flats
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from calcareous sedimentary rock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 11.2 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 1
Land capability (nonirrigated): 4c
Hydrologic Soil Group: B
Ecological site: FINE LOAMY BOTTOM (R014XE025CA)

Typical profile

0 to 19 inches: Clay loam
19 to 64 inches: Clay loam

Minor Components

Still, clay loam

Percent of map unit: 10 percent

Unnamed

Percent of map unit: 10 percent

Sorrento, clay loam

Percent of map unit: 3 percent

Tujunga, fine sand

Percent of map unit: 2 percent

177—Nacimiento-Ayar complex, 9 to 30 percent slopes

Map Unit Setting

Elevation: 600 to 1,500 feet
Mean annual precipitation: 10 to 20 inches
Mean annual air temperature: 60 to 61 degrees F
Frost-free period: 200 days

Map Unit Composition

Nacimiento and similar soils: 35 percent
Ayar and similar soils: 30 percent
Minor components: 35 percent

Description of Nacimiento

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from calcareous shale and/or sandstone

Properties and qualities

Slope: 9 to 30 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.0 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: Fine Loamy 9-13 (R015XE020CA)

Typical profile

0 to 18 inches: Silty clay loam
18 to 28 inches: Silty clay loam
28 to 32 inches: Weathered bedrock

Description of Ayar

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from calcareous shale and/or sandstone

Properties and qualities

Slope: 9 to 30 percent
Depth to restrictive feature: 40 to 70 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 9.6 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: Clayey Hills 10-14" p.z. (R015XE001CA)

Typical profile

0 to 9 inches: Silty clay
9 to 61 inches: Clay
61 to 65 inches: Weathered bedrock

Minor Components

Linne, shaly clay loam

Percent of map unit: 15 percent

Diablo, clay

Percent of map unit: 10 percent

Balcom, loam

Percent of map unit: 4 percent

Calodo, clay loam
Percent of map unit: 1 percent

Rock outcrop
Percent of map unit: 1 percent

Unnamed, areas of deep gullies
Percent of map unit: 1 percent

Dibble, clay loam
Percent of map unit: 1 percent

Shimmon, loam
Percent of map unit: 1 percent

Positas, coarse sandly loam
Percent of map unit: 1 percent

212—Xerofluvents-Riverwash association

Map Unit Setting
Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 60 degrees F
Frost-free period: 200 days

Map Unit Composition
Xerofluvents and similar soils: 50 percent
Riverwash: 30 percent
Minor components: 20 percent

Description of Xerofluvents

Setting
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None

Interpretive groups
Farmland classification: Not prime farmland

Land capability classification (irrigated): 6w
Land capability (nonirrigated): 6w
Hydrologic Soil Group: A

Typical profile
0 to 10 inches: Sand
10 to 30 inches: Stratified gravel to sand to sandy loam
30 to 60 inches: Stratified gravelly sand to gravelly loam

Description of Riverwash

Setting
Landform: Channels

Properties and qualities
Slope: 0 to 2 percent
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Frequent

Interpretive groups
Farmland classification: Not prime farmland
Land capability classification (irrigated): 8w
Land capability (nonirrigeted): 8w

Typical profile
0 to 6 inches: Sand
6 to 60 inches: Error

Minor Components

Metz, loamy sand
Percent of map unit: 7 percent

Elder, loam
Percent of map unit: 7 percent

Tujunga, fine sand
Percent of map unit: 6 percent

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PRIME FARMLAND

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE

AREAS OF SOILS THAT MEET ALL THE CHARACTERISTICS OF PRIME OR STATEWIDE, WITH THE EXCEPTION OF IRRIGATION. ADDITIONAL FARMLANDS INCLUDE DRYLAND FIELD CROPS OF WHEAT, BARLEY, OATS, AND SAFFLOWER.

FARMLAND OF LOCAL POTENTIAL

LANDS HAVING THE POTENTIAL FOR FARMLAND, WHICH HAVE PRIME OR STATEWIDE CHARACTERISTICS AND ARE NOT CULTIVATED.

GRAZING LAND

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

URBAN AND BUILT-UP LAND

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

OTHER LAND

OTHER LAND IS LAND NOT INCLUDED IN ANY OTHER MAPPING CATEGORY. COMMON EXAMPLES INCLUDE LOW DENSITY RURAL DEVELOPMENTS, BRUSH, TIMBER, WETLAND, AND RIPARIAN AREAS NOT SUITABLE FOR LIVESTOCK GRAZING, CONFINED LIVESTOCK, POULTRY, OR AQUACULTURE FACILITIES, STRIP MINES BORROW PITS, AND WATER BODIES SMALLER THAN 40 ACRES. VACANT AND NONAGRICULTURAL LAND SURROUNDED ON ALL SIDES BY URBAN DEVELOPMENT AND GREATER THAN 40 ACRES IS MAPPED AS OTHER LAND.

Important Farmlands Map
Detail of River Oaks Area (in red rectangle)

Appendix B

State of California
Agricultural Land Evaluation and Site Assessment Model
Instruction Manual

CALIFORNIA AGRICULTURAL

LAND EVALUATION AND SITE ASSESSMENT MODEL

Instruction Manual

For further information, please contact:

California Department of Conservation
Office of Land Conservation
801 K Street, MS 13-71
Sacramento, CA 95814-3528
(916) 324-0850
FAX (916) 327-3430

CALIFORNIA AGRICULTURAL

LAND EVALUATION AND SITE ASSESSMENT MODEL

Instruction Manual
1997

Department of Conservation
Office of Land Conservation

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EXECUTIVE SUMMARY

Land Evaluation and Site Assessment (LESA) is a term used to define an approach for rating the relative quality of land resources based upon specific measurable features. The formulation of a California Agricultural LESA Model is the result of Senate Bill 850 (Chapter 812 /1993), which charges the Resources Agency, in consultation with the Governor's Office of Planning and Research, with developing an amendment to Appendix G of the California Environmental Quality Act (CEQA) Guidelines concerning agricultural lands. Such an amendment is intended "to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process" (Public Resources Code Section 21095).

The California Agricultural LESA Model is composed of six different factors. Two Land Evaluation factors are based upon measures of soil resource quality. Four Site Assessment factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, each of these factors is separately rated on a 100 point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. It is this project score that becomes the basis for making a determination of a project's potential significance, based upon a range of established scoring thresholds. This Manual provides detailed instructions on how to utilize the California LESA Model, and includes worksheets for applying the Model to specific projects.

INTRODUCTION

Defining the LESA System

The Land Evaluation and Site Assessment (LESA) system is a point-based approach that is generally used for rating the relative value of agricultural land resources. In basic terms, a given LESA model is created by defining and measuring two separate sets of factors. The first set, Land Evaluation, includes factors that measure the inherent soil-based qualities of land as they relate to agricultural suitability. The second set, Site Assessment, includes factors that are intended to measure social, economic, and geographic attributes that also contribute to the overall value of agricultural land. While this dual rating approach is common to all LESA models, the individual land evaluation and site assessment factors that are ultimately utilized and measured can vary considerably, and can be selected to meet the local or regional needs and conditions for which a LESA model is being designed to address. In short, the LESA methodology lends itself well to adaptation and customization in individual states and localities. Considerable additional information on LESA may be found in *A Decade with LESA - the Evolution of Land Evaluation and Site Assessment* (8).

Background on LESA Nationwide

In 1981, the federal Natural Resources Conservation Service (NRCS), known then as the Soil Conservation Service, released a new system that was designed to provide objective ratings of the agricultural suitability of land compared to demands for nonagricultural uses of lands. The system became known as Land Evaluation and Site Assessment, or LESA. Soon after it was designed, LESA was adopted as a procedural tool at the federal level for identifying and addressing the potential adverse effects of federal programs (e.g., funding of highway construction) on farmland protection. The Farmland Protection Policy Act of 1981 (5) spells out requirements to ensure that federal programs, to the extent practical, are compatible with state, local, and private programs and policies to protect farmland, and calls for the use of LESA to aid in this analysis. Typically, staff of the NRCS is involved in performing LESA scoring analyses of individual projects that involve other agencies of the federal government.

Since its inception, the LESA approach has received substantial attention from state and local governments as well. Nationwide, over two hundred jurisdictions have developed local LESA methodologies (7). One of the attractive features of the LESA approach is that it is well suited to being modified to reflect regional and local conditions. Typical local applications of LESA include assisting in decision making concerning the sitting of projects, changes in zoning, and spheres of influence determinations. LESA is also increasingly being utilized for farmland protection programs, such as the identification of priority areas to concentrate conservation easement acquisition efforts.

Because of the inherent flexibility in LESA model design, there is a broad array of factors that a given LESA model can utilize. Some LESA models require the measurement of as many as twenty different factors. Over the past 15 years, the body of knowledge concerning LESA model development and application has begun to indicate that LESA models utilizing only several basic factors can capture much of the variability associated with the determination of the relative value of agricultural lands. In fact, LESA models with many factors are increasingly viewed as having redundancies, with different factors essentially measuring the same features, or being highly correlated with one another. Additional information on the evolution and development of the LESA approach is provided in, A *Decade with LESA -The Evolution of Land Evaluation and Site Assessment* (8).

Development of the California Agricultural LESA Model

In 1990 the Department of Conservation commissioned a study to investigate land use decisions that affect the conversion of agricultural lands in California. The study, conducted by Jones and Stokes Associates, Inc., was prepared in response to concerns about agricultural land conversion identified in the *California Soil Conservation Plan* (1) (developed by the ad hoc Soil Conservation Advisory Committee serving the Department of Conservation in 1987). Among these concerns was the belief that there was inadequate information available concerning the socioeconomic and environmental implications of farmland conversions, and that the adequacy of current farmland conversion impact analysis under the California Environmental Quality Act (CEQA) was not fully known. The findings of this study are included in the publication, *The Impacts of Farmland Conversion in California* (2).

Currently, neither CEQA nor the State CEQA Guidelines contains procedures or specific guidance concerning how agencies should address farmland conversion impacts of projects. The only specific mention of agricultural issues is contained in Appendix G of the State CEQA Guidelines, which states that a project will normally have a significant effect on the environment if it will "convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land".

Among the conclusions contained in *The Impacts of Farmland Conversion in California* study was that the lack of guidance in how lead agencies should address the significance of farmland conversion impacts resulted in many instances of no impact analysis at all. A survey of environmental documents sent to the Governor's Office of Planning and Research (OPR) between 1986 and 1988 was performed. The survey showed that among projects that affected at least 100 acres of land and for which agriculture was a project issue, nearly 30 percent received Negative Declarations, and therefore did not did not receive the environmental impact analysis that would be provided by an Environmental Impact Report (EIR).

Of those projects involving the conversion of agricultural lands and being the subject of an EIR, the study found a broad range of approaches and levels of detail in describing the environmental setting, performing an impact analysis, and providing alternative mitigation measures. The only agricultural impacts found to be significant in the EIRs were those involving the direct removal of prime agricultural lands from production by the project itself. The focus on prime farmland conversion in the projects surveyed was deemed to be related to the narrow direction provided in Appendix G of the State CEQA Guidelines.

The formulation of a California LESA Model is the result of Senate Bill 850 (Chapter 812 /1993), which charges the Resources Agency, in consultation with the Governor's Office of Planning and Research, to develop an amendment to Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Such an amendment is intended "to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process" (Public Resources Code Section 21095). This legislation authorizes the Department of Conservation to develop a California LESA Model, which can in turn be adopted as the required amendment to Appendix G of the CEQA Guidelines.

Presentation of the California LESA Model

The California LESA Model is presented in this Manual in the following sections:

Section I. provides a listing of the information and tools that will typically be needed to develop LESA scores for individual projects.

Section II. provides step-by-step instructions for scoring each of the six Land Evaluation and Site Assessment factors that are utilized in the Model, with an explanation of the rationale for the use of each factor.

Section III. defines the assignment of weights to each of the factors relative to one another, and the creation of a final LESA score for a given project.

Section IV. assigns scoring thresholds to final LESA scores for the purpose of determining the significance of a given project under CEQA where the conversion of agricultural lands is a project issue.

Additionally:

Appendix A. provides an abridged set of step-by-step LESA scoring instructions that can be used and reproduced for scoring individual projects.

Appendix B. demonstrates the application of the California LESA Model to the scoring of a hypothetical project.

The California Agricultural LESA Model

Section I. Required Resources and Information

The California Land Evaluation and Site Assessment (LESA) Model requires the use and interpretation of basic land resource information concerning a given project. A series of measurements and calculations is also necessary to obtain a LESA score. Listed below are the materials and tools that will generally be needed to make these determinations.

Land Evaluation and Site Assessment calculations will require:

1. A calculator or other means of tabulating numbers
2. An accurately scaled map of the project area, such as a parcel map
3. A means for making acreage determinations of irregularly shaped map units. Options include, from least to most technical:
    - A transparent grid-square or dot-planimeter method of aerial measurement
    - A hand operated electronic planimeter
    - The automatic planimetry capabilities of a Geographic Information System (GIS)
4. A modern soil survey, generally produced by the USDA Natural Resources Conservation Service, which delineates the soil-mapping units for a given project. [Note: If modern soil survey information is not available for a given area of study, it may be necessary to draw upon the services of a professional soil scientist to perform a specific project survey].
5. Maps that depict land uses for parcels including and surrounding the project site, such as the Department of Conservation's Important Farmland Map series, the Department of Water Resources Land Use map series, or other appropriate information.
6. Maps or information that indicate the location of parcels including and surrounding the project site that are within agricultural preserves, are under public ownership, have conservation easements, or have other forms of long term commitments that are considered compatible with the agricultural use of a given project site.

Section II. Defining and Scoring the California Land Evaluation and Site Assessment Model Factors

This section provides detailed step-by-step instructions for the measurement and scoring of each of the Land Evaluation and Site Assessment factors that are utilized in the California Agricultural LESA Model, and is intended to serve as an introduction to the process of utilizing the Model. Once users are familiar with the Model, a more streamlined set of instructions and scoring sheets is available in Appendix A. In addition, the scoring of a hypothetical project is presented using these scoring sheets in Appendix B.

Scoring of Land Evaluation Factors

The California LESA Model includes two Land Evaluation factors that are separately rated:

1. The Land Capability Classification Rating
2. The Storie Index Rating

The information needed to make these ratings is typically available from soil surveys that have been conducted by the federal Natural Resources Conservation Service (formerly known as the Soil Conservation Service). Consultation should be made with NRCS staff (field offices exist in most counties) to assure that valid and current soil resource information is available for the project site. Copies of soil surveys are available at local field offices of the NRCS, and may also be available through libraries, city and county planning departments, the Cooperative Extension, and other sources. In addition, a Certified Professional Soil Scientist (CPSS) may also be consulted to obtain appropriate soil resource information for the project site. A directory of CPSS registered soil consultants is available through the Professional Soil Scientists Association of California, P.O. Box 3213, Yuba City, CA 95992-3213; phone: (916) 671-4276.

1) The USDA Land Capability Classification (LCC) - The LCC indicates the suitability of soils for most kinds of crops. Groupings are made according to the limitations of the soils when used to grow crops, and the risk of damage to soils when they are used in agriculture. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receive the highest rating (Class I). Specific subclasses are also utilized to further characterize soils. An expanded explanation of the LCC is included in most soil surveys.

2) The Storie Index - The Storie Index provides a numeric rating (based upon a 100 point scale) of the relative degree of suitability or value of a given soil for intensive agriculture. The rating is based upon soil characteristics only. Four factors that represent the inherent characteristics and qualities of the soil are

considered in the index rating. The factors are: profile characteristics, texture of the surface layer, slope, and other factors (e.g., drainage, salinity).

In some situations, only the USDA Land Capability Classification information may be currently available from a given published soil survey. However, Storie Index ratings can readily be calculated from information contained in soil surveys by qualified soil scientists. Users are encouraged to seek assistance from NRCS staff or Certified Professional Soil Scientists to derive Storie Index information for the soils as well. If, however, limitations of time or resources restrict the derivation of Storie Index ratings for the soils within a region, it may be possible to adapt the Land Evaluation by relying solely upon the LCC rating. Under this scenario the LCC rating would account for 50 percent of the overall LESA factor weighting.

Identifying a Project's Soils

In order to rate the Land Capability Classification and Storie Index factors, the evaluator must identify the soils that exist on a given project site and determine their relative proportions. A **Land Evaluation Worksheet** (Table 1A.) is used to tabulate these figures, based upon the following:

Step 1.
Locate the project on the appropriate map sheet in the Soil Survey.

Step 2.
Photocopy the map sheet and clearly delineate the project boundaries on the map, paying close attention to the map scale.

Step 3.
Identify all of the soil mapping units existing in the project site (each mapping unit will have a different map unit symbol) and enter the each mapping unit symbol in **Column A** of the **Land Evaluation Worksheet** (Table 1A).

Step 4.
Calculate the acreage of each soil mapping unit present within the project site using any of the means identified in **Section 1**, **Required Resources and Information**, and enter this information in **Column B**.

Step 5.

Divide the acres of each soil mapping unit by the total project acreage to determine the proportion of each unit that comprises the project, and enter this information in Column C.

1. Land Evaluation - The Land Capability Classification Rating

Step 1.
In the Guide to Mapping Units typically found within soil surveys, identify the Land Capability Classification (LCC) designation (e.g., IV-e) for each mapping unit that has been identified in the project and enter these designations in **Column D** of the **Land Evaluation Worksheet** (Table 1A.).

Step 2.
From Table 2., **The Numeric Conversion of Land Capability Classification Units**, obtain a numeric score for each mapping unit, and enter these scores in **Column E**.

Step 3.
Multiply the proportion of each soil mapping unit (**Column C**) by the LCC points for each mapping unit (**Column E**) and enter the resulting scores in **Column F**.

Step 4.
Sum the LCC scores in **Column** F to obtain a single LCC Score for the project. Enter this LCC Score in **Line 1** of the **Final LESA Worksheet** (Table 8)

Table 2. Numeric Conversion of Land Capability Classification Units

Land Capability Classification	LCC Point Rating
I	100
IIe	90
IIs,w	80
IIIe	70
IIIs,w	60
IVe	50
IVs,w	40
V	30
VI	20
VII	10
VIII	0

Table 1A.
Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
Totals		(Must Sum to 1.0)		*LCC Total*		*Storie Index Total*	

Table 1B.
Site Assessment Worksheet 1.

Project Size Score

	I	J	K
	LCC Class I - II	LCC Class III	LCC Class IV - VIII
Total Acres			
Project Size Scores			

Highest Project Size Score

2. Land Evaluation - The Storie Index Rating Score

Step 1.
From the appropriate soil survey or other sources of information identified in Appendix C, determine the Storie Index Rating (the Storie Index Rating is already based upon a 100 point scale) for each mapping unit and enter these values in **Column G** of the **Land Evaluation Worksheet** (Table 1A.).

Step 2.
Multiply the proportion of each soil mapping unit found within the project (**Column C**) by the Storie Index Rating (**Column G**), and enter these scores in **Column H**.

Step 3.
Sum the Storie Index Rating scores in **Column H** to obtain a single Storie Index Rating score for the project. Enter this Storie Index Rating Score in **Line 2** of the **Final LESA Worksheet** (Table 8)

Scoring of Site Assessment Factors

The California LESA Model includes four Site Assessment factors that are separately rated:

1. **The Project Size Rating**
2. **The Water Resources Availability Rating**
3. **The Surrounding Agricultural Land Rating**
4. **The Surrounding Protected Resource Land Rating**

1. Site Assessment - The Project Size Rating

The Project Size Rating relies upon acreage figures that were tabulated under the Land Capability Classification Rating in Table 1A. The Project Size rating is based upon identifying acreage figures for three separate groupings of soil classes within the project site, and then determining which grouping generates the highest Project Size Score.

Step 1.
Using information tabulated in **Columns B** and **D** of the **Land Evaluation Worksheet** (Table 1A), enter acreage figures in **Site Assessment Worksheet 1. - Project Size** (Table 1B) using either **Column I, J,** or **K** for each of the soil mapping units in a given project.

Step 2.
Sum the entries in **Column I** to determine the total acreage of Class I and II soils on the project site.

Sum the entries in **Column J** to determine the total acreage of Class III soils on the project site.

Sum the entries in **Column K** to determine the total acreage of Class IV and lower rated soils on the project site.

Step 3.
For each of the three columns, apply the appropriate scoring plan provided in Table 3, **Project Size Scoring**, and enter the **Project Size Score** for each grouping in the **Site Assessment Worksheet 1. - Project Size** (Table 1B). Determine which column generates the highest score. The highest score becomes the overall **Project Size Score**. Enter this number in **Line 3** of the **Final LESA Scoresheet** (Table 8).

Table 3. Project Size Scoring

LCC Class I or II soils		LCC Class III soils		LCC Class IV or lower	
Acres	*Score*	*Acres*	*Score*	*Acres*	*Score*
80 or above	100	160 or above	100	320 or above	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19	30	40-59	60	40-99	20
fewer than 10	0	20-39	30	fewer than 40	0
		10-19	10		
		fewer than 10	0		

Explanation of the Project Size Factor

The Project Size factor in the California Agricultural LESA Model was developed in cooperation with Nichols-Berman, a consulting firm under contract with the Department of Conservation. A thorough discussion of the development of this rating is presented by Nichols-Berman in a report to the Department entitled, *Statewide LESA Methodologies Report - Project Size and Water Resource Availability Factors* (3).

The inclusion of the measure of a project's size in the California Agricultural LESA Models is a recognition of the role that farm size plays in the viability of commercial agricultural operations. In general, larger farming operations can provide greater flexibility in farm management and marketing decisions. Certain economies of scale for equipment and infrastructure can also be more favorable for larger operations. In addition, larger operations tend to have greater impacts upon the local economy through direct employment, as well as impacts upon support industries (e.g., fertilizers, farm equipment, and shipping) and food processing industries.

While the size of a given farming operation may in many cases serve as a direct indicator of the overall economic viability of the operation, The California Agricultural LESA Model does not specifically consider the issue of economic viability. The variables of economic viability for a specific farm include such factors as the financial management and farming skills of the operator, as well as the debt load and interest rates being paid by an individual operator, which are issues that cannot readily be included in a statewide LESA model.

In terms of agricultural productivity, the size of a farming operation can be considered not just from its total acreage, but the acreage of different quality lands that comprise the operation. Lands with higher quality soils lend themselves to greater management and cropping flexibility and have the potential to provide a greater economic return per unit acre. For a given project, instead of relying upon a single acreage figure in the Project Size rating, the project is divided into three acreage groupings based upon the Land Capability Classification ratings that were previously determined in the Land Evaluation analysis. Under the Project Size rating, relatively fewer acres of high quality soils are required to achieve a maximum Project Size score. Alternatively, a maximum score on lesser quality soils could also be derived, provided there is a sufficiently large acreage present. Acreage figures utilized in scoring are the synthesis of interviews that were conducted statewide for growers of a broad range of crops. In the interviews growers were queried as to what acreage they felt would be necessary in order for a given parcel to be considered attractive for them to farm.

The USDA LCC continues to be the most widely available source of information on land quality. Project Size under this definition is readily measurable, and utilizes much of the same information needed to score a given project under the Land Evaluation component of the methodology. This approach also complements the LE determination, which, while addressing soil quality, does not account for the total acreage of soils of given qualities within a project.

This approach allows for an accounting of the significance of high quality agricultural land as well as lesser quality agricultural lands, which by virtue of their large area can be considered significant agricultural resources. In this way, no single acreage figure for a specific class of soils (e.g., soils defined as "prime") is necessary.

2. Site Assessment - The Water Resources Availability Rating

The Water Resources Availability Rating is based upon identifying the various water sources that may supply a given property, and then determining whether different restrictions in supply are likely to take place in years that are characterized as being periods of drought and non-drought. **Site Assessment Worksheet 2. - Water Resources Availability Worksheet** (Table 4) is used to tabulate the score.

Step 1.
Identify the different water resource types that are used to supply the proposed project site (for example, irrigation district water, ground water, and riparian water are considered to be three different types of water resources). Where there is only one water source identified for the proposed project, skip to Step 4.

Step 2.
Divide the proposed project site into portions, with the boundaries of each portion being defined by the irrigation water source(s) supplying it. A site that is fully served by a single source of water will have a single portion, encompassing the entire site. A site that is fully served by two or more sources that are consistently merged together to serve a crop's needs would also have a single portion. (e.g., a portion of the proposed project may receive both irrigation district and groundwater). If the project site includes land that has no irrigation supply, consider this acreage as a separate portion as well. Enter the water resource portions of the project in **Column B** of Table 4, **Site Assessment Worksheet 2. - Water Resources Availability**.

[As an example, a hypothetical project site is determined to have four separate water supply portions:

Portion 1 is served by irrigation district water only;
Portion 2 is served by ground water only;
Portion 3 is served by *both* irrigation district water and ground water;
Portion 4 is not irrigated at all.]

Step 3.
Calculate the proportion of the total project area that is represented by each water resource portion, and enter these figures in **Column C** of **Site Assessment Worksheet 2. - Water Resources Availability**, verifying that the sum of the proportions equals 1.0.

Table 4. Site Assessment Worksheet 2. - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1				
2				
3				
4				
5				
6				
		(Must Sum to 1.0)	***Total Water Resource Score***	

Step 4.

For each water resource supply portion of the project site, determine whether irrigated and dryland agriculture is *feasible*, and if any *physical* or *economic restrictions* exist, during both *drought* and *non-drought* years. These italicized terms are defined below:

- A *physical restriction* is an occasional or regular interruption or reduction in a water supply, or a shortened irrigation season, that forces a change in agricultural practices -- such as planting a crop that uses less water, or leaving land fallow. (This could be from cutbacks in supply by irrigation and water districts, or by ground or surface water becoming depleted or unusable. Poor water quality can also result in a physical restriction -- for example by requiring the planting of salt-tolerant plants, or by effectively reducing the amount of available water.)

- An *economic restriction* is a rise in the cost of water to a level that forces a reduction in consumption. (This could be from surcharge increases from water suppliers as they pass along the cost of finding new water supplies, the extra cost of pumping more ground water to make up for losses in surface water supplies, or the extra energy costs of pumping the same amount of ground water from deeper within an aquifer.)

- Irrigated agricultural production is *feasible* when:

  1) There is an existing irrigation system on the project site that can serve the portion of the project identified in Step 2;

  2) *Physical* and/or *economic restrictions* are not severe enough to halt production; and

  3) It is possible to achieve a viable economic return on crops though irrigated production.

(A major question that should be considered is, if there is an irrigated crop that can be grown within the region, can it actually be grown on the project site? Depending upon the jurisdiction, some typical crops that have a large water demand may not be feasible to grow on the project site, while others that require less water are feasible. Information to aid in making this determination can be obtained from county agricultural commissioners, the UC Cooperative Extension, irrigation districts, and other sources.)

- *Dryland production* is *feasible* when rainfall is adequate to allow an economically viable return on a nonirrigated crop.

- A *drought year* is a year that lies within a defined drought period, as defined by the Department of Water Resources or by a local water agency. Many regions of the state are by their arid nature dependent upon imports of water to support irrigated agriculture. These regions shall not be considered under periods of drought unless a condition of drought is declared for the regions that typically would be providing water exports.

Step 5.

Each of the project's water resource supply portions identified in **Step 2** is scored separately. Water Resources Availability scoring is performed by identifying the appropriate condition that applies to each portion of the project, as identified in Table 5., **Water Resource Availability Scoring**. Using Table 5, identify the option that best describes the water resource availability for that portion and its corresponding water resource score. Option 1 defines the condition of no restrictions on water resource availability and is followed progressively with increasing restrictions to Option 14, the most severe condition, where neither irrigated nor dryland production is considered feasible. Enter each score into **Column D** of Table 4.

Step 6.

For each portion of the project site, determine the section's weighted score by multiplying the portion's score (**Column D**), by its proportion of the project area (**Column C**), and enter these scores in **Column E**, the weighted Water Availability Score. Sum the **Column E** scores to obtain the total Water Resource Availability Score, and enter this figure in **Line 4** of the **Final LESA Score Sheet** (Table 8).

Table 5. Water Resource Availability Scoring

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	– –	– –	50
9	YES	NO	YES	NO	– –	– –	45
10	YES	YES	NO	NO	– –	– –	35
11	YES	YES	YES	NO	– –	– –	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0

Explanation of the Water Resource Availability Rating

The Water Resource Availability factor in the California Agricultural LESA Model was developed in cooperation with Nichols-Berman, a consulting firm under contract with the Department of Conservation. A thorough discussion of the development of this rating is presented by Nichols-Berman in a report to the Department entitled, *Statewide LESA Methodologies Report - Project Size and Water Resource Availability Factors* (3). During the development of this factor it became apparent that certain conditions unique to California would need to be represented in this system.

First, it was decided to classify water reliability based upon the *effects* on agricultural production (such as being forced to change to lower-value crops, putting in groundwater pumps, or cutting back on the acreage farmed) rather than the actual *type* of limitation (such as a limitation on the quantity, frequency, or duration of water delivery). LESA systems have traditionally focused on the latter. However, it was found that the many types of limitations are too varied in California to adequately represent in the LESA system. In the Statewide LESA system, these effects are referred to as *restrictions*.

Second, the factor had to include an interrelation with cost. The historical shortages and unreliability of California water use has led to the establishment of various interconnected and dual systems. Probably more than any other state, reliability is related with cost -- a more reliable water supply can sometimes be obtained, but at a greater cost. Therefore, *restrictions* were classified into two major categories -- *physical* and *economic*. These are separated because, generally, a physical restriction is more severe than an economic restriction and this should be reflected in the LESA system.

Third, the factor had to include the effects of the drought cycle in California. During the drought of 1987 to 1992, many agricultural areas of the state experienced water shortages. The impact of these shortages resulted in a number of different actions. Some areas were able to avoid the worst effects of the drought simply by implementing water conservation measures. Other areas were able to obtain additional water supplies, such as by securing water transfers or simply pumping more groundwater, but at an increase in the overall price of water. Other options included shifting crops, replanting to higher value crops to offset the increase in water prices, or leaving land fallow. A project site that experiences restrictions during a drought year should not be scored as high as a similar project site that does not.

The easiest way to make determinations of irrigation feasibility and the potential restrictions of water sources is to investigate the cropping history of the project site. For instance, was the water supply to the project site reduced by the local irrigation district during the last drought? If the site has a ground water supply, do area ground water levels sometimes drop to levels that force markedly higher energy costs to pump the water?

If the history of the project site is unavailable (including when the site has recently installed an irrigation system), look at the history of the general area. However, remember that the project site may have different conditions than the rest of the region. For instance, the project site could have an older water right than others in the region. Although certain areas of the state had severe restrictions on water deliveries during the last drought, some parcels within these areas had very secure deliveries due to more senior water rights. If this was the case in the region of the project site, check the date of water right and compare it with parcels that received their total allotment during the last drought. The local irrigation district should have information on water deliveries.

The scoring of water resource availability for a project site should not just reflect the adequacies of water supply in the past -- it should be a *prediction* of how the water system will perform in the future. For instance, a local jurisdiction might find that the allocation of flows to stream and river systems has been recently increased for environmental reasons, which will decrease the future available surface water supply. In this case, the past history of the site is not an adequate representation of future water supply and water system performance.

3. Site Assessment - The Surrounding Agricultural Land Rating

Determination of the surrounding agricultural land use rating is based upon the identification of a project's "Zone of Influence" (ZOI), which is defined as that land near a given project, both directly adjoining and within a defined distance away, that is likely to influence, and be influenced by, the agricultural land use of the subject project site. The determination of the ZOI is described below, and is illustrated with an example in Figure 1.

Defining a Project's "Zone of Influence"

Step 1.
Locate the proposed project on an appropriate map and outline the area and dimensions of the proposed project site.

Step 2.
Determine the smallest rectangle that will completely contain the project site (Rectangle A).

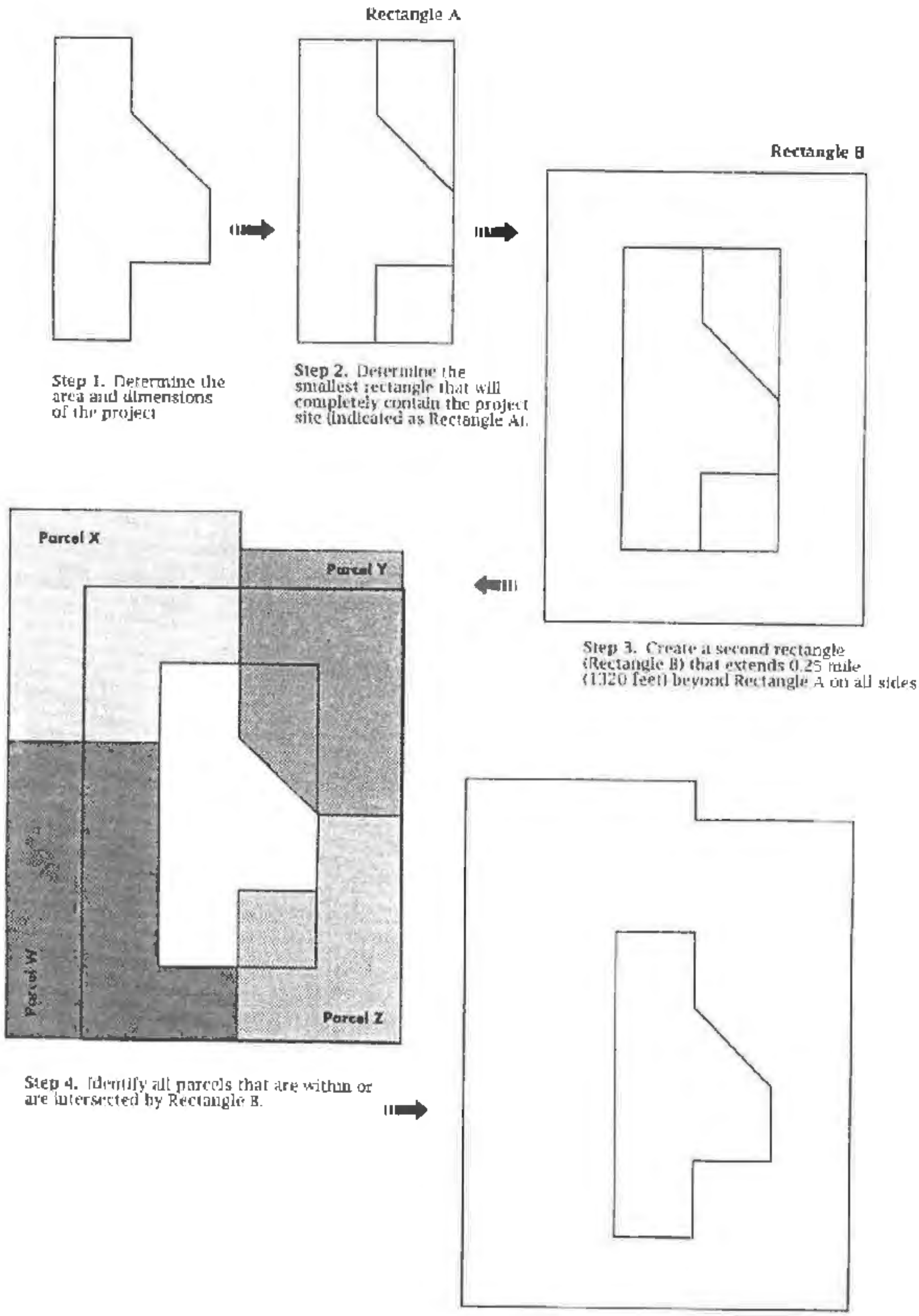
Step 3.
Create a second rectangle (Rectangle B) that extends 0.25 mile (1320 feet) beyond Rectangle A on all sides.

Step 4.
Identify all parcels that are within or are intersected by Rectangle B.

Step 5.
Define the project site's "zone of influence" as the entire area of all parcels identified in Step 4, less the area of the proposed project from Step 1.

[In the illustration provided in Figure 1, Parcels W, X, and Y extend beyond Rectangle B and are therefore included in their entirety in defining the project site's Zone of Influence.]

Figure 1: Defining a Project's Zone of Influence



Step 5. Define the project's "zone of influence" as the entire area of all parcels identified in Step 4, less the area of the proposed project from Step 1.

In this example, parcels W, X, and Y extend beyond Rectangle B and are therefore included in the their entirety in defining the project's zone of influence.

Measuring Surrounding Agricultural Land

Step 1.

Calculate the percentage of the project's Zone of Influence that is currently producing agricultural crops. [This figure can be determined using information from the Department of Conservation's Important Farmland Map Series, the Department of Water Resources' Land Use Map Series, locally derived maps, or direct site inspection. For agricultural land that is currently fallowed, a determination must be made concerning whether the land has been fallowed as part of a rotational sequence during normal agricultural operations, or because the land has become formally "committed" to a nonagricultural use. Land that has become formally committed, whether fallow or not, should not generally be included in determining the proportion of the Zone of Influence that is agricultural land. For further information on the definition of Committed Land, refer to the following Explanation of the Surrounding Agricultural Land Rating.]

Step 2.

Based on the percentage of agricultural land in the ZOI determined in Step 1, assign a Surrounding Agricultural Land score to the project according to Table 6, and enter this score in **Line 5** of the **Final LESA Scoresheet** (Table 8) .

Table 6. Surrounding Agricultural Land Rating

Percent of Project's Zone of Influence in Agricultural Use	Surrounding Agricultural Land Score
90 - 100%	100 Points
80 - 89	90
75 - 79	80
70 - 74	70
65 - 69	60
60 - 64	50
55 - 59	40
50 - 54	30
45 - 49	20
40 - 44	10
40 <	0

Explanation of the Surrounding Agricultural Land Rating

The Surrounding Agricultural Land Rating is designed to provide a measurement of the level of agricultural land use for lands in close proximity to a subject project. The California Agricultural LESA Model rates the potential significance of the conversion of an agricultural parcel that has a large proportion of surrounding land in agricultural production more highly than one that has a relatively small percentage of surrounding land in agricultural production. The definition of a "Zone of Influence" that accounts for surrounding lands up to a minimum of one quarter mile from the project boundary is the result of several iterations during model development for assessing an area that will generally be a representative sample of surrounding land use. In a simple example, a single one quarter mile square project (160 acres) would have a Zone of Influence that is a minimum of eight times greater (1280 acres) that the parcel itself.

Land within a Zone of Influence that is observed to be fallow will require a case by case determination of whether this land should be considered agricultural land. The Department of Conservation's Important Farmland Maps may be of assistance in making this determination. In addition, land currently in agricultural production may be designated as being "committed" to future nonagricultural development. The Department of Conservation's Farmland Mapping and Monitoring Program has a land use designation of Land Committed to Nonagricultural Use, and is defined as "land that is permanently committed by local elected officials to nonagricultural development by virtue of decisions which cannot be reversed simply by a majority vote of a city council or county board of supervisors. The "committed" land must be so designated in an adopted local general plan, and must also meet the requirements of either (a) or (b) below:

(a). It must have received one of the following final discretionary approvals:

1. Tentative subdivision map (approved per the Subdivision Map Act);
2. Tentative or final parcel map (approved per the Subdivision Map Act);
3. Recorded development agreement (per Government Code §65864);
4. Other decisions by a local government which are analogous to items #1-3 above and which exhibit an element of permanence. Zoning by itself does <u>not</u> qualify as a permanent commitment.

<u>Or</u>

(b) It must be the subject of one of the final fiscal commitments to finance the capital improvements specifically required for future development of the land in question as shown below:

1. Recorded Resolution of Intent to form a district and levy an assessment;
2. Payment of assessment;
3. Sale of bonds;
4. Binding contract, secured by bonds, guaranteeing installation of infrastructure;
5. Other fiscal commitments which are analogous to items #1-4 above and exhibit an element of permanence."

Lead agencies are encouraged to identify Land Committed to Nonagricultural Use within a project's ZOI and make the determination whether this land, while still in agricultural production, be considered nonagricultural land for the purposes of the calculation performed here.

4. Site Assessment - The Surrounding Protected Resource Land Rating

The Surrounding Protected Resource Land Rating is essentially an extension of the Surrounding Agricultural Land Rating, and is scored in a similar manner. Protected resource lands are those lands with long term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following:

- Williamson Act contracted lands
- Publicly owned lands maintained as park, forest, or watershed resources
- Lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses.

Instructions for the Surrounding Protected Resource Land Rating

Step 1.
Utilizing the same "Zone of Influence" (ZOI) area calculated for a project under the Surrounding Agricultural Land Rating, calculate the percentage of the ZOI that is Protected Resource Land, as defined above.

Step 2.
Assign a Surrounding Protected Resource Land score to the project according to Table 7, and enter this score on **Line 6** of the **Final LESA Scoresheet** (Table 8).

Table 7. Surrounding Protected Resource Land Rating

Percent of Project's Zone of Influence Defined as Protected	Surrounding Protected Resource Land Score
90 - 100%	100 Points
80 - 89	90
75 - 79	80
70 - 74	70
65 - 69	60
60 - 64	50
55 - 59	40
50 - 54	30
45 - 49	20
40 - 44	10
40 <	0

Section III. Weighting of Factors and Final LESA Scoring

The California LESA Model is weighted so that 50 percent of the total LESA score of a given project is derived from the Land Evaluation factors, and 50 percent from the Site Assessment factors. Individual factor weights are listed below, with the sum of the factor weights required to equal 100 percent.

Land Evaluation Factors	
Land Capability Classification	25%
Storie Index Rating	25%
Land Evaluation Subtotal	**50%**
Site Assessment Factors	
Project Size	15%
Water Resource Availability	15%
Surrounding Agricultural Lands	15%
Surrounding Protected Resource Lands	5%
Site Assessment Subtotal	**50%**
Total LESA Factor Weighting	**100%**

Each factor is measured separately (each on 100 point scale) and entered in the appropriate line in **Column B** of the **Final LESA Scoresheet** (Table 8). Each factor's score is then multiplied by its respective factor weight, resulting in a weighted factor score in **Column D** as indicated in Table 8. The weighted factor scores are summed, yielding a Total LESA Score (100 points maximum) for a given project, which is entered in **Line 7** of **Column D**.

Table 8. Final LESA Scoresheet

A	B		C		D
Factor Name	Factor Rating (0-100 points)	X	Factor Weighting (Total = 1.00)	=	Weighted Factor Rating
Land Evaluation					
1. Land Capability Classification	<Line 1>_______	X	0.25	=	_______
2. Storie Index Rating	<Line 2>_______	X	0.25	=	_______
Site Assessment					
1. Project Size	<Line 3>_______	X	0.15	=	_______
2. Water Resource Availability	<Line 4>_______	X	0.15	=	_______
3. Surrounding Agricultural Lands	<Line 5>_______	X	0.15	=	_______
4. Protected Resource Lands	<Line 6>_______	X	0.05	=	_______
			Total LESA Score (sum of weighted factor ratings)		<Line 7>_______

Section IV. California Agricultural LESA Scoring Thresholds - Making Determinations of Significance Under CEQA

A single LESA score is generated for a given project after all of the individual Land Evaluation and Site Assessment factors have been scored and weighted as detailed in Sections 2 and 3. Just as with the scoring of individual factors that comprise the California Agricultural LESA Model, final project scoring is based on a scale of 100 points, with a given project being capable of deriving a maximum of 50 points from the Land Evaluation factors and 50 points from the Site Assessment factors.

The California Agricultural LESA Model is designed to make determinations of the potential significance of a project's conversion of agricultural lands during the Initial Study phase of the CEQA review process. Scoring thresholds are based upon both the total LESA score as well as the component LE and SA subscores. In this manner the scoring thresholds are dependent upon the attainment of a minimum score for the LE and SA subscores so that a single threshold is not the result of heavily skewed subscores (i.e., a site with a very high LE score, but a very low SA score, or vice versa). Table 9 presents the California Agricultural LESA scoring thresholds.

Table 9. California LESA Model Scoring Thresholds

Total LESA Score	Scoring Decision
0 to 39 Points	Not Considered Significant
40 to 59 Points	Considered Significant only if LE and SA subscores are each greater than or equal to 20 points
60 to 79 Points	Considered Significant unless either LE or SA subscore is less than 20 points
80 to 100 Points	Considered Significant

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Memorandum

Date: **May 16, 2014**

To: **Ed Gallagher, Community Development Director**

From: **John Rickenbach, AICP, Principal Planner**

Subject: **River Oaks II Project, Agricultural Issues and the CEQA Process**

The following memorandum discusses the River Oaks II project in the context of the City's recent legal opinion with regard to the CEQA process and the analysis of agricultural issues. Recent information (including a LESA analysis to address farmland conversion impacts) and a close examination of the CEQA record for the Borkey Area Specific Plan suggest that such impacts would be less than significant for the River Oaks II project.

A. City Legal Opinion

As stated in a memorandum dated May 14, 2014, the City's legal opinion (paraphrased) is that an EIR will be required for the River Oaks II project for the following reasons:

1. **Impacts to agricultural resources (prime soils) will be significant.** This assertion is based on the fact that the 1989 Borkey Area Specific Plan (BASP) EIR concluded that there would be a significant unavoidable impact to agriculture because of the loss of 126 acres of prime soils, and that the proposed project would be responsible for a portion of this loss of acreage.

2. **Not appropriate to tier from 1989 EIR.** Because of the age of the EIR and recent changes to the Public Resources Code, a CEQA document cannot tier from an EIR more than 3 years old, so the original Statement of Overriding Considerations cannot be applied to a new project for agricultural impacts that were found to be significant and unavoidable.

3. **Modifying the 300-Foot Buffer could result in new impacts.** If development on the River Oaks site requires modification of the existing 300-foot buffer, new impacts would be introduced not previously disclosed.

B. CEQA Process

It is never advisable—and indeed, now no longer allowed under PRC 21094(a)(2)(d)—to tier from an older EIR for a Specific Plan, because the conditions that existed at the time it was prepared have likely changed too much to make the original analysis meaningful as the basis for the new CEQA document. This correctly recognizes that physical factors, project circumstances or regulatory requirements may have changed since the preparation of the original EIR.

For that reason, a new project in such an area must be analyzed based on a stand-alone CEQA document. This is precisely what was done in 2002 for the proposed GPA and SPA associated with the Paso Robles Hot Springs project. That project was processed through a Mitigated Negative Declaration, which did not tier from the 1989 BASP EIR, but instead functioned as a stand-alone document. Specifically, key relevant findings from that document include:

1. The project was to amend the BASP to expand Subarea A by 117 acres to the north to include recently annexed land; to rezone 23 acres from AG to PF; and to establish a PD overlay on 231 acres of the BASP to allow the proposed Paso Robles Hot Springs project;
2. An Initial Study and MND was prepared to address this action that referenced, but did not tier from, the 1989 BASP EIR.
3. The potential conversion of a limited amount of prime soil was determined to be less than significant.
4. Mitigation measures related to agriculture were required to address the following subissues:
    a. Erosion and soil disturbance;
    b. Williamson Act compliance (the site was then under LCA contract);
    c. The 300-foot agricultural buffer. The existing ag buffer was moved to the north along the recently-moved City limit boundary to address potential conflicts between development in the City and agriculture in the County.
5. Findings were made that through a mitigation agreement, required mitigation measures would reduce all impacts to a less than significant level.
6. No Statement of Overriding Considerations was made, because all impacts were found to be less than significant with required mitigation.

The fact that this project was processed through a stand-alone MND, and all impacts were found to be mitigable, established the precedent that the City has done this and can do it again as appropriate. As noted above, that MND did not rely on the 1989 EIR, but instead was an independent analysis for a different project under different circumstances. This same approach can be applied to the River Oaks II Project, if through the Initial Study the City can determine that all impacts are either less than significant, or can be mitigated to a less than significant level.

C. Agricultural Impacts of the River Oaks II Project

The City's May 2014 legal opinion presumes that the River Oaks II project's impacts to agricultural resources would be significant and unavoidable. Such a determination can only be made through a formal CEQA process. As demonstrated through the 2002 Paso Robles Hot Springs Project MND, it is possible to make the determination that impacts are potentially less than significant, under the appropriate circumstances.

The City, as Lead Agency, must make this determination through a review of current information, as analyzed in a new CEQA Initial Study. The following information is included to assist the City as it makes this determination:

1. **Conversion of Farmland.** City staff has previously indicated that the California Land Evaluation and Site Assessment (LESA) model would be an appropriate tool to determine whether there would be significant impacts to agriculture on the River Oaks site, since this tool is explicitly included in the CEQA Guidelines for this purpose. This tool was not available at the time the 1989 BASP EIR was prepared, and thus represents an opportunity to revisit previous conclusions regarding farmland conversion in an updated regulatory context. To assist the City, we have prepared a LESA analysis for your consideration and review. When the conversion of a limited amount of potentially high quality soils is considered in the context of existing and surrounding land uses, parcel size, and water availability, our analysis found that impacts to agricultural land would be less than significant.

2. **Agricultural Buffer.** The City's legal opinion is that a 300-foot buffer was required as mitigation in the 1989 BASP EIR, and thus must be maintained as part of the current project. In fact, the 300-foot buffer was identified as a **project feature of the original BASP, and not prescribed as an additional mitigation measure**. Please refer to Figure 2-4 of the 1989 EIR (Proposed Land Use and Circulation Plan, Chapter 2, page 12), which shows a 300-foot ag buffer as part of the proposed project.

   The intent of this feature was to reduce potential conflicts between development in the City and neighboring agricultural uses in the County. (This is the reason why this feature was moved northward as a mitigation measure in the 2002 MND, since the City-County boundary had moved northward.) The 1989 EIR stated that the buffer acted as a mitigative project feature that would ensure impacts related to land use conflicts would be less than significant (Chapter 3, page 24). As stated on Page 24 of the BASP EIR:

   > *"Several elements of the Borkey Area Specific Plan have been devised explicitly to mitigate the potential effects of plan area development on remaining adjacent agricultural uses... The plan prescribes an agricultural protection strip, or "buffer", of 300 feet along the northeasterly edge of Subarea A..."*

   The 1989 EIR analysis concluded that the plan's project features, including the buffer, were sufficient to ensure that impacts related to agricultural land use conflicts would be reduced to a less than significant level. No additional mitigation was determined necessary. No analysis was included in the EIR to determine whether a smaller buffer might have resulted in a similarly less than significant impact, but it is reasonable to assume that subsequent analysis could possibly draw such a conclusion under the appropriate conditions.

   As noted above, the 300-foot buffer is no longer on the River Oaks project site, but was moved northward to the neighboring property, along the southern edge of the County-City boundary, the new northern boundary of BASP Subarea A (pursuant to GPA 1-02; SPA 02-001; Exhibit B, page 36 of the revised Specific Plan). This was consistent with the intent of the original project feature and EIR analysis, which was to minimize land use conflicts between development in the City and agricultural uses in the County.

Note that there are many examples of areas within the City limits where urban development and agriculture abut, because the long-term presumption is that areas in the City will eventually develop to non-agricultural uses, so land use conflicts are temporary. Such interfaces can be potentially complementary, when agricultural uses are intentionally designed within residential communities, either for the reasons of community character or as community gardens.

In summary, the key points of our analysis include:

- The 300-foot buffer was a mitigative project feature of the 1989 BASP, the intent of which was to minimize land use conflicts between urban land in the City and agriculture in the County.
- The fact that the 2002 MND for the expanded BASP moved the buffer to the new City-County boundary confirms that intent.
- The buffer is no longer on the River Oaks project site.
- Finally, there are many examples in the City of urban and agricultural uses directly abutting.

These facts suggest that impacts from the project on neighboring uses to the north would be less than significant. The proposed project would not affect the location or function of the existing 300-foot buffer within the BASP, which will still serve its original purpose at the northern boundary of the Borkey Area at the edge of the City.

D. Conclusion

In previous correspondence to the applicant, the City indicated the impetus for requiring an EIR for the project was to address various agricultural issues that may not be fully mitigable. As demonstrated above, we believe that based on an analysis of facts not available when the 1989 BASP EIR was prepared, such impacts are actually less than significant and do not require mitigation.

For that reason, we request that the City use the information provided in our November 2013 application as amended through our new analysis of agricultural issues, and prepare an Initial Study that leads to a Mitigated Negative Declaration, an approach similar to what was successfully used for the 2002 GPA and Specific Plan Amendment.

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Memorandum

Date: **February 9, 2015**

To: **Dick Willhoit**

From: **John Rickenbach, AICP, Principal Planner**

Subject: **River Oaks II Project, Agricultural Buffers in California**

In its ongoing correspondence related to the River Oaks II project, City of Paso Robles staff has often stated the need for including an appropriate buffer between existing agricultural uses and proposed development. To address this concern, the following memorandum discusses the project in the context of issues related to agricultural buffers, specifically focusing on the requirements of other communities in California, and the rationale for these requirements. The memo also explores the scientific basis for these buffer policies, and the degree of flexibility built into such policies to address uncertainties inherent in such policies.

Summary of Findings

1. The City of Paso Robles does not have an adopted citywide agricultural buffer policy, but recently-approved projects in the City have included vineyards adjacent to urban development without any buffer between them, consistent with principles included in the City's *2006 Economic Strategy*.

2. There is a 300-foot buffer requirement at the northern edge of the Borkey Area Specific Plan area (along the City boundary), but there is no buffer requirement associated with the River Oaks property, which is entirely within and adjacent to parcels within the City along its northern boundary.

3. The buffer policies of other agencies in California vary widely, but in general exhibit a high degree of flexibility, in recognition of the following circumstances:
    a. The type and density of non-agricultural development
    b. The type of crops on grown on the adjacent parcel
    c. Agricultural practices on the adjacent parcel (the use of sprayed pesticides or herbicides, for example)
    d. Wind direction
    e. Topography
    f. Physical barriers within the buffer area

4. Other wine-oriented communities similar to Paso Robles (notably the City of Napa and Napa County) have flexible buffer policies that range from 80-120 feet, which may be waived entirely under certain circumstances.

5. There are few scientific studies that have addressed buffer issues, and those that there are conclude that fences, berms, trees, and other barriers with the buffer zone can greatly reduce the need for a wide buffer. This finding is consistent with the opinion of a local vineyard management expert, who also notes that onsite agricultural row crop management practices could reduce or eliminate the need for a buffer.

6. None of the cited buffer policies described in this paper appear to be based on (or cite) specific scientific studies in developing their criteria, but appear to be based on past practices, informal input from the agricultural and development communities, or in some cases, reflect the currently-adopted policies of neighboring or similar jurisdictions.

7. There are important issues associated with buffer areas that impact their degree of effectiveness, as well as their potential to create nuisances for adjacent property owners.

A. City of Paso Robles Requirements

The City of Paso Robles does not have a standard buffer requirement between agricultural and non-agricultural uses. However, as noted in our memo to the City dated May 16, 2014, there had historically been a 300-foot buffer associated with the Borkey Area Specific Plan, specifically to separate agricultural uses in the unincorporated portions of the County from urban uses in the City. The May 2014 memo analyzed this requirement with respect to the current project, concluding that the 300-foot buffer no long exists at the northern edge of the current River Oaks property, since the area directly to the north is now in the City as well (see GPA 1-02; SPA 02-001; Exhibit B, page 36 of the revised Specific Plan). The City now appears to concur with that conclusion, as stated in a letter to you dated December 2014.

In that letter, the City endeavored to work with you to determine an appropriate project design that addresses the fact that there would likely be ongoing agricultural uses on the property to the north until such time that the neighboring property owner wishes to develop under the Borkey Area Specific Plan.

The City's adopted *2006 Economic Strategy* indirectly addresses the City's approach with regard to the appropriate use of agricultural buffers that could form the basis for future General Plan policy. That document provides direction for the economic health of the City. These principles suggest the integration of ongoing agricultural uses with future urban development, including:

- *Support agriculture as a viable industry and visitor attraction by featuring it as the distinguishing community environment.*

- *Promote the City as a center of high value agriculture and industry.*

- *Encourage synergy amongst and between, and reinvest in, attractions that showcase Paso Robles' unique identity and heritage including...agriculture.*

In recognition of these concepts, recent city developments on the urban fringe have encouraged the integration of urban uses and agriculture, promoting this synergy as an important local and regional attraction. An example of this is the recently approved Ayers Hotel, which features a vineyard planted adjacent to the hotel and other adjacent residential property. There is effectively no buffer between vineyard uses and urban development. Its approval stemmed in part because the project was considered consistent with the principles included in the City's *2006 Economic Strategy*. This project established the precedent that the City could approve projects without agricultural buffers if considered consistent with its long-term economic health.

B. Requirements of Other California Cities and Counties

There are no adopted statewide standards related to agricultural buffers, so the issue is left to local jurisdictions to address. Relatively few communities within California include adopted standards, which are typically either included in the General Plan as a range depending on specific circumstance, or within the zoning code. The ones that do are those with a rural-urban interface, and face issues similar to those found in San Luis Obispo County. Rarely is there a fixed buffer requirement. This relates to four factors: 1) the type of crops (and practices associated with those crops); 2) the type of development (including residential densities); 3) physical site conditions (prevailing winds, topography, and other site considerations); and 4) the factor that there is little supporting literature indicating the effectiveness of any specific standard.

The last point is particularly important, and underscores the reasons why buffer ranges vary so widely. The few studies that have explored this issue directly have addressed this question not only as function of buffer width, but a variety of approaches to screening within the buffer area.

Vegetative screening (sufficiently well-canopied trees, for example), has been found to be a relatively effective approach for minimizing spray drift and dust that can substantially reduce the need for a wide buffer area (DNRLGP, 1997). These screenings can also be effective for reducing odors from livestock, fertilizer and pest control applications. Depending on the design of the screening features, and other physical factors, effective buffer widths could be as little as 10 to 50 feet (*A Landscape Buffering Strategy for the Agricultural-Urban Interface*, City of Abbotsford, BC, 2008; Pennebaker, 2009). Effective screening features with a buffer could include:

- Tree rows of sufficient height and depth;
- Ditches, swales and other topographic relief (whether natural or manmade);
- Berms or fences;
- Landscaped areas that could include walkways and trails; and
- Water features, such as ponds

Nevertheless, because relatively little study has been conducted to assess the effectiveness of these measures, many jurisdictions in California tend to be much more conservative in their approach to agricultural buffers. (It should be noted that many cities and counties do not have any buffer requirements at all.) In Table 1 summarizes a broad cross-section of standards applied throughout the state, for jurisdictions that have such standards:

Table 1. Representative Agricultural Buffer Requirements in California		
Agency	**Minimum Requirement**	**Source**
Santa Cruz County	200 feet	http://www.sccoplanning.com/PlanningHome/Environmental/AgriculturalResources/AgriculturalBufferSetbacks.aspx
City of Napa	80-120 feet (depends on residential density)	http://qcode.us/codes/napa/view.php?topic=17-17_52-17_52_040&frames=on
Napa County	80-120 feet (depends on residential density)	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Santa Barbara County	100-300 feet (for residential or commercial)	http://longrange.sbcountyplanning.org/programs/ag_buffer/AgBufferOrdCLUDC%20Board%20Reso4851.pdf
Solano County	300 feet	http://www.co.solano.ca.us/civicax/filebank/blobdload.aspx?blobid=6493
City of Davis	150 feet	http://qcode.us/codes/davis/view.php?topic=40a-40a_01-40a_01_050
SLO County	200-600 feet (to vineyards)	http://www.slocounty.ca.gov/Assets/AG/assets/Buffer+Policy_2005.pdf
City of Watsonville	200 feet	http://www.coastal.ca.gov/sc/lcpawat1-99-rf.pdf
City of Arroyo Grande	100 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
City of Brentwood	100-300 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
City of Ontario	100 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
City of Fairfield	300 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Sonoma County	100-200 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Sutter County	100-300 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Yolo County	150-300 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Ventura County	150-300 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Monterey County	200 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Mendocino County	200 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
El Dorado County	200 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Tuolumne County	200 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses
Stanislaus County	150-300 feet	http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1087&context=theses

Many of these requirements acknowledge, however, that requirements could be reduced if it can be shown through additional study that a reduced buffer would be equally effective to minimize potential conflicts. In addition, several agencies will reduce their buffer requirement if a project incorporates vegetative screening features, notably Ventura County, Monterey County, and Yuba County.

In general, counties have established larger buffer areas than cities, likely because of the inherently rural nature of counties. Some cities that do have substantial urban-agricultural interfaces, such as Ventura and Santa Maria, do not have any buffer requirements at all. Similarly, the City of San Luis Obispo does not specify a buffer requirement, although future development on that city's rural fringe (notably within the Airport, Margarita, Orcutt, and proposed San Luis Ranch Specific Plans) will be required to address potential urban-rural conflicts through project design, consistent with general guidance set forth in those specific plans.

Notably, none of the above-referenced buffer policies cite any specific scientific studies that support the buffer requirements, but instead appear to rely on past practices, informal input from the agricultural and development communities, or in some cases, reflect the currently-adopted policies of neighboring or similar jurisdictions.

C. Case Study: City of Napa

As a vineyard and tourist-oriented semi-rural community similar to Paso Robles, the City of Napa's buffer policies are particularly instructive. As described in that city's municipal code, they are as follows:

> ***Purpose and Required Provisions of Agricultural Buffers***
> *The purpose of these regulations is to minimize potential conflicts between agriculture and urban residential uses by providing an appropriate agricultural buffer. The following provisions shall be required for all residentially zoned lots adjacent to the Rural Urban Limit (RUL) when development is proposed:*
>
> - *Setback – a special agricultural setback of between 80 and 120 feet between any dwellings or other buildings designed for human habitation and the nearest residential property line*
>
>   *adjoining the URL. The exact distance shall be based upon the overall density of the residential project as follows:*
>   - *0 – 6 units per acre = 80 foot setback*
>   - *6 – 10 units per acres = 100 foot setback*
>   - *Greater than 10 units per acre = 120 foot setback*
> - *Permanent landscape buffer area at least 20 feet wide.*
>
> ***Buffer Composition***
> *Within the special agricultural setback a permanent landscape buffer area at least 20 feet wide measured from the residential property line(s) adjoining the RUL and nearest agricultural property line(s) shall provide a clear boundary between urban and agricultural uses. The landscape buffer shall consist of:*
>
> - *A mix of trees, shrubs, berms, fences, walls, etc. sufficient to reduce noise, dust, diffuse light and act as a physical separation between the housing and agricultural activities in a design acceptable to the Planning Commission (or Community Development Department Director in the case of single-family dwellings exempt from Planning Commission review).*
>
> ***Other Requirements***
> - *No accessory structures are permitted within the landscape buffer area (except buffer fences and walls as well as pump stations or other similar improvements)*

- *Permanence of the landscaped buffer shall be assured through appropriate easements or equally effective restrictions and ongoing maintenance and funding mechanisms.*
- *Final landscape plans shall specify that all plant materials be certified by the Napa County Agricultural Commissioner inspection program for freedom from pests.*
- *All approved agricultural buffer measures to mitigate agricultural – urban residential land use conflicts shall become project conditions of approval.*
- *Site design shall include a project layout with streets that DO NOT end at the RUL to preclude a future extension into unincorporated areas outside the RUL.*

Waivers and Modifications

- *The Planning Commission or Community Development Director may, after consultation with the Agricultural Commissioner, waive the requirement for an agricultural buffer plan for projects where it can be clearly demonstrated that no agricultural – urban land use conflicts will result from development of the property.*
- *The Planning Commission or Community Development Director may, after consultation with the Agricultural Commissioner, modify or substitute different requirements than those identified above for developments on a project specific basis if the different requirements will achieve the intended purpose of this section.*

The City of Napa's standards exhibit a high degree of flexibility and provide a wide level of discretion for the Planning Commission and Community development direction, recognizing the fact that projects need to be examined on a case-by-case basis because differing physical circumstances require different solutions to be equally effective.

D. Case Study: San Luis Obispo County

It is useful to closely examine the requirements of San Luis Obispo County, not only because they are the most restrictive on the list, but because the City of Paso Robles is located in the County.

The County does not have set minimum buffer requirements, but recommends a range of buffer distances depending on the crop grown on the adjacent agricultural parcel. The buffer range associated with adjacent vineyards is 200 to 600 feet. However, as noted in the County's 2010 Agricultural Element (Appendix C, Table 1):

> *"Site-specific non-crop factors (such as topography, prevailing wind direction, and elevation differences) and proposal specifications often affect the final buffer distance recommendation within ranges listed. Significant overriding factors or land unsuitable for agricultural use could justify recorded buffers less than the indicated range."*

The County's buffer policies also recognize special circumstances in developing an appropriate buffer, particularly when the adjacent agricultural parcel has the potential for future development:

> *"When buffers are recommended for proposed land use projects adjacent to production agriculture on non-agriculturally zoned property, the report will normally state: 'The buffer shall become null and void if future development on adjacent parcel(s) precludes production agriculture.' Such a determination shall be made in consultation with the Department of Agriculture."*

Thus, while the County's buffer policies are extremely conservative compared to other jurisdictions, they are geared toward the rural projects, and recognize a high degree of flexibility for areas that have the potential to be developed with non-agricultural uses. Ultimately, the County's policies suggest that projects need to be evaluated on a case-by-case basis.

E. Other Issues Related to Agricultural Buffers

Other factors appear to be more important than buffer distance in developing an appropriate interface between agricultural and non-agricultural uses. According to local vineyard management consultant George Donati, the most commonly-cited ag nuisance complaint is related to headlights from tractors shining into homes during nighttime ag operations. The most effective way to address this is to ensure that row crops are aligned parallel with the homes facing the ag field, so that field vehicles will move parallel to the adjacent roadway (between crop rows), and not perpendicular, where headlights can shine into the first row of homes unobstructed. Other effective solutions include planting a visual barrier of trees or bushes between the fields and homes that block ground level views of the fields.

Because of regulatory limitations on dust drift and chemical overspray (both must remain onsite), Donati says, buffer distances are less important than controlling nuisances that are not buffer dependent. Commonly-cited nuisances of this type relate to parking and driving practices of field workers, who often use the roadways adjacent to homes. While an important compatibility concern, this does not relate to buffer distance, but to parking and field access management.

Studies have also shown that maintenance of buffer areas can be problematic. Apart from administrative issues (who maintains them), these areas can present nuisances, including blocking views, and weed/pest proliferation if not regularly maintained. However, if designed and maintained properly, studies have also concluded these can be neighborhood assets, both visually and functionally.

F. Conclusions

The following conclusions may be drawn from this analysis:

1. The City of Paso Robles does not have an adopted citywide agricultural buffer policy, but recently-approved projects in the City have included vineyards adjacent to urban development without any buffer between them, consistent with principles included in the City's *2006 Economic Strategy*.

2. There is a 300-foot buffer requirement at the northern edge of the Borkey Area Specific Plan area (along the City boundary), but there is no buffer requirement associated with the River Oaks property, which is entirely within and adjacent to parcels within the City along its northern boundary.

3. The buffer policies of other agencies in California vary widely (and many rural cities and counties do not have them at all), but in general exhibit a high degree of flexibility, in recognition of the following circumstances:

a. The type and density of non-agricultural development
b. The type of crops on grown on the adjacent parcel
c. Agricultural practices on the adjacent parcel (the use of sprayed pesticides or herbicides, for example)
d. Wind direction
e. Topography
f. Physical barriers within the buffer area

4. Other wine-oriented communities similar to Paso Robles (notably the City of Napa and Napa County) have flexible buffer policies that range from 80-120 feet, which may be waived entirely under certain circumstances.

5. There are few scientific studies that have addressed buffer issues, and those that there are conclude that fences, berms, trees, and other barriers with the buffer zone can greatly reduce the need for a wide buffer. This finding is consistent with the opinion of a local vineyard management expert, who also notes that onsite agricultural row crop management practices could reduce or eliminate the need for a buffer.

6. None of the cited buffer policies described in this paper appear to be based on (or cite) specific scientific studies in developing their criteria, but appear to be based on past practices, informal input from the agricultural and development communities, or in some cases, reflect the currently-adopted policies of neighboring or similar jurisdictions.

7. There are important issues associated with buffer areas that impact their degree of effectiveness, as well as their potential to create nuisances for adjacent property owners.

G. Key References

City of Paso Robles *General Plan* (2003).

City of Paso Robles *Economic Strategy* (2006).

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Department of Natural Resources, Local Government and Planning, Queensland Australia. (1997). *Planning Guidelines Separating Agricultural and Residential Land Uses. DNRQ Publication No. 97088.* Scientific Publishing. Queensland Australia.

Pennebaker, Laura. (2009). *Agricultural Buffer Criteria for the City of Arroyo Grande.* A Professional Project Presented to the Faculty of California Polytechnic State University San Luis Obispo, In Partial Fulfillment of the Requirements for the Degree of Master of City and Regional Planning.

City and County websites (various, as noted in Table 1)

Interview with George Donati of Pacific Vineyard Company, February 9, 2015.

Attachment 11

Air Quality and Greenhouse Gas Emissions Analysis for

River Oaks II Project

Submitted to:
City of Paso Robles
Community Development Department

March 2016

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7675 Bella Vista Road
Atascadero, California 93422

Air Quality and Greenhouse Gas Emissions Analysis River Oaks II Project

This report provides an analysis of air quality and greenhouse gas (GHG) impacts associated with the proposed River Oaks II project. This report also provides a summary of existing conditions in the project area and the applicable regulatory framework pertaining to air quality and climate change.

The proposed project is a General Plan Amendment and amendment to the Borkey Area Specific Plan that would facilitate the development of a variety of land uses within the City. The proposed project includes a range of residential housing, related community amenities and open space, which collectively would complete the River Oaks master plan community. The proposed project will allow 271 residential units on approximately 113 acres located within Subarea A of the Borkey Area Specific Plan area.

Specific development parameters examined in this report include the following:

- 144 age-restricted residential dwelling units for "active adults"
- 127 market rate single-family residential units
- Expansion of an existing spa facility to include up to 5,000 square feet of additional amenities

Air Quality

A. Environmental Setting

Paso Robles is located in San Luis Obispo County, which is part of the South Central Coast Air Basin (SCCAB) and within the jurisdiction of the County of San Luis Obispo Air Pollution Control District (SLOAPCD). Air quality in the SCCAB is influenced by a variety of factors, including topography, local and regional meteorology. Factors affecting regional and local air quality are discussed below.

1. Factors Affecting Regional and Local Air Quality

Topography. The City of Paso Robles is located in the upper Salinas River Valley. The Paso Robles area is bordered to the south and west by the Santa Lucia Coastal Range; to the east by the low hills of the La Panza and Temblor ranges; and to the north by the low hills and flat-topped mesas of the Diablo Range. The highest elevations in the vicinity are located in the Santa Lucia Coastal Range, where many peaks are 2,000 to 3,400 feet above mean sea level. Substantial ridgelines are distributed throughout the western, southern, and eastern portions of the City. The effects of the Pacific Ocean are diminished inland and by these major intervening terrain features.

Local and Regional Meteorology. The climate of San Luis Obispo County can be generally characterized as Mediterranean, with warm, dry summers and cooler, relatively damp winters. Along the coast, mild temperatures are the rule throughout the year due to the moderating influence of the Pacific Ocean. This effect is diminished inland in proportion to distance from the ocean or by major intervening terrain features, such as the coastal mountain ranges. As a result, inland areas are characterized by a considerably wider range of temperature conditions. Maximum summertime temperatures average about 70 degrees Fahrenheit near the coast, while inland valleys are often in the high 90s. Average minimum winter temperatures range from the low 30's along the coast to the low 20s inland.

Regional meteorology is largely dominated by a persistent high-pressure area, which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause seasonal changes in the weather patterns of the area. The Pacific "high" remains generally fixed several hundred miles offshore from May through September, enhancing onshore winds and opposing offshore winds. During spring and early summer, as the onshore breezes pass over the cool water of the ocean, fog and low clouds often form in the marine air layer along the coast. Surface heating in the interior valleys dissipates the marine layer as it moves inland.

From November through April the Pacific High tends to migrate southward, allowing northern storms to move across the County. About 90% of the total annual rainfall is received during this period. Winter conditions are usually mild, with intermittent periods of precipitation followed by mostly clear days. Rainfall amounts can vary considerably among the different regions in the County.

Airflow around the County plays an important role in the movement and dispersion of pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific High pressure system and other global patterns, by topographical factors, and by circulation patterns resulting from temperature differences between the land and sea. In spring and summer months, when the Pacific High attains its greatest strength, onshore winds from the northwest generally prevail during the day. At night, as the sea breeze dies, weak drainage winds flow down the coastal mountains and valleys to form a light, easterly land breeze.

In the fall, onshore surface winds decline and the marine layer grow shallow, allowing an occasional reversal to a weak offshore flow. This, along with the diurnal alternation of land-sea breeze circulation, can sometimes produce a "sloshing" effect. Under these conditions, pollutants may accumulate over the ocean for a period of one or more days and are subsequently carried back onshore with the return of the sea breeze. Strong inversions can form at this time, "trapping" pollutants near the surface.

This effect is intensified when the Pacific High weakens or moves inland to the east. This may produce a condition in which air, often pollutant-laden, is transported into the County from the east and southeast. This can occur over a period of several days until the high-pressure system returns to its normal location, breaking the pattern. The breakup of this condition may result in relatively stagnant condition and a buildup of pollutants offshore. The onset of the typical daytime sea breeze can bring these pollutants back onshore, where they combine with local emissions to cause high pollutant concentrations. Not all occurrences of this condition lead to high ambient pollutant levels, but it does play an important role in the air pollution meteorology of the County.

Atmospheric Stability and Dispersion. Air pollutant concentrations are primarily determined by the amount of pollutant emissions in an area and the degree to which these pollutants are dispersed into the atmosphere. The stability of the atmosphere is one of the key factors affecting pollutant dispersion. Atmospheric stability regulates the amount of vertical and horizontal air exchange, or mixing, that can occur within a given air basin. Restricted mixing and low wind speeds are generally associated with a high degree of stability in the atmosphere. These conditions are characteristic of temperature inversions (SLOAPCD 2001).

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this gradient can occur. This condition, termed an inversion, is simply a warm layer of air above a layer of cooler air, and it has the effect of limiting the vertical dispersion of pollutants. The height of the inversion determines the size of the mixing volume trapped below. Inversion strength or intensity is measured by the thickness of the layer and the difference in temperature between the base and the top of the inversion. The strength of the inversion determines how easily it can be broken by winds or solar heating (SLOAPCD 2001).

Several types of inversions are common to this area. Weak, surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys and low lying areas this condition is intensified by the addition of cold air flowing downslope from the hills and pooling on the valley floor. Surface inversions are a common occurrence throughout the county during the winter, particularly on cold mornings when the inversion is strongest. As the morning sun warms the earth and the air near the ground, the inversion lifts, gradually dissipating as the day progresses. During the late spring and early summer months, cool air over the ocean can intrude under the relatively warmer air over land, causing a marine inversion. These inversions can restrict dispersion along the coast, but they are typically shallow and will dissipate with surface heating (SLOAPCD 2001).

In contrast, in the summertime the presence of the Pacific high pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms it to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion, is common to all of coastal California and can act as a nearly impenetrable lid to the vertical mixing of pollutants. The base of the inversion typically ranges from 1000 to 2500 feet above sea level; however, levels as low as 250 feet, among the lowest anywhere in the state, have been recorded on the coastal plateau in San Luis Obispo county. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion (SLOAPCD 2001).

2. Criteria Air Pollutants

For the protection of public health and welfare, the Clean Air Act (CAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the US EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air without harm to the public's health. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. The CAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

Common air pollutants and associated adverse health and welfare effects are summarized in Table 1. Within the SCCAB, the air pollutants of primary concern, with regard to human health, include ozone, particulate matter (PM) and carbon monoxide (CO). Exposure to increased pollutant concentrations of ozone, PM and CO can result in various heart and lung ailments, cardiovascular and nervous system impairment, and death.

Table 1. Common Pollutants & Adverse Effects

Pollutant	Human Health & Welfare Effects
Particulate Matter (PM10 & PM2.5)	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Ozone (O3)	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles and dyes.
Sulfur Dioxide (SO2)	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO2)	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2013

3. Odors

Typically odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The SLOAPCD does not have an individual rule or regulation that specifically addresses odors; however, odors would be applicable to SLOAPCD’s Rule 204, Nuisance . Any actions related to odors would be based on citizen complaints to local governments and the SLOAPCD. The SLOAPCD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine if the Project results in excessive nuisance odors, as defined under the California Code of Regulations, Health & Safety Code Section 41700, air quality public nuisance.

4. Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered “criteria pollutants” under either the Federal Clean Air Act (FCAA) or the California Clean Air Act (CCAA), and are thus not subject to National or State AAQS. TACs are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting of National or State AAQS. Instead, the U.S. EPA and CARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the state level, the CARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. Most recently, Diesel-exhaust particulate matter (DPM) was added to the CARB list of TACs. DPM is the primary TACs of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. The CARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (CARB 2005).

At the local level, air districts have the authority over stationary or industrial sources. All projects that require air quality permits from the SLOAPCD are evaluated for TAC emissions. The SLOAPCD limits emissions and public exposure to TACs through a number of programs. The SLOAPCD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The SLOAPCD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588. No major existing sources of TACs have been identified in the project area.

<u>Land Use Compatibility with TAC Emission Sources</u>. The CARB published an informational guide entitled *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) in 2005. The purpose of this guide is to provide information to aid local jurisdictions in addressing issues and concerns related to the placement of sensitive land uses near major sources of air pollution. The CARB's Handbook includes recommended separation distances for various land uses that are based on relatively conservative estimations of emissions based on source-specific information. However, these recommendations are not site specific and should not be interpreted as defined "buffer zones".

It is also important to note that the recommendations of the Handbook are advisory and need to be balanced with other State and local policies (CARB 2005). Depending on site and project-specific conditions, an assessment of potential increases in exposure to TACs may be warranted for proposed development projects located within the distances identified.

CARB recommended separation distances for various sources of emissions are summarized in Table 2.

Table 2. Recommendations on Siting New Sensitive Land Uses Near Air Pollutant Sources	
Source Category	**Advisory Recommendations**
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). • A 50-foot separation is recommended for typical gas dispensing facilities.
Recommendations are advisory, are not site specific, and may not fully account for future reductions in emissions, including those resulting from compliance with existing/future regulatory requirements. *Source: CARB 2005*	

5. Asbestos

Asbestos is the common name for a group of naturally-occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Naturally-occurring asbestos, which was identified as a TAC in 1986 by CARB, is located in many parts of California and is commonly associated with ultramafic rock. The project site is located near areas that are likely to contain ultramafic rock. A map depicting known areas of naturally occurring areas within the County is included in Appendix A.

B. Regulatory Setting

Both the federal and state governments have established ambient air quality standards for the protection of public health. The U.S. Environmental Protection Agency (EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency. Local control in air quality management is provided by the CARB through regional-level Air Pollution Control Districts (APCDs). The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide. The following summarizes the various federal and state regulatory authority mechanisms over air quality.

1. Federal

U.S. Environmental Protection Agency. At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act. The FCAA required the US EPA to establish National Ambient Air Quality Standards (NAAQS or National AAQS), and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 3.

2. State of California

California Air Resources Board. The CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in Table 3. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

Both the federal and state governments have established ambient air quality standards for the protection of public health. The U.S. Environmental Protection Agency (EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency. Local control in air quality management is provided by the CARB through regional-level Air Pollution Control Districts (APCDs). The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide.

The U.S. EPA has set primary and secondary ambient air quality standards for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates (PM_{10}) and lead. In addition, the State of California has established health-based ambient air quality standards for these and other pollutants, which are more stringent than the federal standards. Table 3 shows the federal and state primary standards for the major pollutants.

Table 3. Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	--------	0.09 PPM
	8-Hour	0.075 PPM	0.070 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual	0.053 PPM	0.030 PPM
	1-Hour	100 PPM	0.18 PPM

Table 3. Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Sulfur Dioxide	Annual	0.030 PPM	-------
	24-Hour	0.14 PPM	0.04 PPM
	3-Hour	0.5 PPM	-------
	1-Hour	75 PPB	0.25 PPM
PM_{10}	Annual	-------	20 µg/m^3
	24-Hour	150 µg/m^3	50 µg/m^3
$PM_{2.5}$	Annual	12 µg /m^3	12 ug/m^3
	24-Hour	35 µg /m^3	*
Lead	30-Day Average	-------	-------
	Quarterly	-------	1.5 µg/m^3
	3-Month Average	1.5 µg/m^3	-------

** No separate State standard*
ppm = parts per million
µg/m^3 = micrograms per cubic meter
Source: SLOAPCD, 2015

California Clean Air Act. The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO2, and NO2 by the earliest practical date.

The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 --- Toxic Air Contaminants. Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

In-Use Off-Road Diesel Vehicle Regulation. On July 26, 2007, the Air Resources Board (ARB) adopted a regulation to reduce diesel particulate matter (PM) and oxides of nitrogen (NO_x) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. The regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road, as well as two-engine vehicles that drive on road, with the limited exception of two-engine sweepers. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, airport ground support equipment, water well drilling rigs, and two-engine cranes. Such vehicles are used in construction, mining, and industrial operations. The regulation does not apply to stationary equipment or portable equipment such as generators. The off-road vehicle regulation, establishes emissions performance requirements, establishes reporting, disclosure, and labeling requirements for offroad vehicles, and limits unnecessary idling.

3. Local

County of San Luis Obispo Air Pollution Control District (SLOAPCD). The SLOAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions within the region are maintained. Responsibilities of the SLOAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

SLOAPCD is required to monitor air pollutant levels to assure that air quality standards are met, and if they are not met, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or as in “nonattainment.”

Federal air quality standards have been attained for the portion of the basin in which the project site lies, while the County is in non-attainment for the state standards for both PM_{10} and ozone. In addition, the San Luis Obispo Air Basin is in attainment for the state and federal carbon monoxide standards.

In San Luis Obispo County, ozone and PM_{10} are the pollutants of main concern, since exceedences of state health-based standards for those are experienced here in most years. The nearest air monitoring station to the project site is located on Santa Fe Avenue in the City of Paso Robles.

Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO_x) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County, the major sources of ROG are motor vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO_x are motor vehicles, public utility power generation, and fuel combustion by various industrial sources.

Ambient PM_{10} concentrations have been primarily a localized issue of concern in the southern portion of San Luis Obispo County, providing the major impetus for the County’s non-attainment designation for the State PM_{10} standard. The major sources for PM_{10} are mineral quarries, grading, demolition, agricultural tilling, road dust, and vehicle exhaust.

C. Impact Analysis

1. Methodology

Short-term construction and long-term operational emissions associated with the proposed project were calculated using the CalEEMod, version 2013.2.2, computer program.

The project will be developed over a several year period, at a rate to be determined by market demand. For the purpose of this analysis, it is assumed that roughly 50 dwelling units (likely anticipated market demand) will be constructed annually starting by 2017, with grading and site preparation for the portions of the site to be conducted prior to development. Under this scenario, all development would be completed by 2022. Grading would be balanced on the site, with up to 250,000 square feet of material moved. It is assumed that the volume of grading would be distributed evenly over the time of project development, and would be phased according to the amount of homes constructed annually until all 271 dwelling units would be built.

Construction activity durations, equipment use, vehicle trips, equipment load factors and emission factors were based default parameters contained in the model. Operational vehicle trip-generation rates are based on the traffic report prepared for the project. Modeling assumptions and output files are included in Appendix C of this report.

2. Thresholds of Significance

Pursuant to the State CEQA Guidelines, air quality impacts would be significant if the project would:

- *Conflict with or obstruct implementation of the applicable air quality plan;*
- *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
- *Expose sensitive receptors to substantial pollutant concentrations; and/or*
- *Create objectionable odors affecting a substantial number of people.*

<u>Consistency with the District's Clean Air Plan (CAP)</u>. Projects and programs requiring an analysis of consistency with the Clean Air Plan include: General Plan Updates and Amendments, Specific Plans, Area Plans, large residential developments and large commercial/industrial developments. Therefore, the proposed River Oaks II shall be evaluated for impacts related to CAP consistency. The consistency analysis must evaluate the following questions:

- *Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?*
- *Is rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?*
- *Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?*

If the answer to all of the above questions is yes, then the proposed project or plan is consistent with the CAP. If the answer to any one of the questions is no, then the emissions reductions projected in the CAP may not be achieved, which could delay or preclude attainment of the state ozone standard. This would be inconsistent with the Clean Air Plan.

The following significance thresholds are based on SLOAPCD criteria included in its CEQA Air Quality Handbook (2012).

<u>Construction Emissions (Short-Term)</u>. The threshold criteria established by SLO APCD to determine the significance and appropriate mitigation level for construction-related emissions from a project are presented in Table 4. Emissions that equal or exceed the designated threshold levels are significant and should be mitigated. Emissions in excess of 185 pounds per day (lbs/day) or 2.5 tons per quarter (tons/qtr) require Best Available Control Technology for construction equipment (CBACT).

Emission in excess of 6.0 tons/qtr requires CBACT in addition to further mitigation, spelled out in the SLO APCD CEQA Handbook (2003).

Table 4. SLOAPCD Significance Thresholds for Construction Emissions

Pollutant	Daily	Quarterly Tier 1	Quarterly Tier 2
ROG + NO_x	137 lbs	2.5 tons	6.3 tons
Diesel Particulate Matter (DPM)	7 lbs	0.13 tons	0.32 tons
PM_{10}	---	2.5 tons	---
Greenhouse Gases	Amortized and combined with Operational Emissions		

Source: Table 2-1 of the 2012 SLO County APCD CEQA Air Quality Handbook Any project with a grading area greater than 4.0 acres of worked area can exceed the 2.5 tons PM_{10} quarterly threshold.

ROG and NOx Emissions

- Daily: For construction projects expected to be completed in less than one quarter (90 days), exceedance of the 137 lb/day threshold requires Standard Mitigation Measures;
- Quarterly – Tier 1: For construction projects lasting more than one quarter, exceedance of the 2.5 ton/qtr threshold requires Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. If implementation of the Standard Mitigation and BACT measures cannot bring the project below the threshold, off-site mitigation may be necessary; and
- Quarterly – Tier 2: For construction projects lasting more than one quarter, exceedance of the 6.3 ton/qtr threshold requires Standard Mitigation Measures, BACT, implementation of a Construction Activity Management Plan (CAMP), and off-site mitigation.

Diesel Particulate Matter (DPM) Emissions

- Daily: For construction projects expected to be completed in less than one quarter, exceedance of the 7 lb/day threshold requires Standard Mitigation Measures;
- Quarterly --- Tier 1: For construction projects lasting more than one quarter, exceedance of the 0.13 tons/quarter threshold requires Standard Mitigation Measures, BACT for construction equipment; and
- Quarterly --- Tier 2: For construction projects lasting more than one quarter, exceedance of the 0.32 ton/qtr threshold requires Standard Mitigation Measures, BACT, implementation of a CAMP, and off-site mitigation.

Fugitive Particulate Matter (PM10), Dust Emissions

- Quarterly: Exceedance of the 2.5 ton/qtr threshold requires Fugitive PM10 Mitigation Measures and may require the implementation of a CAMP.

<u>Operational Emissions (Long-Term)</u>. Operational emissions are divided into area source emissions and operational vehicle emissions. Area source emissions include energy consumption by residential and commercial buildings. However, vehicle emissions are the largest continuing source of emissions from the operational phase of a development.

The threshold criteria established by SLO APCD to determine the significance and appropriate mitigation level for long-term emissions from a project are presented in Table 5. Emissions that equal or exceed the designated threshold levels are significant and should be mitigated. As shown in the table, the level of analysis and mitigation recommended follows a tiered approach based on the amount of emissions generated by the project.

Table 5. SLOAPCD Significance Thresholds for Operational Emissions

	Threshold	
Pollutant	**Daily**	**Annual**
Operational Precursors (ROG + NO_x)	25 lbs/day	25 tons/yr
Diesel Particulate Matter (DPM)	1.25 lbs/day	---
Fugitive Particulate Matter (PM_{10})	25 lbs/day	25 tons/yr
CO	550 lbs/day	---
Greenhouse Gases	Consistency with Qualified GHG Reduction Plan OR 1,150 MT CO2e/yr OR 4.9 CO2e/SP/yr (residents + employees)	
Source: Table 3-2 of the 2012 SLO County APCD CEQA Air Quality Handbook		

<u>Toxic Air Contaminants</u>. If a project has the potential to emit toxic or hazardous air pollutants, or is located in close proximity to sensitive receptors, impacts may be considered significant due to increased cancer risk for the affected population, even at a very low level of emissions. For the evaluation of such projects, the SLOAPCD recommends the use of the following thresholds:

- Type A Projects: new proposed land use projects that generate toxic air contaminants (such as gasoline stations, distribution facilities or asphalt batch plants) that impact sensitive receptors. Air districts across California are uniform in their recommendation to use the significance thresholds that have been established under each district's "Hot Spots" and permitting programs. The SLOAPCD has defined the excess cancer risk significance threshold at 10 in a million for Type A projects in SLO County; and,
- Type B Projects: new land use projects that will place sensitive receptors (e.g., residential units) in close proximity to existing toxics sources (e.g., freeway). The APCD has established a CEQA health risk threshold of 89 in-a-million for the analysis of projects proposed in close proximity to toxic sources. This value represents the population weighted average health risk caused by ambient background concentrations of toxic air contaminants in San Luis Obispo County. The SLOAPCD recommends Health Risk screening and, if necessary, Health Risk Assessment (HRA) for any residential or sensitive receptor development proposed in proximity to toxic sources.

<u>Localized CO Concentrations</u>. Localized CO concentrations associated with the proposed project would be considered less than-significant impact if: (1) Traffic generated by the proposed project would not result in deterioration of intersection level of service (LOS) to LOS E or F; or (2) the project would not contribute additional traffic to an intersection that already operates at LOS of E or F (Caltrans 1996).

Odors. Screening of potential odor impacts is typically recommended for the following two situations:

- Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate; and
- Residential or other sensitive receptor projects or other projects that may attract people locating near existing odor sources.

If the proposed project would locate receptors and known odor sources within one mile of each other, a full analysis of odor impacts is recommended. Known odor sources of primary concern, as identified by the SLOAPCD, include: landfills, transfer stations, asphalt batch plants, rendering plants, petroleum refineries, and painting/coating operations, as well as, composting, food processing, wastewater treatment, chemical manufacturing, and feedlot/dairy facilities.

3. Project Impacts and Mitigation Measures

Impact AQ-1. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The Clean Air Plan includes a variety of policies and strategies, including land use policies intended to result in reductions in overall vehicle miles traveled, as well as various transportation control measures.

Transportation Control Measures. The Clean Air Plan would reduce emissions through implementation of adopted transportation control measures (TCMs) that are potentially applicable to residential projects. The degree to which the proposed project implements those applicable to residential project is discussed below:

- T-2A. Local Transit System Improvements. The proposed project allows for the potential to include a transit stop within the project area.
- T-3. Bicycling and Bikeway Enhancements. The project includes a circulation pattern conducive to safe bicycling opportunities, with connectively to the rest of the City consistent with the City's General Plan Circulation Element and Bike Master Plan, which calls for an extension of a Class II Bikeway into the community from Clubhouse Drive to the south, as well as providing access to a potential regional bikeway system along the Salinas River corridor.
- T-6. Traffic Flow Improvements. This control measure refers to implementing traffic calming measures to slow down vehicles and encourage safe alternative modes of transportation. This could be accomplished through a variety of means, including traffic control devices, roadway design appropriate to the proposed land uses, and improvements for pedestrians and bicycles to encourage those modes of transportation. The project implements bikeway connections and roadway design consistent with City standards, and encourages bicycling and pedestrian use relate to access to the centrally-located community facilities that are part of the project. Ultimately, the City will determine the appropriate design of circulation improvements on the site to ensure safe multimodal transportation opportunities.

Because the proposed project is residential in nature, the remaining adopted transportation control measures in the CAP to reduce VMT that are geared toward non-residential development would not apply. These include:

- T-1B. Campus-Based Trip Reduction
- T-1C. Voluntary Trip Reduction Program
- T-2B. Regional Transit Improvements
- T-4. Park and Ride Lots
- T-5. Motor Vehicle Inspection and Control Program
- T-8. Telecommuting, Teleconferencing, and Telelearning

Land Use Planning Strategies. The Clean Air Plan also includes various land use planning strategies to encourage the use of alternative forms of transportation, increase pedestrian access and accessibility to community services and local destinations, reduce vehicle miles traveled within the County, and promote congestion management efforts.

In general, these measures are most appropriate in the context of long-range plans, particularly general plans, where they can be applied communitywide. Relative to the River Oaks project, the proposed development is an extension of the existing land use pattern within the Borkey Area Specific Plan, which plans for orderly development and appropriate residential densities within the northern portion of the City. The degree to which the proposed project implements these land use strategies is discussed below.

- L-1. Planning Compact Communities. The project concentrates residential development into several neighborhoods, preserving and extending existing recreational open space uses in an orderly fashion.
- L-2. Providing for Mixed Use. The River Oaks community is centered on a recreationally-oriented facility that is focused on the needs of the proposed and existing Rive Oaks community. This center is consistent with the mixed use concept that is at the hear to reducing vehicle trips and air emissions. The project is envisioned as a residential development and an extension of the existing River Oaks I development located to the south within the Borkey Area Specific Plan. The proposed land use pattern is appropriate for its location away from the downtown, and toward the urban edge of the City of Paso Robles. Mixed commercial and residential uses are more appropriately located toward the urban core of the City, in the downtown area.
- L-3. Balancing Jobs and Housing. Balancing jobs and housing is a goal most appropriately implemented on a Citywide basis in the context of the General Plan. The purpose of this goal is to minimize commute distances, vehicle miles traveled, and thus air emissions. The overall land use pattern of the City includes a variety of commercial, industrial and residential uses that provide opportunities for residents to be employed within the community. Te River Oaks project is an appropriate extension of the approved Borkey Area Specific Plan, which is an important residentially-oriented component of the General Plan land use pattern intended to provide an overall jobs-housing balance.
- L-4. Circulation Management. This strategy is intended to encourage a transportation system that supports alternative travel modes and decreases reliance on the single occupant motor vehicle. In addition to the roadway system, the project includes provisions for transit connections, trails (including a connection to a potential regional trail alignment along the Salinas River), and safe pedestrian access between the proposed neighborhoods.
- L-5. Communication, Coordination and Monitoring. This goal is most appropriately directed at the agency level, in that it encourages local and regional jurisdictions to coordinate closely to ensure that adopted land circulation programs related to reducing air emissions are implemented. The CEQA process for the River Oaks project provides an important avenue to

ensure that such strategies are implemented on a project by project basis, including for the River Oaks project.

The proposed project would introduce housing within the Borkey Area Specific Plan, and would be an extension of existing development under that plan. The buildout potential of the proposed project will include up to 271 residential units in a currently undeveloped area. The resulting increase in population will result in an increase in vehicular traffic, which may result in the marginal degradation of the air quality of the North County air basin.

That said, the City's General Plan includes a population limit of 44,000, which is monitored closely. From time to time, the City evaluates factors such as population per household (which has been decreasing in recent years), and the developability of areas assumed to have a higher buildout potential under the General Plan. If it is found that the General Plan buildout potential is lower than anticipated in the 2003 General Plan, the City allows for more intensive development on parcels with a greater development potential, and can make a finding that such development would be consistent with the City's growth limit. Thus, the project would by definition be within the City's population limit, and thus consistent with the population buildout assumption on which the CAP was based.

Furthermore, as noted in Impact AQ-3 below, the proposed project would not result in operational emissions that would exceed SLOAPCD's significance thresholds for criteria air pollutants. For these reasons, the proposed project would not conflict with or obstruct continued implementation of the CAP. This impact is considered less than significant.

Impact AQ-2. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As noted in Impact AQ-3 below, short-term construction activities may result in localized concentrations of pollutants that could adversely affect nearby land uses. As a result, this impact is considered potentially significant. Refer to Impact AQ-3 and Impact AQ-4 of this report for more detailed discussions of air quality impacts and recommended mitigation measures.

Impact AQ-3. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Short-Term Construction Emissions. Construction-generated emissions are of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact. Construction of the proposed project would result in the temporary generation of emissions associated with site grading and excavation, paving, motor vehicle exhaust associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces. Short-term construction emissions would result in increased emissions of ozone-precursor pollutants (i.e., ROG and NOX) and emissions of PM. Emissions of ozone-precursors would result from the operation of on- and off-road motorized vehicles and equipment. Emissions of airborne PM are largely dependent on the amount of ground disturbance associated with site preparation activities and may result in increased concentrations of PM that can adversely affect nearby sensitive land uses.

Emissions generated by construction of the proposed Specific Plan were calculated using the CalEEMod.2013.2.2 air quality model (see attached). Table 6 summarizes the worst-case construction-related emissions associated with the proposed project, assuming built in project features that would mitigate potential impacts to some extent. In addition, San Luis Obispo County is currently a non-attainment area for PM_{10}, and development under the proposed Specific Plan Amendment would contribute to this existing condition. (Please refer to Mitigation Measure AQ-1 for a list of project features that will be required to ensure that construction-related impacts will be less than significant.)

Table 6. Unmitigated Construction Emissions Associated with Proposed Project

Emission Source	ROG + NO_x	DPM	Fugitive PM_{10}
Thresholds			
Daily Threshold	*137 lb/day*	*7 lbs/day*	----
Tier 1 Quarterly Threshold	*2.5 tons/qtr*	*0.13 tons/qtr*	*2.5 tons/qtr*
Tier 2 Quarterly Threshold	*6.3 tons/qtr*	*0.32 tons/qtr*	----
Phase 1 (2016)			
Worst-Case Daily Totals	295.58 lbs/day	10.90 lbs/day	34.72 lbs/day
Quarterly Totals	2.47 tons/qtr	0.09 tons/qtr	0.29 tons/qtr
Threshold Exceeded?	*No*	*Yes (daily only)*	*No**
Phase 2 (2017)			
Worst-Case Daily Totals	208.11 lbs/day	8.36 lbs/day	28.73 lbs/day
Quarterly Totals	1.74 tons/qtr	0.07 tons/qtr	0.24 tons/qtr
Threshold Exceeded?	*No*	*Yes (daily only)*	*No**
Phase 3 (2018)			
Worst-Case Daily Totals	221.98 lbs/day	9.06 lbs/day	40.86 lbs/day
Quarterly Totals	1.83 tons/qtr	0.07 tons/qtr	0.34 tons/qtr
Threshold Exceeded?	*No*	*Yes (daily only)*	*No**
Phase 4 (2019)			
Worst-Case Daily Totals	163.90 lbs/day	6.38 lbs/day	28.47 lbs/day
Quarterly Totals	1.37 tons/qtr	0.05 tons/qtr	0.24 tons/qtr
Threshold Exceeded?	*No*	*No*	*No**
Phase 5 (2020)			
Worst-Case Daily Totals	147.86 lbs/day	5.73 lbs/day	28.47 lbs/day
Quarterly Totals	1.24 tons/qtr	0.05 tons/qtr	0.24 tons/qtr
Threshold Exceeded?	*No*	*No*	*No**
Phase 6 (2021)			
Worst-Case Daily Totals	289.93 lbs/day	5.18 lbs/day	28.77 lbs/day
Quarterly Totals	2.58 tons/qtr	0.04 tons/qtr	0.24 tons/qtr
Threshold Exceeded?	*Yes (Tier 1 only)*	*No*	*No**

** Emissions may be concentrated during particular months, and therefore may surpass 2.5 tons/qtr threshold. SLOAPCD states that if more than 4.0 acres are graded continuously, the project would surpass the PM_{10} threshold.*

Note: Modeling based on an assumed rate of up to 50 dwelling units built per phase, with up to 20 acres of disturbed and/or graded areas per phase to accommodate development, until the project is completed.

When compared to the SLOAPCD thresholds of significance, the proposed project would exceed daily County thresholds for combined ROG and NO_x, and for DPM during certain project phases, based on current development phasing assumptions. It would also potentially exceed Tier 1 Quarterly thresholds for combined ROG and NO_x. Although the model shows an exceedance later in the project phasing, it is possible that such an exceedance could occur at earlier phases, if different development phasing assumptions are made. Thus, to be conservative, it is assumed that there is a potentially significant impact that could occur at any time during project construction.

In addition to the daily emission thresholds, annual construction-related PM_{10} emissions would total up to 0.34 tons/quarter, which would not exceed the County threshold of 2.5 tons/qtr. It should be noted that if more than 4.0 acres are graded continuously, development under the project would surpass the PM_{10} threshold described in Table 6, based on input from APCD. This condition is likely to occur during the course of the project, so mitigation measures to reduce construction-related emissions are included to address this potential. (Please refer to Mitigation Measure AQ-1 for a list of project features that will be required to ensure that construction-related impacts will be less than significant.)

Long-Term Operational Emissions. Long-term operational emissions associated with the proposed project would be predominantly associated with mobile sources. To a lesser extent, emissions associated with area sources, such as landscape maintenance activities, as well as, use of electricity and natural gas would also contribute to increased emissions. Daily unmitigated operational emissions for a worst case scenario (winter conditions) are summarized in Table 7. These are also projected to annual emissions to provide a worst-case annual estimate for applicable thresholds.

The unmitigated project would exceed the daily threshold for ROG + NO_x, which are precursors to ozone emissions. For all other pollutants, thresholds would not be exceeded. Daily operational emissions would be a potentially significant impact for ROG + NO_x (an estimated 35.34 pounds per day, which exceeds the threshold of 25 pounds per day).

Table 7. Operational Unmitigated Emissions Associated with Proposed Project

Emission Source	**ROG + NO_x**	**DPM**	**Fugitive PM_{10}**	**CO**
Area Source	12.94 lbs/day	0.61 lbs/day	----	22.42 lbs/day
Energy	1.89 lbs/day	0.14 lbs/day	----	0.73 lbs/day
Operational (Vehicle)	20.51 lbs/day	0.20 lbs/day	11.09 lbs/day	62.63 lbs/day
Total lbs/day	***35.34 lbs/day***	***0.95 lbs/day***	***11.09 lbs/day***	***85.78 lbs/day***
Total tons/yr	***6.45 tons/yr***	***0.17 tons/yr***	***2.03 tons/yr***	***15.65 tons/yr***
Significance Threshold				
Daily	*25 lbs/day*	*1.25 lbs/day*	*25 lbs/day*	----
Annual	*25 tons/yr*	----	*25 tons/yr*	*550 lbs/day*
Threshold Exceeded?	*Yes; daily only*	*No*	*No*	*No*

Note: See Appendix C for Calculations; winter emissions for daily values and projected annually are assumed for a worst-case scenario.

Mitigative Project Features: Many mitigation measures included in the CalEEMod.2013.2.2 air quality model are already built into the project as designed, and these are assumed to occur under the "mitigated" project scenario. These mitigative project features (and corresponding mitigation number in the model) include:

- *Increased Density (4 du/ac); LUT-1*
- *Improve Walkability (16 intersections per square mile of development); LUT-9*
- *Improve Destination Accessibility (1 mile to downtown); LUT-4*
- *Increase Transit Accessibility (transit stop on site); LUT-5*
- *Improve Pedestrian Network; SDT-1*
- *Provide Traffic Calming Measures (roundabouts and intersection improvements); SDT-2*
- *Landscape Equipment (assumed 25% electric); A-1*
- *High Energy Lighting (used throughout site); LE-1*
- *Apply Water Conservation Strategies; WUW-2*

- *Use Reclaimed Water (when available); WSW-1*
- *Use Grey Water (when available); WSW-2*
- *Low Flow Fixtures; WUW-1*
- *Turf Reduction; WUW-5*
- *Water-Efficient Landscaping; WUW-3*
- *Water Efficient Irrigation; WUW-4*
- *Recycling; SW-1*

The project would also include substantial amount of vegetated areas, including a 5-acre vineyard, landscaping and numerous trees, which may contribute to a reduction in NO_x emissions (Urban Forestry Network, http://urbanforestrynetwork.org/benefits/airquality.htm). Trees will be planted at the same density as has occurred in the neighboring River Oaks I development, which was 3,200 trees over 196 acres (16 trees per acre). Applying the same rate to the 131-acre River Oaks II project site yields about 2,140 trees.

The River Oaks site includes many community facilities within the project area, and is located in close proximity to the Kermit King Elementary School, the River Oaks Center (50,000 s.f. of retail), and Cuesta College. It is also adjacent to existing recreational facilities, including the River Oaks Golf Course and Hot Springs. These on-site and adjacent facilities contribute to internal trips, or trips that do not leave the project site. The integrated land uses also facilitate walking or biking for short trips to the adjacent land uses. These measures will help reduce potential operational emissions.

In addition to adjacent customer serving land uses that would reduce the overall vehicle miles traveled, the aspects of the project would be designed and constructed with green building practices using a tiered points checklist system developed by SLO Green Build, Build It Green, CALGreen or similar rating system. Furthermore, the project will include some smart growth principles, such as but not limited to: providing a range of housing opportunities and choices, walkable neighborhoods, encouraging community and stakeholder collaboration, mixed land uses, preserve natural beauty and critical environmental areas, providing a variety of transportation choices. All these design elements would reduce resource use and the amount of pollutant emissions. Table 8 summarizes the projected operational emissions based on modeling, assuming all mitigative project features mitigation measures are applied.

Table 8. Operational Mitigated Emissions Associated with Proposed Project

Emission Source	**ROG + NO_x**	**DPM**	**Fugitive PM_{10}**	**CO**
Area Source	12.24 lbs/day	0.60 lbs/day	----	21.07 lbs/day
Energy	1.89 lbs/day	0.14 lbs/day	----	0.73 lbs/day
Operational (Vehicle)	19.24 lbs/day	0.19 lbs/day	10.01 lbs/day	58.97 lbs/day
Total lbs/day	***33.37 lbs/day***	***0.93 lbs/day***	***10.01 lbs/day***	***80.77 lbs/day***
Total tons/yr	***5.85 tons/yr***	***0.08 tons/yr***	***1.77 tons/yr***	***13.72 tons/yr***
Significance Threshold				
Daily	*25 lbs/day*	*1.25 lbs/day*	*25 lbs/day*	----
Annual	*25 tons/yr*	----	*25 tons/yr*	*550 lbs/day*
Threshold Exceeded?	*Yes; daily only*	*No*	*No*	*No*

Note: See attached for Calculations

Even with assumed mitigative features, the project would potentially still exceed the daily threshold for ROG + NO_x. For all other pollutants, thresholds would not be exceeded. This is a potentially significant impact requiring further mitigation.

<u>Mitigation Measures</u>

Short-Term Construction Emissions. The proposed project would be required to comply with standard APCD permitting and requirements. Because it also exceeds Tier 1 quarterly thresholds for combined ROG and NO_x, Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment would be required, as described in the SLOAPCD CEQA Air Quality Handbook:

Mitigation Measure AQ-1:

Standard Measures for Construction Activities. Standard mitigation measures for reducing emissions from construction activities are listed below:

- Interior and exterior paints used during project construction shall have a maximum allowable VOC content of 150 grams per liter;
- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation;
- Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_x exempt area fleets) may be eligible by proving alternative compliance;
- Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators, discouraging them from idling for more than 5 minutes;
- Diesel idling within 1,000 feet of sensitive receptors shall be discouraged to the extent feasible;
- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
- Electrify equipment when feasible;
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and,
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

Standard mitigation construction measures listed above are expected to reduce impacts to a less than significant level, because the magnitude of potential threshold exceedance is relatively small in each phase, and in later phases, not exceeded at all. If phasing assumptions change substantially from what is assumed in this analysis, such that the estimated ozone precursor emissions from the actual fleet for a given construction phase would likely exceed the APCD threshold of significance to a greater degree than anticipated in this analysis, then BACT would also need to be implemented to further reduce these impacts. The BACT measures can include:

- Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines;
- Repowering equipment with the cleanest engines available; and
- Installing California Verified Diesel Emission Control Strategies. These strategies are listed at: http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

The above mitigation measure shall be shown on grading and building plans.

Mitigation Measure AQ-2:

Although not expected to exceed thresholds related to PM10 (dust) emissions, in the event that more than 4 acres are graded continuously, the threshold may be exceeded. In that event, the following measures would be required:

Dust Control. In accordance with SLOAPCD-recommendations, projects with grading areas that are greater than 4 acres or are within 1,000 feet of any sensitive receptor shall implement the following mitigation measures to manage fugitive dust emissions such that they do not exceed the APCD 20-percent opacity limit (APCD Rule 401) and do not impact offsite areas prompting nuisance violations (APCD Rule 402) (Mutziger 2012):

- Reduce the amount of the disturbed area where possible;
- Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Water could be applied as soon as possible whenever wind speeds exceed 15 miles per hour;
- All dirt-stock-pile areas could be sprayed daily as needed;
- Permanent dust control measures could be identified in the approved project revegetation and landscape plans and implemented as soon as possible following completion of any soil disturbing activities;
- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading could be sown with a fast-germinating native grass seed and watered until vegetation is established;
- All disturbed soil areas not subject to revegetation could be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
- All roadways, driveways, sidewalks, etc., to be paved could be completed as soon as possible. In addition, building pads could be laid as soon as possible after grading unless seeding or soil binders are used;
- Vehicle speed for all construction vehicles could not exceed 15 mph on any unpaved surface at the construction site;
- All trucks hauling dirt, sand, soil or other loose materials could be covered or could maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;

- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water could be used where feasible; and
- Construction personnel could wear protective face masks while grading and excavating soils that contain serpentine soil;
- All PM_{10} mitigation measures required shall be shown on grading and building plans; and,
- The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20-percent opacity, and to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

The above mitigation measure shall be shown on grading and building plans.

Long-Term Operational Emissions. For unmitigated projects that result in emissions between 35 and 50 pounds per day, the APCD CEQA Air Quality Handbook recommends that 18 standard mitigation measures be implemented as part of the project to ensure that impacts would be less than significant, based on a list included as Table 3-5 in that document. The list covers a large range of activities and would reduce impacts either through site design, transportation strategies, or increasing the energy efficiency of the project. In many cases, adherence to the proposed project design guidelines would implement many of these measures. Compliance with the intent of APCD's recommended measures as appropriate would ensure that impacts would be reduced to a less than significant level.

Table 9 summarizes the list of appropriate mitigation measures, and which of these are already intended to be incorporated into the proposed project by the applicant prior to any needed additional mitigation. Of the 50 potentially appropriate mitigation strategies, the applicant is already intending to include 25 of these in the project design. Since the APCD CEQA Handbook states that at least 18 would be needed to fully mitigate for projects with the potential to generated 35-50 lbs/day of combined ROG and NO_x, the project as designed already includes a sufficient number of mitigation strategies to ensure that impacts would be less than significant. Therefore, no additional mitigation would be needed. However, to ensure compliance, this list will be included in the Mitigation Monitoring and Reporting Program for the project, so City staff can work with the applicant to ensure that these strategies are implemented.

Table 9. Potentially Appropriate Mitigation Measures from APCD CEQA Air Quality Handbook

Measure #	Measure Type	MITIGATION MEASURE	POLLUTANT REDUCED Ozone (O) Particulate (P) Diesel Particulate Matter (DPM) Greenhouse Gas (GHG)	Does Project Already Include This Feature?
1	Site design, Transportation	Improve job / housing balance opportunities within communities.	O, P, GHG	
2	Site design	Orient buildings toward streets with automobile parking in the rear to promote a pedestrian-friendly environment.	O, P, GHG	Yes

Table 9. Potentially Appropriate Mitigation Measures from APCD CEQA Air Quality Handbook

Measure #	Measure Type	MITIGATION MEASURE	POLLUTANT REDUCED Ozone (O) Particulate (P) Diesel Particulate Matter (DPM) Greenhouse Gas (GHG)	Does Project Already Include This Feature?
3	Site design	Provide a pedestrian-friendly and interconnected streetscape to make walking more convenient, comfortable and safe (including appropriate signalization and signage).	O, P, GHG	Yes
4	Site design	Provide good access to/from the development for pedestrians, bicyclists, and transit users.	O, P, GHG	Yes
5	Site design	Incorporate outdoor electrical outlets to encourage the use of electric appliances and tools.	O, P, GHG	Yes
6	Site design	Provide shade tree planting in parking lots to reduce evaporative emissions from parked vehicles. Design should provide 50% tree coverage within 10 years of construction using low ROG emitting, low maintenance native drought resistant trees.	O, P, GHG	Yes; as part of spa/pavilion
7	Site design	Pave and maintain the roads and parking areas	P	Yes
8	Site design	Driveway design standards (e.g., speed bumps, curved driveway) for self-enforcing of reduced speed limits for unpaved driveways.	P	
9	Site design	Use of an APCD-approved suppressant on private unpaved roads leading to the site, unpaved driveways and parking areas; applied at a rate and frequency that ensures compliance with APCD Rule 401, visible emissions and ensures offsite nuisance impacts do not occur.	P	
10	Site design	Development is within 1/4 mile of transit centers and transit corridors.	O, P, GHG	
11	Site design	Design and build compact communities in the urban core to prevent sprawl.	O, P, GHG	
12	Site design	Increase density within the urban core and urban reserve lines.	O, P, GHG	
13	Site design	No residential wood burning appliances.	O, P, GHG	Yes
14	Site design; transportation	Incorporate traffic calming modifications to project roads, such as narrower streets, speed platforms, bulb-outs and intersection designs that reduce vehicles speeds and encourage pedestrian and bicycle travel.	O, P, GHG	Yes
15	Site design; transportation	Increase number of connected bicycle routes/lanes in the vicinity of the project.	O, P, GHG	Yes
16	Site design; transportation	Provide easements or land dedications and construct bikeways and pedestrian walkways.	O, P, GHG	Yes
17	Site design; transportation	Link cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel to adjacent land uses.	O, P, GHG	Yes
18	Site design; transportation	Project is located within one-half mile of a ‘Park and Ride’ lot or project installs a ‘Park and Ride’ lot with bike lockers in a location of need defined by SLOCOG.	O, P, GHG	
19	Site design	Tract maps resulting in parcels of one-half acre or less shall orient at least 75% of all lot lines to create easy due south orientation of future structures.	GHG	
20	Site design	Trusses for south-facing portions of roofs shall be designed to handle dead weight loads of standard solar-heated water and photovoltaic panels. Roof design shall include sufficient south facing roof surface, based on structures size and use, to	O, GHG	

Table 9. Potentially Appropriate Mitigation Measures from APCD CEQA Air Quality Handbook

Measure #	Measure Type	MITIGATION MEASURE	POLLUTANT REDUCED Ozone (O) Particulate (P) Diesel Particulate Matter (DPM) Greenhouse Gas (GHG)	Does Project Already Include This Feature?
		accommodate adequate solar panels. For south facing roof pitches, the closest standard roof pitch to the ideal average solar exposure shall be used.		
21	Energy efficiency	Increase the building energy rating by 20% above Title 24 requirements. Measures used to reach the 20% rating cannot be double counted.	O, GHG	
22	Energy efficiency	Plant drought tolerant, native shade trees along southern exposures of buildings to reduce energy used to cool buildings in summer.	O, GHG	Yes
23	Energy efficiency	Utilize green building materials (materials which are resource efficient, recycled, and sustainable) available locally if possible.	O, DPM, GHG	Yes
24	Energy efficiency	Install high efficiency heating and cooling systems.	O, GHG	Yes
25	Energy efficiency	Orient 75 percent or more of homes and/or buildings to be aligned north / south to reduce energy used to cool buildings in summer.	O, GHG	
26	Energy efficiency	Design building to include roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows (passive solar design).	O, GHG	
27	Energy efficiency	Utilize high efficiency gas or solar water heaters.	O, P, GHG	Yes
28	Energy efficiency	Utilize built-in energy efficient appliances (i.e. Energy Star®).	O, P, GHG	Yes
29	Energy efficiency	Utilize double-paned windows.	O, P, GHG	Yes
30	Energy efficiency	Utilize low energy street lights (i.e. sodium).	O, P, GHG	Yes
31	Energy efficiency	Utilize energy efficient interior lighting.	O, P, GHG	Yes
32	Energy efficiency	Utilize low energy traffic signals (i.e. light emitting diode).	O, P, GHG	
33	Energy efficiency	Install door sweeps and weather stripping (if more efficient doors and windows are not available).	O, P, GHG	Yes
34	Energy efficiency	Install energy-reducing programmable thermostats.	O, P, GHG	Yes
35	Energy efficiency	Participate in and implement available energy-efficient rebate programs including air conditioning, gas heating, refrigeration, and lighting programs.	O, P, GHG	
36	Energy efficiency	Use roofing material with a solar reflectance values meeting the EPA/DOE Energy Star® rating to reduce summer cooling needs.	O, P, GHG	
37	Energy efficiency	Utilize onsite renewable energy systems (e.g., solar, wind, geothermal, low-impact hydro, biomass and bio-gas).	O, P, GHG	
38	Energy efficiency	Eliminate high water consumption landscape (e.g., plants and lawns) in residential design. Use native plants that do not require watering and are low ROG emitting.	O, GHG	

Table 9. Potentially Appropriate Mitigation Measures from APCD CEQA Air Quality Handbook

Measure #	Measure Type	MITIGATION MEASURE	POLLUTANT REDUCED Ozone (O) Particulate (P) Diesel Particulate Matter (DPM) Greenhouse Gas (GHG)	Does Project Already Include This Feature?
39	Energy efficiency	Provide and require the use of battery powered or electric landscape maintenance equipment for new development.	O, GHG	
40	Transportation	Develop recreational facility (e.g., parks, gym, pool, etc.) within one-quarter of a mile from site.	O, P, GHG	Yes
41	Transportation	If the project is located on an established transit route, provide improved public transit amenities (i.e., covered transit turnouts, direct pedestrian access, covered bench, smart signage, route information displays, lighting etc.).	O, P, GHG	Yes; at spa/pavilion
42	Transportation	Project provides a display case or kiosk displaying transportation information in a prominent area accessible to employees or residents.	O, P, GHG	Yes
43	Transportation	Provide electrical charging station for electric vehicles.	O, P, GHG	
44	Transportation	Provide neighborhood electric vehicles / car share program for the development.	O, P, GHG	
45	Transportation	Provide bicycle-share program for development.	O, P, GHG	
46	Transportation	Provide preferential parking / no parking fee for alternative fueled vehicles or vanpools.	O, P, GHG	
47	Transportation	Provide bicycle lockers for existing 'Park and Ride' lots where absent or insufficient.	O, P, GHG	
48	Transportation	Provide vanpool, shuttle, mini bus service (alternative fueled preferred).	O, P, DPM, GHG	Yes
49	Transportation	Provide storage space in garage for bicycle and bicycle trailers, or covered racks / lockers to service the residential units.	O, P, GHG	
50	Transportation	Provide free-access telework terminals and/or wi-fi access in multi-family projects.	O, P, GHG	

Mitigation Measure AQ-3:

The list included in Table 9 (Potentially Appropriate Mitigation Measures from APCD CEQA Air Quality Handbook) shall be included as part of the Mitigation Monitoring and Reporting Program for the project to provide a mechanism to ensure project compliance with the indicated mitigation strategies. City staff will work with the applicant to ensure compliance with the measures at the appropriate points in the development process, whether prior to grading, construction or occupancy.

<u>Significance After Mitigation</u>

With proposed mitigation, both short-term construction-related and long-term operational impacts would be reduced to a less than significant level.

Impact AQ-4. Would the project expose sensitive receptors to substantial pollutant concentrations?

The nearest sensitive receptor to the project site is the Traditions residential neighborhood (buyers are age-restricted) to the south, which is directly adjacent to potential development. Kermit King Elementary School is another nearby sensitive receptor, the nearest point of which is about 600 feet south of the nearest proposed construction area. The predominant wind direction is from the northwest, so offsite receptors have the potential to be subject to emissions generated onsite. Depending on wind speed and direction, local concentrations of point source emissions could be spread and/or dispersed, to result in lower concentrations.

No major stationary or area sources of toxic air contaminants (TACs) have been identified in the project vicinity. The proposed project does not include the installation of any major stationary sources of TACs. During construction, diesel equipment idling would result in increased temporary concentrations of pollutants, including PM and DPM. Construction related impacts from equipment are discussed in Impact AQ-3, with mitigation measures required to ensure that impacts would be less than significant.

<u>Localized CO Concentrations</u>. Localized concentrations of CO are of primary concern in areas located near congested roadway intersections. Of particular concern are intersections that are projected to operate at unacceptable levels of service (LOS) E or F.

As described in the traffic study for this project, no intersections in the area would operate at LOS E or F. For this reason, the proposed project would not result in emissions of CO in excess of the SLOAPCD's significance threshold of 550 lbs/day. Localized concentrations of CO are considered to be less than significant.

<u>Naturally Occurring Asbestos</u>. Naturally Occurring Asbestos (NOA) has been identified as a toxic air contaminant by the California Air Resources Board (ARB). In accordance with ARB Air Toxics Control Measure (ATCM), prior to any grading activities a geologic evaluation should be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the District. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM (SLOAPCD 2012).

Based on a review of the SLOAPCD's map depicting potential areas of NOA, the project site is located in an area that has been identified as having a potential for NOA. As a result, the disturbance and potential exposure to NOA is considered to have a potentially significant impact. A map of areas within the County potentially containing NOA is included in Appendix A.

<u>Construction-Generated PM</u>. Construction of the proposed project would result in short-term emissions of PM, including fugitive dust and diesel-exhaust PM, primarily during the initial site preparation and grading phase. These activities could result in localized PM concentrations that may result in adverse nuisance impacts to nearby sensitive receptors. As noted in Impact AQ-3, localized uncontrolled concentrations of construction-generated PM would be considered to have a potentially significant impact.

<u>Mitigation Measures</u>

Implement Mitigation Measure AQ-1, as identified in Impact AQ-3 above, for the control of PM emitted during construction, as well as emissions from operational impacts.

Mitigation Measures AQ-4:

a. Prior to issuance of a grading permit, a permit to operate shall be obtained from the SLOAPCD for any diesel emergency back-up generator, 50 hp or greater, that is included as part of the project plans. If the applicant decides to add a permit-required generator to the facility after the occupancy permit, then this mitigation measure is official notice to the applicant that an APCD permit is required prior to the installation of the proposed generator.
b. Prior to any grading activities a geologic evaluation shall be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the SLOAPCD. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. These requirements may include:
    1. Development of an Asbestos Dust Mitigation Plan, which must be approved by the SLOAPCD prior to construction, and
    2. Development and approval of an Asbestos Health and Safety Program (potentially required for some projects).

Significance After Mitigation

With proposed mitigation, impacts would be reduced to a less than significant level.

Impact AQ-5. Would the project create objectionable odors affecting a substantial number of people?

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

The proposed project would not result in the installation of any equipment or processes that would be considered a major odor-emission source. However, construction of the proposed project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition pavement coatings and architectural coatings used during project construction would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. For these reasons, potential exposure of sensitive receptors to odorous emissions would be considered less than significant.

Greenhouse Gas Emissions and Climate Change

A. Environmental Setting

Global climate change refers to changes in average climatic conditions on the Earth as a whole, including temperature, wind patterns, ocean currents, and precipitation. Global temperatures are moderated by naturally occurring atmospheric gases, known as "greenhouse gases" (GHG), including water vapor, carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent heat from escaping, thus warming the Earth's atmosphere. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF6), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion. There are typically two terms used when discussing the impacts of climate change: "Greenhouse Gas Mitigation" and "Adaptation." "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or mitigate the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change, such as adjusting transportation design standards to withstand more intense storms and higher sea levels (Caltrans 2013).

B. Regulatory Setting

1. Federal

The U.S. EPA and the National Highway Traffic Safety Administration are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

Executive Order 13514 (October 5, 2009). This order is focused on reducing GHGs internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions. U.S. EPA in conjunction with NHTSA issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.

The U.S. EPA and the National Highway Traffic Safety Administration are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons (MMT) and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut GHG emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish GHG emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO2 emissions by about 270 MMT and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles (Caltrans 2013).

2. State of California

Assembly Bill 1493, Pavley, Vehicular Emissions: Greenhouse Gases, 2002. This bill requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005). The goal of this EO is to reduce California's GHG emissions to 1) year 2000 levels by 2010, 2) year 1990 levels by 2020, and 3) 80 percent below the year 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of AB 32.

Assembly Bill 32, Núñez and Pavley, The Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that

CARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (October 18, 2006). This order establishes the responsibilities and roles of the Secretary of the CalEPA and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007). This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill 97 Chapter 185, 2007, Greenhouse Gas Emissions. This bill required the Governor's Office of Planning and Research to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection. This bill requires the CARB to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 Chapter 585, 2009 California Transportation Plan. This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

California Building Code. The California Building Code contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Code is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Green Building Standards

In essence, green buildings standards are indistinguishable from any other building standards. Both are contained in the California Building Code and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

AB 32, which mandates the reduction in greenhouse gas emissions in California to 1990 levels by 2020, increased the urgency around the adoption of green building standards. In its scoping plan for the implementation of AB 32, the CARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. In recommending a green building strategy as one element of the scoping plan, the CARB estimated that green building standards would reduce GHG emissions by approximately 26 million metric tons of CO_2e ($MMTCO_2e$) by 2020 (BSC 2011).

2013 Green Building Code

Effective January 2014, the Building Standards Commission adopted the 2013 California Green Building Standards Code, also known as the 2013 CALGreen Code (California Code of Regulations, Title 24, Part 11). The 2010 CALGreen Code was evaluated for updates during the 2012 Triennial Code Adoption Cycle. HCD evaluated stakeholder input, changes in technology, implementation of sustainable building goals in California, and changes in statutory requirements. As such, the scope of CALGreen was expanded to include both low-rise and high-residential structures, additions and alterations. The 2013 CALGreen Code is not an isolated code and must be used in conjunction with other parts of Title 24 to achieve code compliance and ensure minimum standards for public health and safety. Awareness of energy and performance standards in Part 6, the California Energy Code, is also necessary to ensure compliance.

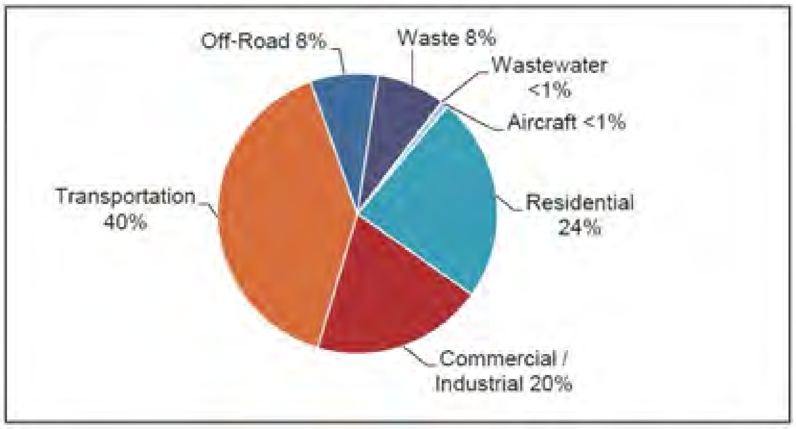
3. Local

San Luis Obispo County Air Pollution Control District. The SLOAPCD is a local public agency with the primary mission of realizing and preserving clean air for all county residents and businesses. Responsibilities of the SLOAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by federal and state regulatory requirements.

City of Paso Robles Climate Action Plan. The City of Paso Robles Climate Action Plan (CAP) was adopted by the City Council on November 18th, 2013. The CAP is a long-range plan to reduce greenhouse gas (GHG) emissions from City government operations and community activities within Paso Robles and prepare for the anticipated effects of climate change. The CAP will also help achieve multiple community goals such as lowering energy costs, reducing air pollution, supporting local economic development, and improving public health and quality of life (City of Paso Robles, 2013).

According to the GHG emissions inventory identified in the CAP, in 2005, the Paso Robles community emitted approximately 169,557 metric tons of carbon dioxide equivalent GHG emissions (MT CO_2e), as a result of activities that took place within the transportation, residential energy use, commercial and industrial energy use, off-road vehicles and equipment, solid waste, aircraft and wastewater sectors. As shown in Figure 1, the largest contributors of GHG emissions were the transportation (40 percent), residential energy use (24 percent) and commercial/industrial energy use (20 percent) sectors. The remainder of emissions resulted from the solid waste (eight percent), off-road vehicles and equipment (8 percent), aircraft (less than one percent), and wastewater (less than one percent) sectors (City of Paso Robles, 2013).

Figure 1. City of Paso Robles
Community-Wide GHG Emissions (2005)



In accordance with SLOAPCD-recommended significance thresholds, as discussed above, projects that are determined to be consistent with the GHG-reduction plan, or in this case the CAP, would be considered to have a less-than-significant impact. To assist with this determination, the CAP includes a worksheet that identifies various "mandatory", as well as, "voluntary" measures. All "mandatory" actions must be incorporated as binding and enforceable components of the project to be considered consistent with the CAP. If a project cannot meet one or more of the "mandatory" actions, substitutions may be allowed provided equivalent reductions can be achieved. In addition, to demonstrate consistency with the CAP, all required measures must be incorporated as binding and enforceable components of the project. A copy of the City's CAP consistency worksheet is included in Appendix B.

C. Impact Analysis

1. Methodology

The methodologies used for quantification of GHG emissions are consistent with those discussed earlier in this report for the quantification of criteria air pollutants. Modeling assumptions and output files are included in Appendix C of this report.

2. Thresholds of Significance

The SLOAPCD has adopted recommended GHG significance thresholds. These thresholds are based on AB 32 GHG emission reduction goals, which take into consideration the emission reduction strategies outlined in ARB's Scoping Plan. The GHG significance thresholds include one qualitative threshold and two quantitative thresholds options for evaluation of operational GHG emissions. The qualitative threshold option is based on a consistency analysis in comparison to a Qualified Greenhouse Gas Reduction Strategy, or equitably similar adopted policies, ordinances and programs. If a project complies with a Qualified Greenhouse Gas Reduction Strategy that is specifically applicable to the project, then the project would be considered less than significant.

In accordance with SLOAPCD significance thresholds, the project would be considered to result in a significant impact if it does not comply with a Qualified Greenhouse Gas Reduction Strategy, in this case the one included in the City's adopted Climate Action Plan (CAP). The CAP includes a "Consistency Worksheet", which identifies various mandatory and voluntary actions designed to reduce GHG emissions. The CAP Consistency Worksheet can be used to demonstrate project-level compliance with the CAP. The project would be considered inconsistent with the CAP if it does not incorporate, at a minimum, the mandatory project-level GHG-reduction measures, as identified in the CAP Consistency Worksheet . The CAP Consistency Worksheet is included in Appendix B of this report.

3. Project Impacts and Mitigation Measures

Impact GHG-1. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 from mobile sources. To a lesser extent, other GHG pollutants, such as CH_4 and N_2O, would also be generated. Short-term and long-term GHG emissions associated with the development of the proposed project are discussed in greater detail, as follows:

Short-term Construction GHG Emissions. Estimated increases in GHG emissions associated with construction of the proposed project are summarized in Table 10. Based on the modeling conducted, annual emissions of greenhouse gases associated with construction of the proposed project would range from approximately 686.7 to 1,151.6 MTCO2**e**. Amortized GHG emissions, when averaged over the assumed 50-year life of the project, would total approximately 96.8 MTCO2**e**/year. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions may vary, depending on the final construction schedules, equipment required, and activities conducted.

Table 10.
Construction-Generated GHG Emissions Without Mitigation

Construction Year	GHG Emissions ($MTCO_2e$/year)
2016	1,151.6
2017	760.9
2018	836.6
2019	700.6
2020	686.7
2021	702.6
Total	*4,839.1*
*Amortized Construction Emissions **	**96.8**

** Amortized emissions are based on an estimated 50-year project life. See Appendix C for modeling assumptions and results.*

Long-term Operational GHG Emissions. Estimated long-term increases in GHG emissions associated with the proposed project are summarized in Table 11. Based on the modeling conducted, operational GHG emissions would be predominantly associated with mobile sources and energy use. To a lesser extent, GHG emissions would also be associated with solid waste generation, as well as, water use and conveyance. With amortized construction-generated emissions, annual emissions would total approximately 3,166 $MTCO_2e$/year. However, as described in Impact GHG-2, the project would be consistent with the Greenhouse Gas Reduction Strategy included in the CAP, so both construction and operational impacts would be less than significant.

Table 11.
Operational GHG Emissions Without Mitigation

Source	GHG Emissions ($MTCO_2e$/year)
Area Source	110.9
Energy Use	853.8
Motor Vehicles	1,943.1
Waste Generation	110.8
Water Use and Conveyance	51.0
Total Project-Generated Emissions	*3,069.6*
Construction (amortized annually)	96.8
Total	**3,166.4**
Appendix C for modeling assumptions and results.	

Impact GHG-2. Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The City of Paso Robles CAP was adopted by the City Council on November 18th, 2013. The CAP is a long-range plan to reduce greenhouse gas (GHG) emissions from City government operations and community activities within Paso Robles and prepare for the anticipated effects of climate change. The CAP will also help achieve multiple community goals such as lowering energy costs, reducing air pollution, supporting local economic development, and improving public health and quality of life (City of Paso Robles, 2013). To help achieve these goals, the CAP includes a "Consistency Worksheet", which identifies various mandatory and voluntary actions designed to reduce GHG emissions. The CAP Consistency Worksheet can be used to demonstrate project-level compliance with the CAP.

A CAP consistency worksheet for the proposed project is included in Appendix B of this report. As depicted in the worksheet, proposed land uses would be consistent with proposed Specific Plan designations and zoning, and would implement all applicable mandatory measures identified in the City's CAP. The proposed project would also include numerous voluntary measures, which would further reduce project-generated GHG emissions. For these reasons, the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be considered less than significant.

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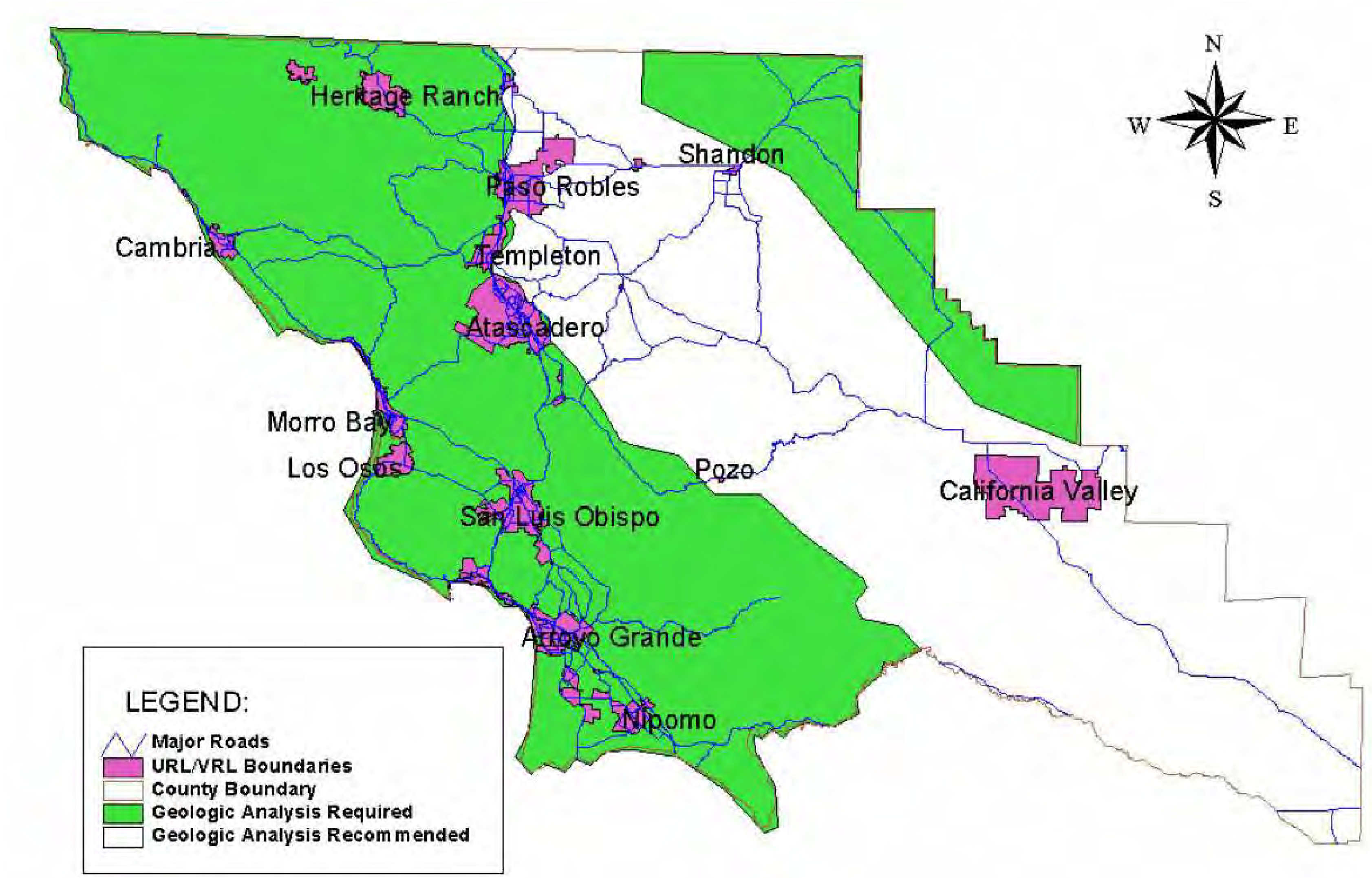
Appendix A

Areas of Known Naturally Occurring Asbestos

Areas Likely to Contain Naturally Occurring Asbestos



Source: SLOAPCD April 2012

Appendix B

Climate Action Plan (CAP) Consistency Worksheet

CAP Consistency Worksheet

The City of Paso Robles CAP was developed to comprehensively analyze and mitigate the significant effects of GHG emissions consistent with CEQA Guidelines Section 15183.S(b) and to support the State's efforts to reduce GHG emissions under Executive Order S-3-05 and AB 32 (see CAP Chapter 1, Sections 1.1 and 1.4). Pursuant to CEQA Guidelines Sections 15064(h)(3) and 15130(d), if a project is consistent and complies with the requirements of an adopted plan, such as a CAP, that includes the attributes specified in CEQA Guidelines Section 15183.S(h), the lead agency may determine that the project's GHG impacts are less than significant with no further analysis required. This appendix sets forth a CAP consistency worksheet that an applicant may use to demonstrate project compliance with the CAP. This checklist should be filled out for each new project, subject to discretionary review of the City of Paso Robles.

To determine project consistency and compliance with the CAP, the applicant should complete Sections A and B below, providing project-level details in the space provided. Generally, only projects that are consistent with the General Plan land use designations, and SLOCOG population and employment projections, upon which the GHG emissions modeling and CAP is based, can apply for a determination of consistency with the CAP. In addition, all mandatory actions identified in Section B must be incorporated as binding and enforceable components of the project for it to be found consistent with the CAP. If an action is not applicable to the proposed project, please identify and explain.

At this time, the voluntary actions are not required for project consistency with the CAP; however, if a project does include voluntary actions identified in Section B, project-level details should be described to help the City track implementation of voluntary CAP actions that would contribute to Paso Robles's achievement of its GHG emissions reduction target.

If the project cannot meet one or more of the mandatory actions, substitutions (preferably starting with the voluntary actions) may be allowed if the applicant can demonstrate how substituted actions would achieve equivalent reductions to the City's satisfaction . The applicant would also be required to demonstrate that the project would not substantially interfere with implementation of the mandatory CAP actions.

If it is determined that a proposed project is not consistent with the CAP, further analysis would be required and the applicant would be required to demonstrate that the proposed project's GHG emissions fall below the APCD's adopted GHG significance thresholds (see CAP Chapter 1, Section 1.8.3, and **Table** 1-2). The project would also be required to demonstrate that it would not substantially interfere with implementation of the CAP.

CITY OF PASO ROBLES CLIMATE ACTION PLAN CONSISTENCY WORKSHEET

Date	December 15, 2015
Project Name	River Oaks II
Project Address	No address; (within Borkey Area Specific Plan)
Project Type	Residential/Specific Plan
Project Size	131 acres
Existing General Plan Land Use Designation(s)	Specific Plan; Agriculture (AG)
Proposed General Plan Land Use Designation(s)	Specific Plan; Residential (RSF-4); Specific Plan amended to ensure consistency
Existing Zoning Designation(s)	Specific Plan; Agriculture-PD
Proposed Zoning Designation(s)	Specific Plan; Residential (R-1); Specific Plan amended to ensure consistency
Project Service Population (Residents + Employees)	721 residents (271 dwellings x 2.66 du/dwelling); consistent with GP Projections
Brief Project Description	See Air Quality and Greenhouse Gas Analysis

CITY OF PASO ROBLES CLIMATE ACTION PLAN CONSISTENCY WORKSHEET

CAP Measures Compliance Worksheet				
Measure	**Project Actions**	**Mandatory or Voluntary**	**Does Project Comply?**	**Details of Compliance**
Energy				
Measure E-4: Incentives for Exceeding Title 24 Energy Efficiency Building Standards	Does the project exceed 2013 Title 24 Building Energy Efficiency Standards?	Voluntary	No	Project will comply with Building Code updates
Measure E-5: Energy Efficient Public Lighting Realm	Does the project use high efficiency lights in parking, streets, and other public areas?	**Mandatory**	Yes	
Measure E-6: Small Scale Onsite Solar PV Incentive Program	Does the project include installation of small-scale on-site solar PV systems and/or solar hot water heaters? If so, what type and how much renewable energy would be generated?	Voluntary	No	
Measure E-7: Income-Qualified Solar PV Program	Does the project include installation of small-scale on-site solar PV systems and/or solar hot water heaters on income-qualified housing units? If so, what type and how much renewable energy would be generated?	Voluntary	No	
Transportation and Land Use				
Measure TL-1: Bicycle Network	For subdivisions and large developments, does the project incorporate bicycle lanes, routes, and/or shared use paths into street system to provide a continuous network of routes, facilitated with markings, signage, and bicycle parking?	**Mandatory**	Yes	
	For non-residential development, does the project comply with mandatory California Green Building Standards Code bicycle parking standards?	**Mandatory**	Yes	Applies to health and wellness center
	Does the project incorporate bicycle facilities and/or other amenities beyond those required?	Voluntary	No	
Measure TL-2: Pedestrian Network	Does the project provide a pedestrian access network that internally links all uses and connects all existing or planned external streets and pedestrian facilities contiguous with the project site?	**Mandatory**	Yes	
	Does the project minimize barriers to pedestrian access and interconnectivity?	**Mandatory**	Yes	
	Does the project implement traffic calming improvements as appropriate (e.g., marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, median islands, mini-circles, tight corner radii, etc.)?	**Mandatory**	Yes	
	Does the project incorporate pedestrian facilities and/or amenities beyond those required?	Voluntary	Yes	Trail network will be included
Measure TL-3: Expand Transit Network	Does the project provide safe and convenient access to public transit within and/or contiguous to the project area?	**Mandatory**	Yes	

CITY OF PASO ROBLES CLIMATE ACTION PLAN CONSISTENCY WORKSHEET

CAP Measures Compliance Worksheet				
Measure	**Project Actions**	**Mandatory or Voluntary**	**Does Project Comply?**	**Details of Compliance**
Measure TL-6: Parking Supply Management	Does the project include a reduced number of parking spaces or use shared parking?	Voluntary	No	
Measure TL-7: Electric vehicle Network and Refueling Stations	Does the project include the installation of electric or other alternative fueling stations?	Voluntary	No	
Measure TL-8: Infill Development	Is the project consistent with the City's land use and zoning code?	**Mandatory**	Yes	Specific Plan is consistent with General Plan
	Does the project include any "smart growth" techniques, such as mixed use, higher density, and/or infill development near existing or planned transit routes, in existing community centers/downtowns, and/or in other designated areas?	Voluntary	Yes	Will have centralized community center to serve the neighborhood
Off-Road				
Measure O-1: Equipment Upgrades, Retrofits, and Replacements	If the project involves construction or demolition, does equipment use low- or zero-emission vehicles or equipment?	Voluntary	TBD	To be determined based on contractors
Water				
Measure W-1: Exceed SB X7-7 (Water Conservation Act of 2009), Water Conservation Target	Does the project meet CALGreen Tier 1 or Tier 2 standards for water efficiency and conservation?	**Mandatory**	Yes	
	Does the project incorporate grey water or recycled water infrastructure?	Voluntary	When available	
Solid Waste				
Measure S-1: Solid Waste Diversion Rates	If the project involves construction or demolition, will the contractor divert 65 percent of non-hazardous construction or demolition debris?	**Mandatory**	Yes	
	Does the project provide receptacles for the collection of organic waste?	Voluntary	TBD	Will work with local waste hauler
	Does the project include composting facilities?	Voluntary	No	
Tree Planting				
Measure T-1: Tree Planting Program	Does the project include the planting of native and drought-tolerant trees beyond those required as mitigation for tree removal? If so, how many?	**Mandatory**	Yes	Trees will be planted at the same density as has occurred in the neighboring River Oaks I development, which was 3,200 trees over 196 acres (16 trees per acre). Applying the same rate to the 131-acre project site yields 2,140 trees.

Appendix C

Emissions Modeling

River Oaks II

San Luis Obispo County, Annual

1.1 Project Characteristics

1.2 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Health Club	5.00	1000sqft	0.11	5,000.00	0
Retirement Community	144.00	Dwelling Unit	28.80	144,000.00	412
Single Family Housing	127.00	Dwelling Unit	41.23	228,600.00	363

1.3 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.4 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - see notes per project description

Grading - Phasing assumed to be about 50 du/yr, and 20 acres disturned and graded in each phase

Trips and VMT - Grading and site prep trips assumed to be equal by phase

Vehicle Trips - Trip generation rates per traffic study.

Woodstoves - No woodstoves; fierplaces are gas-only

Water And Wastewater - No septic tanks will be in project. Water use modeled is the default vcalue, which is a worst case compared to actual anticipatred water use.

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

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2.1 Emissions Summary

2.2 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.8398	9.0495	7.0110	0.0126	1.1535	0.3641	1.5175	0.5329	0.3362	0.8691	0.0000	1,148.5926	1,148.5926	0.1447	0.0000	1,151.6311
2017	0.6106	6.3455	5.0646	8.4600e-003	0.9582	0.2792	1.2374	0.4828	0.2580	0.7408	0.0000	758.4239	758.4239	0.1204	0.0000	760.9530
2018	0.6551	6.6554	5.6563	9.4300e-003	1.3441	0.2983	1.6424	0.6945	0.2765	0.9710	0.0000	833.3910	833.3910	0.1516	0.0000	836.5746
2019	0.4919	4.9712	4.3776	8.0600e-003	0.9490	0.2123	1.1613	0.4803	0.1962	0.6765	0.0000	698.0975	698.0975	0.1187	0.0000	700.5903
2020	0.4613	4.4790	4.2206	8.0800e-003	0.9498	0.1914	1.1412	0.4805	0.1769	0.6574	0.0000	684.1835	684.1835	0.1186	0.0000	686.6740
2021	6.3255	4.0096	4.1398	8.3000e-003	0.9606	0.1733	1.1339	0.4834	0.1604	0.6438	0.0000	700.1198	700.1198	0.1193	0.0000	702.6250
Total	**9.3842**	**35.5102**	**30.4699**	**0.0549**	**6.3150**	**1.5186**	**7.8337**	**3.1545**	**1.4041**	**4.5586**	**0.0000**	**4,822.8082**	**4,822.8082**	**0.7733**	**0.0000**	**4,839.0480**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.8398	9.0495	7.0110	0.0126	1.1535	0.3641	1.5175	0.5329	0.3362	0.8691	0.0000	1,148.5920	1,148.5920	0.1447	0.0000	1,151.6305
2017	0.6106	6.3455	5.0646	8.4600e-003	0.9582	0.2792	1.2374	0.4828	0.2580	0.7408	0.0000	758.4234	758.4234	0.1204	0.0000	760.9525
2018	0.6551	6.6554	5.6563	9.4300e-003	1.3441	0.2983	1.6424	0.6945	0.2765	0.9710	0.0000	833.3904	833.3904	0.1516	0.0000	836.5740
2019	0.4919	4.9712	4.3776	8.0600e-003	0.9490	0.2123	1.1613	0.4803	0.1962	0.6765	0.0000	698.0970	698.0970	0.1187	0.0000	700.5899
2020	0.4613	4.4790	4.2206	8.0800e-003	0.9498	0.1914	1.1412	0.4805	0.1769	0.6574	0.0000	684.1831	684.1831	0.1186	0.0000	686.6736
2021	6.3255	4.0096	4.1398	8.3000e-003	0.9606	0.1733	1.1339	0.4834	0.1604	0.6438	0.0000	700.1193	700.1193	0.1193	0.0000	702.6246
Total	**9.3842**	**35.5102**	**30.4699**	**0.0549**	**6.3150**	**1.5186**	**7.8337**	**3.1545**	**1.4041**	**4.5586**	**0.0000**	**4,822.8052**	**4,822.8052**	**0.7733**	**0.0000**	**4,839.0450**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.1855	0.0426	3.6937	1.9000e-004		0.0277	0.0277		0.0276	0.0276	0.0000	110.1496	110.1496	7.8100e-003	1.9100e-003	110.9054
Energy	0.0361	0.3086	0.1335	1.9700e-003		0.0249	0.0249		0.0249	0.0249	0.0000	849.7085	849.7085	0.0291	0.0112	853.7780
Mobile	1.1452	2.4871	10.7784	0.0280	1.9588	0.0369	1.9957	0.5250	0.0341	0.5590	0.0000	1,941.6473	1,941.6473	0.0681	0.0000	1,943.0772
Waste						0.0000	0.0000		0.0000	0.0000	49.4425	0.0000	49.4425	2.9220	0.0000	110.8039
Water						0.0000	0.0000		0.0000	0.0000	6.3516	39.7778	46.1294	0.0237	0.0142	51.0236
Total	**3.3667**	**2.8383**	**14.6056**	**0.0301**	**1.9588**	**0.0895**	**2.0483**	**0.5250**	**0.0866**	**0.6116**	**55.7941**	**2,941.2832**	**2,997.0774**	**3.0507**	**0.0272**	**3,069.5880**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.0621	0.0404	3.4720	1.8000e-004		0.0264	0.0264		0.0263	0.0263	0.0000	109.6973	109.6973	7.1200e-003	1.9100e-003	110.4385
Energy	0.0361	0.3086	0.1335	1.9700e-003		0.0249	0.0249		0.0249	0.0249	0.0000	743.8077	743.8077	0.0243	0.0102	747.4695
Mobile	1.1101	2.2910	10.1126	0.0254	1.7678	0.0337	1.8015	0.4738	0.0311	0.5048	0.0000	1,758.8235	1,758.8235	0.0622	0.0000	1,760.1304
Waste						0.0000	0.0000		0.0000	0.0000	24.7213	0.0000	24.7213	1.4610	0.0000	55.4019
Water						0.0000	0.0000		0.0000	0.0000	4.4461	26.0019	30.4481	0.0165	9.9100e-003	33.8669
Total	**3.2083**	**2.6399**	**13.7182**	**0.0275**	**1.7678**	**0.0850**	**1.8528**	**0.4738**	**0.0823**	**0.5561**	**29.1674**	**2,638.3304**	**2,667.4978**	**1.5711**	**0.0220**	**2,707.3072**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.71**	**6.99**	**6.08**	**8.76**	**9.75**	**5.08**	**9.55**	**9.75**	**4.98**	**9.08**	**47.72**	**10.30**	**11.00**	**48.50**	**19.31**	**11.80**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	1,274.400 0
Vegetation Land Change	0.0000
Total	**1,274.400 0**

3.1 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation - Phase 1	Site Preparation	6/1/2016	9/1/2016	5	67	
2	Grading - Phase 1	Grading	6/1/2016	9/1/2016	5	67	
3	Building Construction - Phase 1	Building Construction	9/1/2016	12/1/2016	5	66	
4	Site Preparation - Phase 2	Site Preparation	6/1/2017	9/1/2017	5	67	
5	Grading - Phase 2	Grading	6/1/2017	9/1/2017	5	67	
6	Building Construction - Phase 2	Building Construction	9/1/2017	12/1/2017	5	66	
7	Site Preparation - Phase 3	Site Preparation	6/1/2018	9/1/2018	5	66	
8	Grading - Phase 3	Grading	6/1/2018	9/1/2018	5	66	
9	Building Construction - Phase 3	Building Construction	9/1/2018	12/1/2018	5	65	
10	Site Preparation - Phase 4	Site Preparation	6/3/2019	9/3/2019	5	67	
11	Grading - Phase 4	Grading	6/3/2019	9/3/2019	5	67	
12	Building Construction - Phase 4	Building Construction	9/1/2019	12/1/2019	5	65	
13	Site Preparation - Phase 5	Site Preparation	6/1/2020	9/1/2020	5	67	
14	Grading - Phase 5	Grading	6/1/2020	9/1/2020	5	67	
15	Building Construction - Phase 5	Building Construction	9/1/2020	12/1/2020	5	66	
16	Architectural Coating	Architectural Coating	5/21/2021	9/2/2021	5	75	
17	Site Preparation - Phase 6	Site Preparation	6/1/2021	9/1/2021	5	67	
18	Grading - Phase 6	Grading	6/1/2021	9/1/2021	5	67	
19	Building Construction - Phase 6	Building Construction	9/1/2021	12/1/2021	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 754,515; Residential Outdoor: 251,505; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation - Phase 1	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 1	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 1	Excavators	2	8.00	162	0.38
Grading - Phase 1	Graders	1	8.00	174	0.41
Grading - Phase 1	Pavers	2	8.00	125	0.42
Grading - Phase 1	Paving Equipment	2	8.00	130	0.36
Grading - Phase 1	Rollers	2	8.00	80	0.38
Grading - Phase 1	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 1	Scrapers	2	8.00	361	0.48
Grading - Phase 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 1	Cranes	1	7.00	226	0.29
Building Construction - Phase 1	Forklifts	3	8.00	89	0.20
Building Construction - Phase 1	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 1	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 1	Welders	1	8.00	46	0.45
Site Preparation - Phase 2	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 2	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 2	Excavators	2	8.00	162	0.38
Grading - Phase 2	Graders	1	8.00	174	0.41
Grading - Phase 2	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 2	Scrapers	2	8.00	361	0.48
Grading - Phase 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 2	Cranes	1	7.00	226	0.29
Building Construction - Phase 2	Forklifts	3	8.00	89	0.20
Building Construction - Phase 2	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 2	Welders	1	8.00	46	0.45

Site Preparation - Phase 3	Air Compressors	1	6.00	78	0.48
Site Preparation - Phase 3	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation - Phase 3	Excavators	3	8.00	162	0.38
Site Preparation - Phase 3	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation - Phase 3	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 3	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 3	Excavators	2	8.00	162	0.38
Grading - Phase 3	Graders	1	8.00	174	0.41
Grading - Phase 3	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 3	Scrapers	2	8.00	361	0.48
Grading - Phase 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 3	Cranes	1	7.00	226	0.29
Building Construction - Phase 3	Forklifts	3	8.00	89	0.20
Building Construction - Phase 3	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 3	Welders	1	8.00	46	0.45
Site Preparation - Phase 4	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 4	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 4	Excavators	2	8.00	162	0.38
Grading - Phase 4	Graders	1	8.00	174	0.41
Grading - Phase 4	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 4	Scrapers	2	8.00	361	0.48
Grading - Phase 4	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 4	Cranes	1	7.00	226	0.29
Building Construction - Phase 4	Forklifts	3	8.00	89	0.20
Building Construction - Phase 4	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 4	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 4	Welders	1	8.00	46	0.45

Site Preparation - Phase 5	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 5	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 5	Excavators	2	8.00	162	0.38
Grading - Phase 5	Graders	1	8.00	174	0.41
Grading - Phase 5	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 5	Scrapers	2	8.00	361	0.48
Grading - Phase 5	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 5	Cranes	1	7.00	226	0.29
Building Construction - Phase 5	Forklifts	3	8.00	89	0.20
Building Construction - Phase 5	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 5	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 5	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation - Phase 6	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 6	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 6	Excavators	2	8.00	162	0.38
Grading - Phase 6	Graders	1	8.00	174	0.41
Grading - Phase 6	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 6	Scrapers	2	8.00	361	0.48
Grading - Phase 6	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 6	Cranes	1	7.00	226	0.29
Building Construction - Phase 6	Forklifts	3	8.00	89	0.20
Building Construction - Phase 6	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 6	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 6	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation - Phase 1	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 1	14	20.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 1	14	0.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 1	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 2	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 2	8	20.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 2	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 3	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 3	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 4	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 4	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 4	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 5	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 5	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 5	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 6	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 6	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 6	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.2 Mitigation Measures Construction

3.3 Site Preparation - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1701	1.8302	1.3770	1.3100e-003		0.0985	0.0985		0.0906	0.0906	0.0000	123.5383	123.5383	0.0373	0.0000	124.3208
Total	**0.1701**	**1.8302**	**1.3770**	**1.3100e-003**	**0.6052**	**0.0985**	**0.7037**	**0.3327**	**0.0906**	**0.4233**	**0.0000**	**123.5383**	**123.5383**	**0.0373**	**0.0000**	**124.3208**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7400e-003	4.3100e-003	0.0384	7.0000e-005	5.8100e-003	5.0000e-005	5.8500e-003	1.5400e-003	4.0000e-005	1.5900e-003	0.0000	4.9509	4.9509	3.0000e-004	0.0000	4.9571
Total	**2.7400e-003**	**4.3100e-003**	**0.0384**	**7.0000e-005**	**5.8100e-003**	**5.0000e-005**	**5.8500e-003**	**1.5400e-003**	**4.0000e-005**	**1.5900e-003**	**0.0000**	**4.9509**	**4.9509**	**3.0000e-004**	**0.0000**	**4.9571**

3.2 Site Preparation - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1701	1.8302	1.3770	1.3100e-003		0.0985	0.0985		0.0906	0.0906	0.0000	123.5382	123.5382	0.0373	0.0000	124.3207
Total	**0.1701**	**1.8302**	**1.3770**	**1.3100e-003**	**0.6052**	**0.0985**	**0.7037**	**0.3327**	**0.0906**	**0.4233**	**0.0000**	**123.5382**	**123.5382**	**0.0373**	**0.0000**	**124.3207**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7400e-003	4.3100e-003	0.0384	7.0000e-005	5.8100e-003	5.0000e-005	5.8500e-003	1.5400e-003	4.0000e-005	1.5900e-003	0.0000	4.9509	4.9509	3.0000e-004	0.0000	4.9571
Total	**2.7400e-003**	**4.3100e-003**	**0.0384**	**7.0000e-005**	**5.8100e-003**	**5.0000e-005**	**5.8500e-003**	**1.5400e-003**	**4.0000e-005**	**1.5900e-003**	**0.0000**	**4.9509**	**4.9509**	**3.0000e-004**	**0.0000**	**4.9571**

3.3 Grading - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2871	3.2562	2.1425	2.8100e-003		0.1623	0.1623		0.1493	0.1493	0.0000	265.3520	265.3520	0.0800	0.0000	267.0328
Total	**0.2871**	**3.2562**	**2.1425**	**2.8100e-003**	**0.2123**	**0.1623**	**0.3747**	**0.1120**	**0.1493**	**0.2614**	**0.0000**	**265.3520**	**265.3520**	**0.0800**	**0.0000**	**267.0328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.2288	2.8960	2.3358	6.7100e-003	0.2654	0.0368	0.3021	0.0695	0.0338	0.1033	0.0000	612.9389	612.9389	4.3400e-003	0.0000	613.0300
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0500e-003	4.7900e-003	0.0426	7.0000e-005	0.0120	5.0000e-005	0.0121	3.0800e-003	5.0000e-005	3.1300e-003	0.0000	5.5010	5.5010	3.3000e-004	0.0000	5.5079
Total	**0.2318**	**2.9008**	**2.3784**	**6.7800e-003**	**0.2774**	**0.0368**	**0.3142**	**0.0726**	**0.0339**	**0.1064**	**0.0000**	**618.4398**	**618.4398**	**4.6700e-003**	**0.0000**	**618.5379**

3.3 Grading - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2871	3.2562	2.1425	2.8100e-003		0.1623	0.1623		0.1493	0.1493	0.0000	265.3517	265.3517	0.0800	0.0000	267.0325
Total	**0.2871**	**3.2562**	**2.1425**	**2.8100e-003**	**0.2123**	**0.1623**	**0.3747**	**0.1120**	**0.1493**	**0.2614**	**0.0000**	**265.3517**	**265.3517**	**0.0800**	**0.0000**	**267.0325**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.2288	2.8960	2.3358	6.7100e-003	0.2654	0.0368	0.3021	0.0695	0.0338	0.1033	0.0000	612.9389	612.9389	4.3400e-003	0.0000	613.0300
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0500e-003	4.7900e-003	0.0426	7.0000e-005	0.0120	5.0000e-005	0.0121	3.0800e-003	5.0000e-005	3.1300e-003	0.0000	5.5010	5.5010	3.3000e-004	0.0000	5.5079
Total	**0.2318**	**2.9008**	**2.3784**	**6.7800e-003**	**0.2774**	**0.0368**	**0.3142**	**0.0726**	**0.0339**	**0.1064**	**0.0000**	**618.4398**	**618.4398**	**4.6700e-003**	**0.0000**	**618.5379**

3.4 Building Construction - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1124	0.9407	0.6107	8.8000e-004		0.0649	0.0649		0.0610	0.0610	0.0000	79.9107	79.9107	0.0198	0.0000	80.3269
Total	**0.1124**	**0.9407**	**0.6107**	**8.8000e-004**		**0.0649**	**0.0649**		**0.0610**	**0.0610**	**0.0000**	**79.9107**	**79.9107**	**0.0198**	**0.0000**	**80.3269**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.0815	0.1448	1.7000e-004	4.4100e-003	1.1300e-003	5.5400e-003	1.2600e-003	1.0400e-003	2.3000e-003	0.0000	15.2174	15.2174	1.3000e-004	0.0000	15.2201
Worker	0.0228	0.0358	0.3192	5.4000e-004	0.0483	3.9000e-004	0.0487	0.0128	3.5000e-004	0.0132	0.0000	41.1835	41.1835	2.4700e-003	0.0000	41.2354
Total	**0.0357**	**0.1173**	**0.4640**	**7.1000e-004**	**0.0527**	**1.5200e-003**	**0.0542**	**0.0141**	**1.3900e-003**	**0.0155**	**0.0000**	**56.4009**	**56.4009**	**2.6000e-003**	**0.0000**	**56.4555**

3.4 Building Construction - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1124	0.9407	0.6107	8.8000e-004		0.0649	0.0649		0.0610	0.0610	0.0000	79.9106	79.9106	0.0198	0.0000	80.3268
Total	**0.1124**	**0.9407**	**0.6107**	**8.8000e-004**		**0.0649**	**0.0649**		**0.0610**	**0.0610**	**0.0000**	**79.9106**	**79.9106**	**0.0198**	**0.0000**	**80.3268**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.0815	0.1448	1.7000e-004	4.4100e-003	1.1300e-003	5.5400e-003	1.2600e-003	1.0400e-003	2.3000e-003	0.0000	15.2174	15.2174	1.3000e-004	0.0000	15.2201
Worker	0.0228	0.0358	0.3192	5.4000e-004	0.0483	3.9000e-004	0.0487	0.0128	3.5000e-004	0.0132	0.0000	41.1835	41.1835	2.4700e-003	0.0000	41.2354
Total	**0.0357**	**0.1173**	**0.4640**	**7.1000e-004**	**0.0527**	**1.5200e-003**	**0.0542**	**0.0141**	**1.3900e-003**	**0.0155**	**0.0000**	**56.4009**	**56.4009**	**2.6000e-003**	**0.0000**	**56.4555**

3.5 Site Preparation - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1621	1.7337	1.3198	1.3100e-003		0.0923	0.0923		0.0849	0.0849	0.0000	121.6565	121.6565	0.0373	0.0000	122.4393
Total	**0.1621**	**1.7337**	**1.3198**	**1.3100e-003**	**0.6052**	**0.0923**	**0.6975**	**0.3327**	**0.0849**	**0.4176**	**0.0000**	**121.6565**	**121.6565**	**0.0373**	**0.0000**	**122.4393**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3100e-003	3.7600e-003	0.0328	7.0000e-005	5.8100e-003	4.0000e-005	5.8500e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.7572	4.7572	2.6000e-004	0.0000	4.7628
Total	**2.3100e-003**	**3.7600e-003**	**0.0328**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8500e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.7572**	**4.7572**	**2.6000e-004**	**0.0000**	**4.7628**

3.5 Site Preparation - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1621	1.7337	1.3198	1.3100e-003		0.0923	0.0923		0.0849	0.0849	0.0000	121.6564	121.6564	0.0373	0.0000	122.4392
Total	**0.1621**	**1.7337**	**1.3198**	**1.3100e-003**	**0.6052**	**0.0923**	**0.6975**	**0.3327**	**0.0849**	**0.4176**	**0.0000**	**121.6564**	**121.6564**	**0.0373**	**0.0000**	**122.4392**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3100e-003	3.7600e-003	0.0328	7.0000e-005	5.8100e-003	4.0000e-005	5.8500e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.7572	4.7572	2.6000e-004	0.0000	4.7628
Total	**2.3100e-003**	**3.7600e-003**	**0.0328**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8500e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.7572**	**4.7572**	**2.6000e-004**	**0.0000**	**4.7628**

3.6 Grading - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2043	2.3313	1.5680	2.0700e-003		0.1111	0.1111		0.1022	0.1022	0.0000	191.8676	191.8676	0.0588	0.0000	193.1022
Total	**0.2043**	**2.3313**	**1.5680**	**2.0700e-003**	**0.2123**	**0.1111**	**0.3235**	**0.1120**	**0.1022**	**0.2143**	**0.0000**	**191.8676**	**191.8676**	**0.0588**	**0.0000**	**193.1022**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1059	1.2962	1.1003	3.3500e-003	0.0756	0.0157	0.0913	0.0208	0.0144	0.0351	0.0000	301.2928	301.2928	2.0400e-003	0.0000	301.3356
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5600e-003	4.1800e-003	0.0365	7.0000e-005	6.4500e-003	5.0000e-005	6.5000e-003	1.7100e-003	4.0000e-005	1.7600e-003	0.0000	5.2858	5.2858	2.9000e-004	0.0000	5.2920
Total	**0.1085**	**1.3004**	**1.1368**	**3.4200e-003**	**0.0821**	**0.0157**	**0.0978**	**0.0225**	**0.0144**	**0.0369**	**0.0000**	**306.5786**	**306.5786**	**2.3300e-003**	**0.0000**	**306.6276**

3.6 Grading - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2043	2.3313	1.5680	2.0700e-003		0.1111	0.1111		0.1022	0.1022	0.0000	191.8674	191.8674	0.0588	0.0000	193.1020
Total	**0.2043**	**2.3313**	**1.5680**	**2.0700e-003**	**0.2123**	**0.1111**	**0.3235**	**0.1120**	**0.1022**	**0.2143**	**0.0000**	**191.8674**	**191.8674**	**0.0588**	**0.0000**	**193.1020**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1059	1.2962	1.1003	3.3500e-003	0.0756	0.0157	0.0913	0.0208	0.0144	0.0351	0.0000	301.2928	301.2928	2.0400e-003	0.0000	301.3356
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5600e-003	4.1800e-003	0.0365	7.0000e-005	6.4500e-003	5.0000e-005	6.5000e-003	1.7100e-003	4.0000e-005	1.7600e-003	0.0000	5.2858	5.2858	2.9000e-004	0.0000	5.2920
Total	**0.1085**	**1.3004**	**1.1368**	**3.4200e-003**	**0.0821**	**0.0157**	**0.0978**	**0.0225**	**0.0144**	**0.0369**	**0.0000**	**306.5786**	**306.5786**	**2.3300e-003**	**0.0000**	**306.6276**

3.7 Building Construction - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1024	0.8714	0.5983	8.8000e-004		0.0588	0.0588		0.0552	0.0552	0.0000	79.0281	79.0281	0.0195	0.0000	79.4366
Total	**0.1024**	**0.8714**	**0.5983**	**8.8000e-004**		**0.0588**	**0.0588**		**0.0552**	**0.0552**	**0.0000**	**79.0281**	**79.0281**	**0.0195**	**0.0000**	**79.4366**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0118	0.0736	0.1359	1.7000e-004	4.4100e-003	9.6000e-004	5.3700e-003	1.2600e-003	8.8000e-004	2.1500e-003	0.0000	14.9631	14.9631	1.2000e-004	0.0000	14.9657
Worker	0.0192	0.0313	0.2731	5.4000e-004	0.0483	3.6000e-004	0.0487	0.0128	3.3000e-004	0.0132	0.0000	39.5726	39.5726	2.2000e-003	0.0000	39.6189
Total	**0.0310**	**0.1049**	**0.4090**	**7.1000e-004**	**0.0527**	**1.3200e-003**	**0.0540**	**0.0141**	**1.2100e-003**	**0.0153**	**0.0000**	**54.5358**	**54.5358**	**2.3200e-003**	**0.0000**	**54.5846**

3.7 Building Construction - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1024	0.8714	0.5983	8.8000e-004		0.0588	0.0588		0.0552	0.0552	0.0000	79.0280	79.0280	0.0195	0.0000	79.4365
Total	**0.1024**	**0.8714**	**0.5983**	**8.8000e-004**		**0.0588**	**0.0588**		**0.0552**	**0.0552**	**0.0000**	**79.0280**	**79.0280**	**0.0195**	**0.0000**	**79.4365**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0118	0.0736	0.1359	1.7000e-004	4.4100e-003	9.6000e-004	5.3700e-003	1.2600e-003	8.8000e-004	2.1500e-003	0.0000	14.9631	14.9631	1.2000e-004	0.0000	14.9657
Worker	0.0192	0.0313	0.2731	5.4000e-004	0.0483	3.6000e-004	0.0487	0.0128	3.3000e-004	0.0132	0.0000	39.5726	39.5726	2.2000e-003	0.0000	39.6189
Total	**0.0310**	**0.1049**	**0.4090**	**7.1000e-004**	**0.0527**	**1.3200e-003**	**0.0540**	**0.0141**	**1.2100e-003**	**0.0153**	**0.0000**	**54.5358**	**54.5358**	**2.3200e-003**	**0.0000**	**54.5846**

3.8 Site Preparation - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9936	0.0000	0.9936	0.5462	0.0000	0.5462	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2690	2.7867	2.3039	2.7100e-003		0.1427	0.1427		0.1324	0.1324	0.0000	245.6204	245.6204	0.0705	0.0000	247.1008
Total	**0.2690**	**2.7867**	**2.3039**	**2.7100e-003**	**0.9936**	**0.1427**	**1.1364**	**0.5462**	**0.1324**	**0.6786**	**0.0000**	**245.6204**	**245.6204**	**0.0705**	**0.0000**	**247.1008**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9300e-003	3.2600e-003	0.0279	6.0000e-005	0.0156	4.0000e-005	0.0157	3.9500e-003	4.0000e-005	3.9900e-003	0.0000	4.5093	4.5093	2.3000e-004	0.0000	4.5143
Total	**1.9300e-003**	**3.2600e-003**	**0.0279**	**6.0000e-005**	**0.0156**	**4.0000e-005**	**0.0157**	**3.9500e-003**	**4.0000e-005**	**3.9900e-003**	**0.0000**	**4.5093**	**4.5093**	**2.3000e-004**	**0.0000**	**4.5143**

3.8 Site Preparation - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9936	0.0000	0.9936	0.5462	0.0000	0.5462	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2690	2.7867	2.3039	2.7100e-003		0.1427	0.1427		0.1324	0.1324	0.0000	245.6201	245.6201	0.0705	0.0000	247.1005
Total	**0.2690**	**2.7867**	**2.3039**	**2.7100e-003**	**0.9936**	**0.1427**	**1.1364**	**0.5462**	**0.1324**	**0.6786**	**0.0000**	**245.6201**	**245.6201**	**0.0705**	**0.0000**	**247.1005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9300e-003	3.2600e-003	0.0279	6.0000e-005	0.0156	4.0000e-005	0.0157	3.9500e-003	4.0000e-005	3.9900e-003	0.0000	4.5093	4.5093	2.3000e-004	0.0000	4.5143
Total	**1.9300e-003**	**3.2600e-003**	**0.0279**	**6.0000e-005**	**0.0156**	**4.0000e-005**	**0.0157**	**3.9500e-003**	**4.0000e-005**	**3.9900e-003**	**0.0000**	**4.5093**	**4.5093**	**2.3000e-004**	**0.0000**	**4.5143**

3.9 Grading - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2093	0.0000	0.2093	0.1104	0.0000	0.1104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1746	1.9646	1.3961	2.0400e-003		0.0920	0.0920		0.0846	0.0846	0.0000	185.9933	185.9933	0.0579	0.0000	187.2093
Total	**0.1746**	**1.9646**	**1.3961**	**2.0400e-003**	**0.2093**	**0.0920**	**0.3013**	**0.1104**	**0.0846**	**0.1950**	**0.0000**	**185.9933**	**185.9933**	**0.0579**	**0.0000**	**187.2093**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0936	1.0479	0.9656	2.9800e-003	0.0672	0.0137	0.0809	0.0184	0.0126	0.0310	0.0000	263.3198	263.3198	1.8100e-003	0.0000	263.3578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1400e-003	3.6200e-003	0.0310	7.0000e-005	6.3500e-003	5.0000e-005	6.4000e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.0104	5.0104	2.6000e-004	0.0000	5.0159
Total	**0.0957**	**1.0515**	**0.9966**	**3.0500e-003**	**0.0736**	**0.0137**	**0.0873**	**0.0201**	**0.0126**	**0.0328**	**0.0000**	**268.3301**	**268.3301**	**2.0700e-003**	**0.0000**	**268.3736**

3.9 Grading - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2093	0.0000	0.2093	0.1104	0.0000	0.1104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1746	1.9646	1.3961	2.0400e-003		0.0920	0.0920		0.0846	0.0846	0.0000	185.9931	185.9931	0.0579	0.0000	187.2090
Total	**0.1746**	**1.9646**	**1.3961**	**2.0400e-003**	**0.2093**	**0.0920**	**0.3013**	**0.1104**	**0.0846**	**0.1950**	**0.0000**	**185.9931**	**185.9931**	**0.0579**	**0.0000**	**187.2090**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0936	1.0479	0.9656	2.9800e-003	0.0672	0.0137	0.0809	0.0184	0.0126	0.0310	0.0000	263.3198	263.3198	1.8100e-003	0.0000	263.3578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1400e-003	3.6200e-003	0.0310	7.0000e-005	6.3500e-003	5.0000e-005	6.4000e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.0104	5.0104	2.6000e-004	0.0000	5.0159
Total	**0.0957**	**1.0515**	**0.9966**	**3.0500e-003**	**0.0736**	**0.0137**	**0.0873**	**0.0201**	**0.0126**	**0.0328**	**0.0000**	**268.3301**	**268.3301**	**2.0700e-003**	**0.0000**	**268.3736**

3.10 Building Construction - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0867	0.7560	0.5698	8.7000e-004		0.0486	0.0486		0.0457	0.0457	0.0000	76.9502	76.9502	0.0188	0.0000	77.3456
Total	**0.0867**	**0.7560**	**0.5698**	**8.7000e-004**		**0.0486**	**0.0486**		**0.0457**	**0.0457**	**0.0000**	**76.9502**	**76.9502**	**0.0188**	**0.0000**	**77.3456**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.0663	0.1298	1.7000e-004	4.3400e-003	8.7000e-004	5.2100e-003	1.2400e-003	8.0000e-004	2.0400e-003	0.0000	14.4857	14.4857	1.2000e-004	0.0000	14.4882
Worker	0.0160	0.0271	0.2322	5.3000e-004	0.0476	3.4000e-004	0.0479	0.0126	3.1000e-004	0.0130	0.0000	37.5019	37.5019	1.9500e-003	0.0000	37.5429
Total	**0.0272**	**0.0933**	**0.3620**	**7.0000e-004**	**0.0519**	**1.2100e-003**	**0.0531**	**0.0139**	**1.1100e-003**	**0.0150**	**0.0000**	**51.9876**	**51.9876**	**2.0700e-003**	**0.0000**	**52.0311**

3.10 Building Construction - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0867	0.7560	0.5698	8.7000e-004		0.0486	0.0486		0.0457	0.0457	0.0000	76.9501	76.9501	0.0188	0.0000	77.3455
Total	**0.0867**	**0.7560**	**0.5698**	**8.7000e-004**		**0.0486**	**0.0486**		**0.0457**	**0.0457**	**0.0000**	**76.9501**	**76.9501**	**0.0188**	**0.0000**	**77.3455**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.0663	0.1298	1.7000e-004	4.3400e-003	8.7000e-004	5.2100e-003	1.2400e-003	8.0000e-004	2.0400e-003	0.0000	14.4857	14.4857	1.2000e-004	0.0000	14.4882
Worker	0.0160	0.0271	0.2322	5.3000e-004	0.0476	3.4000e-004	0.0479	0.0126	3.1000e-004	0.0130	0.0000	37.5019	37.5019	1.9500e-003	0.0000	37.5429
Total	**0.0272**	**0.0933**	**0.3620**	**7.0000e-004**	**0.0519**	**1.2100e-003**	**0.0531**	**0.0139**	**1.1100e-003**	**0.0150**	**0.0000**	**51.9876**	**51.9876**	**2.0700e-003**	**0.0000**	**52.0311**

3.11 Site Preparation - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1346	1.4239	1.1661	1.3100e-003		0.0720	0.0720		0.0663	0.0663	0.0000	117.8163	117.8163	0.0373	0.0000	118.5991
Total	**0.1346**	**1.4239**	**1.1661**	**1.3100e-003**	**0.6052**	**0.0720**	**0.6773**	**0.3327**	**0.0663**	**0.3990**	**0.0000**	**117.8163**	**117.8163**	**0.0373**	**0.0000**	**118.5991**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	2.9500e-003	0.0250	7.0000e-005	5.8100e-003	4.0000e-005	5.8400e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.4115	4.4115	2.2000e-004	0.0000	4.4161
Total	**1.7100e-003**	**2.9500e-003**	**0.0250**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8400e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.4115**	**4.4115**	**2.2000e-004**	**0.0000**	**4.4161**

3.11 Site Preparation - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1346	1.4239	1.1661	1.3100e-003		0.0720	0.0720		0.0663	0.0663	0.0000	117.8162	117.8162	0.0373	0.0000	118.5989
Total	**0.1346**	**1.4239**	**1.1661**	**1.3100e-003**	**0.6052**	**0.0720**	**0.6773**	**0.3327**	**0.0663**	**0.3990**	**0.0000**	**117.8162**	**117.8162**	**0.0373**	**0.0000**	**118.5989**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	2.9500e-003	0.0250	7.0000e-005	5.8100e-003	4.0000e-005	5.8400e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.4115	4.4115	2.2000e-004	0.0000	4.4161
Total	**1.7100e-003**	**2.9500e-003**	**0.0250**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8400e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.4115**	**4.4115**	**2.2000e-004**	**0.0000**	**4.4161**

3.12 Grading - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1639	1.8156	1.3497	2.0700e-003		0.0839	0.0839		0.0772	0.0772	0.0000	185.7270	185.7270	0.0588	0.0000	186.9610
Total	**0.1639**	**1.8156**	**1.3497**	**2.0700e-003**	**0.2123**	**0.0839**	**0.2963**	**0.1120**	**0.0772**	**0.1892**	**0.0000**	**185.7270**	**185.7270**	**0.0588**	**0.0000**	**186.9610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0890	0.9591	0.9253	2.9700e-003	0.0672	0.0134	0.0807	0.0184	0.0123	0.0308	0.0000	258.7782	258.7782	1.8000e-003	0.0000	258.8160
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	3.2800e-003	0.0278	7.0000e-005	6.4500e-003	4.0000e-005	6.4900e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.9017	4.9017	2.4000e-004	0.0000	4.9068
Total	**0.0909**	**0.9624**	**0.9530**	**3.0400e-003**	**0.0737**	**0.0135**	**0.0871**	**0.0202**	**0.0124**	**0.0325**	**0.0000**	**263.6799**	**263.6799**	**2.0400e-003**	**0.0000**	**263.7227**

3.12 Grading - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1639	1.8156	1.3497	2.0700e-003		0.0839	0.0839		0.0772	0.0772	0.0000	185.7268	185.7268	0.0588	0.0000	186.9608
Total	**0.1639**	**1.8156**	**1.3497**	**2.0700e-003**	**0.2123**	**0.0839**	**0.2963**	**0.1120**	**0.0772**	**0.1892**	**0.0000**	**185.7268**	**185.7268**	**0.0588**	**0.0000**	**186.9608**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0890	0.9591	0.9253	2.9700e-003	0.0672	0.0134	0.0807	0.0184	0.0123	0.0308	0.0000	258.7782	258.7782	1.8000e-003	0.0000	258.8160
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	3.2800e-003	0.0278	7.0000e-005	6.4500e-003	4.0000e-005	6.4900e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.9017	4.9017	2.4000e-004	0.0000	4.9068
Total	**0.0909**	**0.9624**	**0.9530**	**3.0400e-003**	**0.0737**	**0.0135**	**0.0871**	**0.0202**	**0.0124**	**0.0325**	**0.0000**	**263.6799**	**263.6799**	**2.0400e-003**	**0.0000**	**263.7227**

3.13 Building Construction - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0764	0.6814	0.5564	8.7000e-004		0.0418	0.0418		0.0393	0.0393	0.0000	76.0899	76.0899	0.0185	0.0000	76.4787
Total	**0.0764**	**0.6814**	**0.5564**	**8.7000e-004**		**0.0418**	**0.0418**		**0.0393**	**0.0393**	**0.0000**	**76.0899**	**76.0899**	**0.0185**	**0.0000**	**76.4787**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0103	0.0608	0.1228	1.6000e-004	4.3400e-003	8.0000e-004	5.1500e-003	1.2400e-003	7.4000e-004	1.9800e-003	0.0000	14.2320	14.2320	1.1000e-004	0.0000	14.2344
Worker	0.0140	0.0242	0.2046	5.3000e-004	0.0476	3.2000e-004	0.0479	0.0126	3.0000e-004	0.0129	0.0000	36.1408	36.1408	1.7800e-003	0.0000	36.1783
Total	**0.0243**	**0.0850**	**0.3274**	**6.9000e-004**	**0.0519**	**1.1200e-003**	**0.0530**	**0.0139**	**1.0400e-003**	**0.0149**	**0.0000**	**50.3729**	**50.3729**	**1.8900e-003**	**0.0000**	**50.4127**

3.13 Building Construction - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0764	0.6814	0.5564	8.7000e-004		0.0418	0.0418		0.0393	0.0393	0.0000	76.0898	76.0898	0.0185	0.0000	76.4786
Total	**0.0764**	**0.6814**	**0.5564**	**8.7000e-004**		**0.0418**	**0.0418**		**0.0393**	**0.0393**	**0.0000**	**76.0898**	**76.0898**	**0.0185**	**0.0000**	**76.4786**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0103	0.0608	0.1228	1.6000e-004	4.3400e-003	8.0000e-004	5.1500e-003	1.2400e-003	7.4000e-004	1.9800e-003	0.0000	14.2320	14.2320	1.1000e-004	0.0000	14.2344
Worker	0.0140	0.0242	0.2046	5.3000e-004	0.0476	3.2000e-004	0.0479	0.0126	3.0000e-004	0.0129	0.0000	36.1408	36.1408	1.7800e-003	0.0000	36.1783
Total	**0.0243**	**0.0850**	**0.3274**	**6.9000e-004**	**0.0519**	**1.1200e-003**	**0.0530**	**0.0139**	**1.0400e-003**	**0.0149**	**0.0000**	**50.3729**	**50.3729**	**1.8900e-003**	**0.0000**	**50.4127**

3.14 Site Preparation - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1248	1.3019	1.1030	1.3100e-003		0.0647	0.0647		0.0595	0.0595	0.0000	115.2501	115.2501	0.0373	0.0000	116.0328
Total	**0.1248**	**1.3019**	**1.1030**	**1.3100e-003**	**0.6052**	**0.0647**	**0.6699**	**0.3327**	**0.0595**	**0.3922**	**0.0000**	**115.2501**	**115.2501**	**0.0373**	**0.0000**	**116.0328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5400e-003	2.6800e-003	0.0225	7.0000e-005	5.8100e-003	4.0000e-005	5.8400e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.2340	4.2340	2.0000e-004	0.0000	4.2383
Total	**1.5400e-003**	**2.6800e-003**	**0.0225**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8400e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.2340**	**4.2340**	**2.0000e-004**	**0.0000**	**4.2383**

3.14 Site Preparation - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1248	1.3019	1.1030	1.3100e-003		0.0647	0.0647		0.0595	0.0595	0.0000	115.2499	115.2499	0.0373	0.0000	116.0327
Total	**0.1248**	**1.3019**	**1.1030**	**1.3100e-003**	**0.6052**	**0.0647**	**0.6699**	**0.3327**	**0.0595**	**0.3922**	**0.0000**	**115.2499**	**115.2499**	**0.0373**	**0.0000**	**116.0327**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5400e-003	2.6800e-003	0.0225	7.0000e-005	5.8100e-003	4.0000e-005	5.8400e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.2340	4.2340	2.0000e-004	0.0000	4.2383
Total	**1.5400e-003**	**2.6800e-003**	**0.0225**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8400e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.2340**	**4.2340**	**2.0000e-004**	**0.0000**	**4.2383**

3.15 Grading - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1524	1.6544	1.2873	2.0700e-003		0.0758	0.0758		0.0697	0.0697	0.0000	181.6667	181.6667	0.0588	0.0000	182.9005
Total	**0.1524**	**1.6544**	**1.2873**	**2.0700e-003**	**0.2123**	**0.0758**	**0.2881**	**0.1120**	**0.0697**	**0.1818**	**0.0000**	**181.6667**	**181.6667**	**0.0588**	**0.0000**	**182.9005**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0883	0.8127	0.9192	2.9700e-003	0.0672	0.0131	0.0804	0.0185	0.0121	0.0305	0.0000	252.8740	252.8740	1.8000e-003	0.0000	252.9117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	2.9800e-003	0.0250	7.0000e-005	6.4500e-003	4.0000e-005	6.4900e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.7045	4.7045	2.3000e-004	0.0000	4.7092
Total	**0.0900**	**0.8156**	**0.9442**	**3.0400e-003**	**0.0737**	**0.0132**	**0.0868**	**0.0202**	**0.0121**	**0.0323**	**0.0000**	**257.5785**	**257.5785**	**2.0300e-003**	**0.0000**	**257.6209**

3.15 Grading - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1524	1.6544	1.2873	2.0700e-003		0.0758	0.0758		0.0697	0.0697	0.0000	181.6665	181.6665	0.0588	0.0000	182.9003
Total	**0.1524**	**1.6544**	**1.2873**	**2.0700e-003**	**0.2123**	**0.0758**	**0.2881**	**0.1120**	**0.0697**	**0.1818**	**0.0000**	**181.6665**	**181.6665**	**0.0588**	**0.0000**	**182.9003**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0883	0.8127	0.9192	2.9700e-003	0.0672	0.0131	0.0804	0.0185	0.0121	0.0305	0.0000	252.8740	252.8740	1.8000e-003	0.0000	252.9117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	2.9800e-003	0.0250	7.0000e-005	6.4500e-003	4.0000e-005	6.4900e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.7045	4.7045	2.3000e-004	0.0000	4.7092
Total	**0.0900**	**0.8156**	**0.9442**	**3.0400e-003**	**0.0737**	**0.0132**	**0.0868**	**0.0202**	**0.0121**	**0.0323**	**0.0000**	**257.5785**	**257.5785**	**2.0300e-003**	**0.0000**	**257.6209**

3.16 Building Construction - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0697	0.6298	0.5547	8.8000e-004		0.0367	0.0367		0.0345	0.0345	0.0000	76.1145	76.1145	0.0185	0.0000	76.5039
Total	**0.0697**	**0.6298**	**0.5547**	**8.8000e-004**		**0.0367**	**0.0367**		**0.0345**	**0.0345**	**0.0000**	**76.1145**	**76.1145**	**0.0185**	**0.0000**	**76.5039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.0523	0.1218	1.7000e-004	4.4100e-003	7.2000e-004	5.1200e-003	1.2600e-003	6.6000e-004	1.9200e-003	0.0000	14.1197	14.1197	1.1000e-004	0.0000	14.1220
Worker	0.0128	0.0223	0.1872	5.4000e-004	0.0483	3.2000e-004	0.0486	0.0128	3.0000e-004	0.0131	0.0000	35.2202	35.2202	1.6900e-003	0.0000	35.2556
Total	**0.0229**	**0.0746**	**0.3090**	**7.1000e-004**	**0.0527**	**1.0400e-003**	**0.0537**	**0.0141**	**9.6000e-004**	**0.0151**	**0.0000**	**49.3399**	**49.3399**	**1.8000e-003**	**0.0000**	**49.3776**

3.16 Building Construction - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0697	0.6298	0.5547	8.8000e-004		0.0367	0.0367		0.0345	0.0345	0.0000	76.1144	76.1144	0.0185	0.0000	76.5038
Total	**0.0697**	**0.6298**	**0.5547**	**8.8000e-004**		**0.0367**	**0.0367**		**0.0345**	**0.0345**	**0.0000**	**76.1144**	**76.1144**	**0.0185**	**0.0000**	**76.5038**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.0523	0.1218	1.7000e-004	4.4100e-003	7.2000e-004	5.1200e-003	1.2600e-003	6.6000e-004	1.9200e-003	0.0000	14.1197	14.1197	1.1000e-004	0.0000	14.1220
Worker	0.0128	0.0223	0.1872	5.4000e-004	0.0483	3.2000e-004	0.0486	0.0128	3.0000e-004	0.0131	0.0000	35.2202	35.2202	1.6900e-003	0.0000	35.2556
Total	**0.0229**	**0.0746**	**0.3090**	**7.1000e-004**	**0.0527**	**1.0400e-003**	**0.0537**	**0.0141**	**9.6000e-004**	**0.0151**	**0.0000**	**49.3399**	**49.3399**	**1.8000e-003**	**0.0000**	**49.3776**

3.17 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	5.8866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2100e-003	0.0573	0.0682	1.1000e-004		3.5300e-003	3.5300e-003		3.5300e-003	3.5300e-003	0.0000	9.5747	9.5747	6.6000e-004	0.0000	9.5885
Total	**5.8948**	**0.0573**	**0.0682**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.5300e-003**	**3.5300e-003**	**0.0000**	**9.5747**	**9.5747**	**6.6000e-004**	**0.0000**	**9.5885**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6800e-003	4.6300e-003	0.0388	1.2000e-004	0.0108	7.0000e-005	0.0109	2.8800e-003	7.0000e-005	2.9400e-003	0.0000	7.7628	7.7628	3.6000e-004	0.0000	7.7703
Total	**2.6800e-003**	**4.6300e-003**	**0.0388**	**1.2000e-004**	**0.0108**	**7.0000e-005**	**0.0109**	**2.8800e-003**	**7.0000e-005**	**2.9400e-003**	**0.0000**	**7.7628**	**7.7628**	**3.6000e-004**	**0.0000**	**7.7703**

3.17 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	5.8866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2100e-003	0.0573	0.0682	1.1000e-004		3.5300e-003	3.5300e-003		3.5300e-003	3.5300e-003	0.0000	9.5747	9.5747	6.6000e-004	0.0000	9.5885
Total	**5.8948**	**0.0573**	**0.0682**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.5300e-003**	**3.5300e-003**	**0.0000**	**9.5747**	**9.5747**	**6.6000e-004**	**0.0000**	**9.5885**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6800e-003	4.6300e-003	0.0388	1.2000e-004	0.0108	7.0000e-005	0.0109	2.8800e-003	7.0000e-005	2.9400e-003	0.0000	7.7628	7.7628	3.6000e-004	0.0000	7.7703
Total	**2.6800e-003**	**4.6300e-003**	**0.0388**	**1.2000e-004**	**0.0108**	**7.0000e-005**	**0.0109**	**2.8800e-003**	**7.0000e-005**	**2.9400e-003**	**0.0000**	**7.7628**	**7.7628**	**3.6000e-004**	**0.0000**	**7.7703**

3.18 Site Preparation - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1141	1.1727	1.0335	1.3100e-003		0.0569	0.0569		0.0524	0.0524	0.0000	115.1397	115.1397	0.0372	0.0000	115.9218
Total	**0.1141**	**1.1727**	**1.0335**	**1.3100e-003**	**0.6052**	**0.0569**	**0.6622**	**0.3327**	**0.0524**	**0.3851**	**0.0000**	**115.1397**	**115.1397**	**0.0372**	**0.0000**	**115.9218**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	2.4800e-003	0.0208	7.0000e-005	5.8100e-003	4.0000e-005	5.8400e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.1608	4.1608	1.9000e-004	0.0000	4.1649
Total	**1.4400e-003**	**2.4800e-003**	**0.0208**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8400e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.1608**	**4.1608**	**1.9000e-004**	**0.0000**	**4.1649**

3.18 Site Preparation - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6052	0.0000	0.6052	0.3327	0.0000	0.3327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1141	1.1727	1.0335	1.3100e-003		0.0569	0.0569		0.0524	0.0524	0.0000	115.1396	115.1396	0.0372	0.0000	115.9216
Total	**0.1141**	**1.1727**	**1.0335**	**1.3100e-003**	**0.6052**	**0.0569**	**0.6622**	**0.3327**	**0.0524**	**0.3851**	**0.0000**	**115.1396**	**115.1396**	**0.0372**	**0.0000**	**115.9216**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	2.4800e-003	0.0208	7.0000e-005	5.8100e-003	4.0000e-005	5.8400e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.1608	4.1608	1.9000e-004	0.0000	4.1649
Total	**1.4400e-003**	**2.4800e-003**	**0.0208**	**7.0000e-005**	**5.8100e-003**	**4.0000e-005**	**5.8400e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.1608**	**4.1608**	**1.9000e-004**	**0.0000**	**4.1649**

3.19 Grading - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1405	1.4905	1.2314	2.0700e-003		0.0675	0.0675		0.0621	0.0621	0.0000	181.7095	181.7095	0.0588	0.0000	182.9436
Total	**0.1405**	**1.4905**	**1.2314**	**2.0700e-003**	**0.2123**	**0.0675**	**0.2798**	**0.1120**	**0.0621**	**0.1741**	**0.0000**	**181.7095**	**181.7095**	**0.0588**	**0.0000**	**182.9436**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0863	0.6444	0.8889	2.9600e-003	0.0672	0.0128	0.0800	0.0185	0.0117	0.0302	0.0000	252.3237	252.3237	1.8300e-003	0.0000	252.3621
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-003	2.7600e-003	0.0231	7.0000e-005	6.4500e-003	4.0000e-005	6.4900e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.6232	4.6232	2.1000e-004	0.0000	4.6276
Total	**0.0879**	**0.6472**	**0.9120**	**3.0300e-003**	**0.0737**	**0.0128**	**0.0865**	**0.0202**	**0.0118**	**0.0319**	**0.0000**	**256.9469**	**256.9469**	**2.0400e-003**	**0.0000**	**256.9897**

3.19 Grading - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2123	0.0000	0.2123	0.1120	0.0000	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1405	1.4905	1.2314	2.0700e-003		0.0675	0.0675		0.0621	0.0621	0.0000	181.7092	181.7092	0.0588	0.0000	182.9434
Total	**0.1405**	**1.4905**	**1.2314**	**2.0700e-003**	**0.2123**	**0.0675**	**0.2798**	**0.1120**	**0.0621**	**0.1741**	**0.0000**	**181.7092**	**181.7092**	**0.0588**	**0.0000**	**182.9434**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0863	0.6444	0.8889	2.9600e-003	0.0672	0.0128	0.0800	0.0185	0.0117	0.0302	0.0000	252.3237	252.3237	1.8300e-003	0.0000	252.3621
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-003	2.7600e-003	0.0231	7.0000e-005	6.4500e-003	4.0000e-005	6.4900e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.6232	4.6232	2.1000e-004	0.0000	4.6276
Total	**0.0879**	**0.6472**	**0.9120**	**3.0300e-003**	**0.0737**	**0.0128**	**0.0865**	**0.0202**	**0.0118**	**0.0319**	**0.0000**	**256.9469**	**256.9469**	**2.0400e-003**	**0.0000**	**256.9897**

3.20 Building Construction - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0625	0.5722	0.5457	8.8000e-004		0.0315	0.0315		0.0296	0.0296	0.0000	76.1235	76.1235	0.0183	0.0000	76.5086
Total	**0.0625**	**0.5722**	**0.5457**	**8.8000e-004**		**0.0315**	**0.0315**		**0.0296**	**0.0296**	**0.0000**	**76.1235**	**76.1235**	**0.0183**	**0.0000**	**76.5086**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6200e-003	0.0420	0.1164	1.7000e-004	4.4100e-003	6.3000e-004	5.0400e-003	1.2600e-003	5.8000e-004	1.8400e-003	0.0000	14.0904	14.0904	1.1000e-004	0.0000	14.0927
Worker	0.0120	0.0206	0.1730	5.4000e-004	0.0483	3.2000e-004	0.0486	0.0128	3.0000e-004	0.0131	0.0000	34.6116	34.6116	1.5900e-003	0.0000	34.6450
Total	**0.0216**	**0.0626**	**0.2894**	**7.1000e-004**	**0.0527**	**9.5000e-004**	**0.0537**	**0.0141**	**8.8000e-004**	**0.0150**	**0.0000**	**48.7019**	**48.7019**	**1.7000e-003**	**0.0000**	**48.7377**

3.20 Building Construction - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0625	0.5722	0.5457	8.8000e-004		0.0315	0.0315		0.0296	0.0296	0.0000	76.1234	76.1234	0.0183	0.0000	76.5085
Total	**0.0625**	**0.5722**	**0.5457**	**8.8000e-004**		**0.0315**	**0.0315**		**0.0296**	**0.0296**	**0.0000**	**76.1234**	**76.1234**	**0.0183**	**0.0000**	**76.5085**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6200e-003	0.0420	0.1164	1.7000e-004	4.4100e-003	6.3000e-004	5.0400e-003	1.2600e-003	5.8000e-004	1.8400e-003	0.0000	14.0904	14.0904	1.1000e-004	0.0000	14.0927
Worker	0.0120	0.0206	0.1730	5.4000e-004	0.0483	3.2000e-004	0.0486	0.0128	3.0000e-004	0.0131	0.0000	34.6116	34.6116	1.5900e-003	0.0000	34.6450
Total	**0.0216**	**0.0626**	**0.2894**	**7.1000e-004**	**0.0527**	**9.5000e-004**	**0.0537**	**0.0141**	**8.8000e-004**	**0.0150**	**0.0000**	**48.7019**	**48.7019**	**1.7000e-003**	**0.0000**	**48.7377**

4.1 Operational Detail - Mobile

4.2 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1101	2.2910	10.1126	0.0254	1.7678	0.0337	1.8015	0.4738	0.0311	0.5048	0.0000	1,758.823 5	1,758.823 5	0.0622	0.0000	1,760.130 4
Unmitigated	1.1452	2.4871	10.7784	0.0280	1.9588	0.0369	1.9957	0.5250	0.0341	0.5590	0.0000	1,941.647 3	1,941.647 3	0.0681	0.0000	1,943.077 2

4.3 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	164.65	104.35	133.65	216,952	195,799
Retirement Community	653.76	653.76	653.76	1,661,568	1,499,566
Single Family Housing	1,308.10	1,308.10	1308.10	3,324,611	3,000,461
Total	2,126.51	2,066.21	2,095.51	5,203,132	4,695,826

4.4 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	13.00	5.00	5.00	16.90	64.10	19.00	52	39	9
Retirement Community	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
Single Family Housing	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.454968	0.042327	0.214633	0.150226	0.067641	0.009835	0.017975	0.024142	0.002353	0.001408	0.008947	0.000814	0.004731

5.0 Energy Detail
4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	386.7739	386.7739	0.0175	3.6200e-003	388.2629
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	492.6748	492.6748	0.0223	4.6100e-003	494.5714
NaturalGas Mitigated	0.0361	0.3086	0.1335	1.9700e-003		0.0249	0.0249		0.0249	0.0249	0.0000	357.0337	357.0337	6.8400e-003	6.5500e-003	359.2066
NaturalGas Unmitigated	0.0361	0.3086	0.1335	1.9700e-003		0.0249	0.0249		0.0249	0.0249	0.0000	357.0337	357.0337	6.8400e-003	6.5500e-003	359.2066

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.97999e+006	0.0215	0.1834	0.0780	1.1700e-003		0.0148	0.0148		0.0148	0.0148	0.0000	212.3876	212.3876	4.0700e-003	3.8900e-003	213.6802
Health Club	108800	5.9000e-004	5.3300e-003	4.4800e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8060	5.8060	1.1000e-004	1.1000e-004	5.8413
Retirement Community	2.60177e+006	0.0140	0.1199	0.0510	7.7000e-004		9.6900e-003	9.6900e-003		9.6900e-003	9.6900e-003	0.0000	138.8402	138.8402	2.6600e-003	2.5500e-003	139.6851
Total		**0.0361**	**0.3086**	**0.1335**	**1.9700e-003**		**0.0249**	**0.0249**		**0.0249**	**0.0249**	**0.0000**	**357.0337**	**357.0337**	**6.8400e-003**	**6.5500e-003**	**359.2066**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.97999e+006	0.0215	0.1834	0.0780	1.1700e-003		0.0148	0.0148		0.0148	0.0148	0.0000	212.3876	212.3876	4.0700e-003	3.8900e-003	213.6802
Health Club	108800	5.9000e-004	5.3300e-003	4.4800e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8060	5.8060	1.1000e-004	1.1000e-004	5.8413
Retirement Community	2.60177e+006	0.0140	0.1199	0.0510	7.7000e-004		9.6900e-003	9.6900e-003		9.6900e-003	9.6900e-003	0.0000	138.8402	138.8402	2.6600e-003	2.5500e-003	139.6851
Total		**0.0361**	**0.3086**	**0.1335**	**1.9700e-003**		**0.0249**	**0.0249**		**0.0249**	**0.0249**	**0.0000**	**357.0337**	**357.0337**	**6.8400e-003**	**6.5500e-003**	**359.2066**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	48300	14.0510	6.4000e-004	1.3000e-004	14.1051
Retirement Community	671964	195.4822	8.8400e-003	1.8300e-003	196.2347
Single Family Housing	973291	283.1416	0.0128	2.6500e-003	284.2316
Total		**492.6748**	**0.0223**	**4.6100e-003**	**494.5714**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	32750	9.5274	4.3000e-004	9.0000e-005	9.5640
Retirement Community	527806	153.5448	6.9400e-003	1.4400e-003	154.1359
Single Family Housing	768968	223.7018	0.0101	2.0900e-003	224.5629
Total		**386.7739**	**0.0175**	**3.6200e-003**	**388.2629**

6.1 Area Detail

6.2 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.0621	0.0404	3.4720	1.8000e-004		0.0264	0.0264		0.0263	0.0263	0.0000	109.6973	109.6973	7.1200e-003	1.9100e-003	110.4385
Unmitigated	2.1855	0.0426	3.6937	1.9000e-004		0.0277	0.0277		0.0276	0.0276	0.0000	110.1496	110.1496	7.8100e-003	1.9100e-003	110.9054

6.3 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0105	0.0000	5.7000e-004	0.0000		7.2700e-003	7.2700e-003		7.1900e-003	7.1900e-003	0.0000	104.1235	104.1235	2.0000e-003	1.9100e-003	104.7571
Landscaping	0.1116	0.0426	3.6931	1.9000e-004		0.0204	0.0204		0.0204	0.0204	0.0000	6.0262	6.0262	5.8100e-003	0.0000	6.1483
Total	**2.1855**	**0.0426**	**3.6937**	**1.9000e-004**		**0.0277**	**0.0277**		**0.0276**	**0.0276**	**0.0000**	**110.1496**	**110.1496**	**7.8100e-003**	**1.9100e-003**	**110.9054**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3645					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0105	0.0000	5.7000e-004	0.0000		7.2700e-003	7.2700e-003		7.1900e-003	7.1900e-003	0.0000	104.1235	104.1235	2.0000e-003	1.9100e-003	104.7571
Landscaping	0.0984	0.0404	3.4714	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.5738	5.5738	5.1200e-003	0.0000	5.6813
Total	**2.0621**	**0.0404**	**3.4720**	**1.8000e-004**		**0.0264**	**0.0264**		**0.0263**	**0.0263**	**0.0000**	**109.6973**	**109.6973**	**7.1200e-003**	**1.9100e-003**	**110.4385**

7.1 Water Detail

7.2 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.4481	0.0165	9.9100e-003	33.8669
Unmitigated	46.1294	0.0237	0.0142	51.0236

7.3 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	0.295716 / 0.181245	0.7547	3.9000e-004	2.3000e-004	0.8353
Retirement Community	9.38218 / 5.91485	24.1106	0.0124	7.4100e-003	26.6683
Single Family Housing	8.27456 / 5.21657	21.2642	0.0109	6.5400e-003	23.5200
Total		**46.1294**	**0.0237**	**0.0142**	**51.0236**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	0.207001 / 0.126872	0.4979	2.7000e-004	1.6000e-004	0.5542
Retirement Community	6.56753 / 4.1404	15.9145	8.6100e-003	5.1800e-003	17.7012
Single Family Housing	5.79219 / 3.6516	14.0357	7.6000e-003	4.5700e-003	15.6115
Total		**30.4481**	**0.0165**	**9.9100e-003**	**33.8669**

8.1 Waste Detail

8.2 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	24.7213	1.4610	0.0000	55.4019
Unmitigated	49.4425	2.9220	0.0000	110.8039

8.3 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	28.5	5.7852	0.3419	0.0000	12.9651
Retirement Community	66.24	13.4461	0.7946	0.0000	30.1336
Single Family Housing	148.83	30.2111	1.7854	0.0000	67.7051
Total		**49.4425**	**2.9220**	**0.0000**	**110.8038**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	14.25	2.8926	0.1710	0.0000	6.4826
Retirement Community	33.12	6.7231	0.3973	0.0000	15.0668
Single Family Housing	74.415	15.1056	0.8927	0.0000	33.8526
Total		**24.7213**	**1.4610**	**0.0000**	**55.4019**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.1 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	1,274.400 0	0.0000	0.0000	1,274.400 0

10.2 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Cropland	5 / 5	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

10.3 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	1800	1,274.4000	0.0000	0.0000	1,274.4000
Total		**1,274.4000**	**0.0000**	**0.0000**	**1,274.4000**

River Oaks II

San Luis Obispo County, Winter

1.1 Project Characteristics

1.2 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Health Club	5.00	1000sqft	0.11	5,000.00	0
Retirement Community	144.00	Dwelling Unit	28.80	144,000.00	412
Single Family Housing	127.00	Dwelling Unit	41.23	228,600.00	363

1.3 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.4 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - see notes per project description

Grading - Phasing assumed to be about 50 du/yr, and 20 acres disturned and graded in each phase

Trips and VMT - Grading and site prep trips assumed to be equal by phase

Vehicle Trips - Trip generation rates per traffic study.

Woodstoves - No woodstoves; fierplaces are gas-only

Water And Wastewater - No septic tanks will be in project. Water use modeled is the default vcalue, which is a worst case compared to actual anticipatred water use.

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

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tblConstructionPhase	PhaseEndDate	3/6/2017	9/1/2017
tblConstructionPhase	PhaseEndDate	3/5/2018	9/1/2018
tblConstructionPhase	PhaseStartDate	12/2/2020	5/21/2021
tblConstructionPhase	PhaseStartDate	9/4/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	9/2/2020	9/1/2020

tblConstructionPhase	PhaseStartDate	9/2/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	9/2/2016	9/1/2016
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tblConstructionPhase	PhaseStartDate	9/2/2018	9/1/2018
tblConstructionPhase	PhaseStartDate	9/4/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	9/2/2020	6/1/2020
tblConstructionPhase	PhaseStartDate	9/2/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	9/2/2016	6/1/2016
tblConstructionPhase	PhaseStartDate	9/2/2017	6/1/2017
tblConstructionPhase	PhaseStartDate	9/2/2018	6/1/2018
tblConstructionPhase	PhaseStartDate	12/2/2018	6/3/2019
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tblFireplaces	FireplaceHourDay	0.00	4.00
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tblFireplaces	NumberGas	0.00	127.00
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tblGrading	AcresOfGrading	167.50	20.00
tblGrading	AcresOfGrading	167.50	20.00
tblGrading	AcresOfGrading	167.50	20.00
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tblGrading	MaterialImported	0.00	45,000.00
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tblGrading	MaterialImported	0.00	40,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2022
tblSequestration	NumberOfNewTrees	0.00	1,800.00
tblTripsAndVMT	WorkerTripNumber	35.00	20.00
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tblVehicleTrips	ST_TR	2.81	4.54
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tblWater	AerobicPercent	87.46	100.00
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tblWater	AerobicPercent	87.46	100.00

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tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
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tblWater	SepticTankPercent	10.33	0.00
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tblWoodstoves	WoodstoveDayYear	60.00	0.00
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tblWoodstoves	WoodstoveWoodMass	2,016.50	0.00
tblWoodstoves	WoodstoveWoodMass	2,016.50	0.00

2.1 Emissions Summary

2.2 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	25.6855	269.9020	218.4945	0.3757	34.7248	10.9005	45.6253	15.9810	10.0663	26.0473	0.0000	37,818.0509	37,818.0509	4.7734	0.0000	37,918.2923
2017	18.5721	189.5428	156.3215	0.2531	28.7306	8.3637	37.0943	14.4446	7.7287	22.1733	0.0000	24,992.5977	24,992.5977	3.9743	0.0000	25,076.0578
2018	20.1604	201.8186	176.0435	0.2861	40.8634	9.0630	49.9264	21.0798	8.4013	29.4811	0.0000	27,876.5607	27,876.5607	5.0753	0.0000	27,983.1429
2019	15.0023	148.8697	135.6162	0.2417	28.4740	6.3790	34.8529	14.3744	5.8947	20.2691	0.0000	23,071.8924	23,071.8924	3.9273	0.0000	23,154.3649
2020	14.0323	133.8316	130.4933	0.2416	28.4741	5.7318	34.2059	14.3744	5.2959	19.6704	0.0000	22,549.3524	22,549.3524	3.9131	0.0000	22,631.5270
2021	170.2903	119.6418	127.7455	0.2475	28.7708	5.1774	33.9482	14.4531	4.7902	19.2433	0.0000	23,010.9245	23,010.9245	3.9326	0.0000	23,093.5085
Total	**263.7429**	**1,063.6065**	**944.7144**	**1.6456**	**190.0377**	**45.6153**	**235.6531**	**94.7073**	**42.1770**	**136.8843**	**0.0000**	**159,319.3786**	**159,319.3786**	**25.5959**	**0.0000**	**159,856.8934**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	25.6855	269.9020	218.4945	0.3757	34.7248	10.9005	45.6253	15.9810	10.0663	26.0473	0.0000	37,818.0509	37,818.0509	4.7734	0.0000	37,918.2923
2017	18.5721	189.5428	156.3215	0.2531	28.7306	8.3637	37.0943	14.4446	7.7287	22.1733	0.0000	24,992.5977	24,992.5977	3.9743	0.0000	25,076.0578
2018	20.1604	201.8186	176.0435	0.2861	40.8634	9.0630	49.9264	21.0798	8.4013	29.4811	0.0000	27,876.5607	27,876.5607	5.0753	0.0000	27,983.1429
2019	15.0023	148.8697	135.6162	0.2417	28.4740	6.3790	34.8529	14.3744	5.8947	20.2691	0.0000	23,071.8924	23,071.8924	3.9273	0.0000	23,154.3649
2020	14.0323	133.8316	130.4933	0.2416	28.4741	5.7318	34.2059	14.3744	5.2959	19.6704	0.0000	22,549.3524	22,549.3524	3.9131	0.0000	22,631.5270
2021	170.2903	119.6418	127.7455	0.2475	28.7708	5.1774	33.9482	14.4531	4.7902	19.2433	0.0000	23,010.9245	23,010.9245	3.9326	0.0000	23,093.5085
Total	**263.7429**	**1,063.6065**	**944.7144**	**1.6456**	**190.0377**	**45.6153**	**235.6531**	**94.7073**	**42.1770**	**136.8843**	**0.0000**	**159,319.3785**	**159,319.3785**	**25.5959**	**0.0000**	**159,856.8933**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.6836	0.2582	22.4207	1.1800e-003		0.6083	0.6083		0.6032	0.6032	0.0000	7,692.0235	7,692.0235	0.1855	0.1403	7,739.4065
Energy	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300
Mobile	6.7400	13.7712	62.6323	0.1535	11.0868	0.2045	11.2913	2.9648	0.1886	3.1534		11,744.3122	11,744.3122	0.4148		11,753.0237
Total	**19.6214**	**15.7204**	**85.7847**	**0.1655**	**11.0868**	**0.9493**	**12.0361**	**2.9648**	**0.9284**	**3.8932**	**0.0000**	**21,592.8416**	**21,592.8416**	**0.6417**	**0.1798**	**21,662.0602**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.0000	0.2447	21.0773	1.0800e-003		0.6004	0.6004		0.5953	0.5953	0.0000	7,689.0016	7,689.0016	0.1809	0.1403	7,736.2873
Energy	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300
Mobile	6.5465	12.6882	58.9666	0.1391	10.0058	0.1865	10.1923	2.6758	0.1720	2.8478		10,637.8931	10,637.8931	0.3792		10,645.8562
Total	**18.7442**	**14.6239**	**80.7755**	**0.1509**	**10.0058**	**0.9234**	**10.9293**	**2.6758**	**0.9039**	**3.5797**	**0.0000**	**20,483.4005**	**20,483.4005**	**0.6014**	**0.1798**	**20,551.7735**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.47**	**6.98**	**5.84**	**8.79**	**9.75**	**2.73**	**9.20**	**9.75**	**2.64**	**8.05**	**0.00**	**5.14**	**5.14**	**6.27**	**0.00**	**5.13**

3.1 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation - Phase 1	Site Preparation	6/1/2016	9/1/2016	5	67	
2	Grading - Phase 1	Grading	6/1/2016	9/1/2016	5	67	
3	Building Construction - Phase 1	Building Construction	9/1/2016	12/1/2016	5	66	
4	Site Preparation - Phase 2	Site Preparation	6/1/2017	9/1/2017	5	67	
5	Grading - Phase 2	Grading	6/1/2017	9/1/2017	5	67	
6	Building Construction - Phase 2	Building Construction	9/1/2017	12/1/2017	5	66	
7	Site Preparation - Phase 3	Site Preparation	6/1/2018	9/1/2018	5	66	
8	Grading - Phase 3	Grading	6/1/2018	9/1/2018	5	66	
9	Building Construction - Phase 3	Building Construction	9/1/2018	12/1/2018	5	65	
10	Site Preparation - Phase 4	Site Preparation	6/3/2019	9/3/2019	5	67	
11	Grading - Phase 4	Grading	6/3/2019	9/3/2019	5	67	
12	Building Construction - Phase 4	Building Construction	9/1/2019	12/1/2019	5	65	
13	Site Preparation - Phase 5	Site Preparation	6/1/2020	9/1/2020	5	67	
14	Grading - Phase 5	Grading	6/1/2020	9/1/2020	5	67	
15	Building Construction - Phase 5	Building Construction	9/1/2020	12/1/2020	5	66	
16	Architectural Coating	Architectural Coating	5/21/2021	9/2/2021	5	75	
17	Site Preparation - Phase 6	Site Preparation	6/1/2021	9/1/2021	5	67	
18	Grading - Phase 6	Grading	6/1/2021	9/1/2021	5	67	
19	Building Construction - Phase 6	Building Construction	9/1/2021	12/1/2021	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 754,515; Residential Outdoor: 251,505; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation - Phase 1	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 1	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 1	Excavators	2	8.00	162	0.38
Grading - Phase 1	Graders	1	8.00	174	0.41
Grading - Phase 1	Pavers	2	8.00	125	0.42
Grading - Phase 1	Paving Equipment	2	8.00	130	0.36
Grading - Phase 1	Rollers	2	8.00	80	0.38
Grading - Phase 1	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 1	Scrapers	2	8.00	361	0.48
Grading - Phase 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 1	Cranes	1	7.00	226	0.29
Building Construction - Phase 1	Forklifts	3	8.00	89	0.20
Building Construction - Phase 1	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 1	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 1	Welders	1	8.00	46	0.45
Site Preparation - Phase 2	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 2	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 2	Excavators	2	8.00	162	0.38
Grading - Phase 2	Graders	1	8.00	174	0.41
Grading - Phase 2	Rubber Tired Dozers	1	8.00	255	0.40

Grading - Phase 2	Scrapers	2	8.00	361	0.48
Grading - Phase 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 2	Cranes	1	7.00	226	0.29
Building Construction - Phase 2	Forklifts	3	8.00	89	0.20
Building Construction - Phase 2	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 2	Welders	1	8.00	46	0.45
Site Preparation - Phase 3	Air Compressors	1	6.00	78	0.48
Site Preparation - Phase 3	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation - Phase 3	Excavators	3	8.00	162	0.38
Site Preparation - Phase 3	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation - Phase 3	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 3	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 3	Excavators	2	8.00	162	0.38
Grading - Phase 3	Graders	1	8.00	174	0.41
Grading - Phase 3	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 3	Scrapers	2	8.00	361	0.48
Grading - Phase 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 3	Cranes	1	7.00	226	0.29
Building Construction - Phase 3	Forklifts	3	8.00	89	0.20
Building Construction - Phase 3	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 3	Welders	1	8.00	46	0.45
Site Preparation - Phase 4	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 4	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 4	Excavators	2	8.00	162	0.38
Grading - Phase 4	Graders	1	8.00	174	0.41
Grading - Phase 4	Rubber Tired Dozers	1	8.00	255	0.40

Grading - Phase 4	Scrapers	2	8.00	361	0.48
Grading - Phase 4	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 4	Cranes	1	7.00	226	0.29
Building Construction - Phase 4	Forklifts	3	8.00	89	0.20
Building Construction - Phase 4	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 4	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 4	Welders	1	8.00	46	0.45
Site Preparation - Phase 5	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 5	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 5	Excavators	2	8.00	162	0.38
Grading - Phase 5	Graders	1	8.00	174	0.41
Grading - Phase 5	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 5	Scrapers	2	8.00	361	0.48
Grading - Phase 5	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 5	Cranes	1	7.00	226	0.29
Building Construction - Phase 5	Forklifts	3	8.00	89	0.20
Building Construction - Phase 5	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 5	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 5	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation - Phase 6	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 6	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 6	Excavators	2	8.00	162	0.38
Grading - Phase 6	Graders	1	8.00	174	0.41
Grading - Phase 6	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 6	Scrapers	2	8.00	361	0.48
Grading - Phase 6	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 6	Cranes	1	7.00	226	0.29

Building Construction - Phase 6	Forklifts	3	8.00	89	0.20
Building Construction - Phase 6	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 6	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 6	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation - Phase 1	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 1	14	20.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 1	14	0.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 1	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 2	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 2	8	20.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 2	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 3	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 3	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 4	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 4	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 4	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 5	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 5	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 5	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 6	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 6	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 6	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.2 Mitigation Measures Construction

3.3 Site Preparation - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0874	0.1308	1.1667	1.9400e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		161.6038	161.6038	9.7800e-003		161.8092
Total	**0.0874**	**0.1308**	**1.1667**	**1.9400e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**161.6038**	**161.6038**	**9.7800e-003**		**161.8092**

3.2 Site Preparation - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**	**0.0000**	**4,065.005 3**	**4,065.005 3**	**1.2262**		**4,090.754 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0874	0.1308	1.1667	1.9400e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		161.6038	161.6038	9.7800e-003		161.8092
Total	**0.0874**	**0.1308**	**1.1667**	**1.9400e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**161.6038**	**161.6038**	**9.7800e-003**		**161.8092**

3.3 Grading - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	8.5692	97.1997	63.9550	0.0840		4.8452	4.8452		4.4576	4.4576		8,731.357 5	8,731.357 5	2.6337		8,786.664 9
Total	**8.5692**	**97.1997**	**63.9550**	**0.0840**	**6.3387**	**4.8452**	**11.1839**	**3.3444**	**4.4576**	**7.8020**		**8,731.357 5**	**8,731.357 5**	**2.6337**		**8,786.664 9**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.2841	85.7391	77.6381	0.2003	8.1330	1.0998	9.2328	2.1265	1.0114	3.1380		20,141.44 49	20,141.44 49	0.1439		20,144.46 67
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0971	0.1453	1.2963	2.1500e-003	0.3696	1.5500e-003	0.3712	0.0946	1.4100e-003	0.0960		179.5598	179.5598	0.0109		179.7880
Total	**7.3812**	**85.8843**	**78.9343**	**0.2024**	**8.5026**	**1.1013**	**9.6040**	**2.2212**	**1.0128**	**3.2340**		**20,321.00 47**	**20,321.00 47**	**0.1548**		**20,324.25 46**

3.3 Grading - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	8.5692	97.1997	63.9550	0.0840		4.8452	4.8452		4.4576	4.4576	0.0000	8,731.357 5	8,731.357 5	2.6337		8,786.664 9
Total	**8.5692**	**97.1997**	**63.9550**	**0.0840**	**6.3387**	**4.8452**	**11.1839**	**3.3444**	**4.4576**	**7.8020**	**0.0000**	**8,731.357 5**	**8,731.357 5**	**2.6337**		**8,786.664 9**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.2841	85.7391	77.6381	0.2003	8.1330	1.0998	9.2328	2.1265	1.0114	3.1380		20,141.44 49	20,141.44 49	0.1439		20,144.46 67
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0971	0.1453	1.2963	2.1500e-003	0.3696	1.5500e-003	0.3712	0.0946	1.4100e-003	0.0960		179.5598	179.5598	0.0109		179.7880
Total	**7.3812**	**85.8843**	**78.9343**	**0.2024**	**8.5026**	**1.1013**	**9.6040**	**2.2212**	**1.0128**	**3.2340**		**20,321.00 47**	**20,321.00 47**	**0.1548**		**20,324.25 46**

3.4 Building Construction - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4267	2.4444	4.9748	5.0800e-003	0.1366	0.0347	0.1713	0.0390	0.0319	0.0709		505.1389	505.1389	4.4200e-003		505.2317
Worker	0.7378	1.1042	9.8518	0.0164	1.5027	0.0118	1.5145	0.3985	0.0107	0.4092		1,364.6545	1,364.6545	0.0826		1,366.3886
Total	**1.1645**	**3.5486**	**14.8266**	**0.0215**	**1.6393**	**0.0465**	**1.6858**	**0.4376**	**0.0426**	**0.4801**		**1,869.7933**	**1,869.7933**	**0.0870**		**1,871.6202**

3.4 Building Construction - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4267	2.4444	4.9748	5.0800e-003	0.1366	0.0347	0.1713	0.0390	0.0319	0.0709		505.1389	505.1389	4.4200e-003		505.2317
Worker	0.7378	1.1042	9.8518	0.0164	1.5027	0.0118	1.5145	0.3985	0.0107	0.4092		1,364.6545	1,364.6545	0.0826		1,366.3886
Total	**1.1645**	**3.5486**	**14.8266**	**0.0215**	**1.6393**	**0.0465**	**1.6858**	**0.4376**	**0.0426**	**0.4801**		**1,869.7933**	**1,869.7933**	**0.0870**		**1,871.6202**

3.5 Site Preparation - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.1141	0.9947	1.9400e-003	0.1780	1.3000e-003	0.1793	0.0472	1.1900e-003	0.0484		155.2790	155.2790	8.7100e-003		155.4620
Total	**0.0735**	**0.1141**	**0.9947**	**1.9400e-003**	**0.1780**	**1.3000e-003**	**0.1793**	**0.0472**	**1.1900e-003**	**0.0484**		**155.2790**	**155.2790**	**8.7100e-003**		**155.4620**

3.5 Site Preparation - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.085 9	4,003.085 9	1.2265		4,028.843 2
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**	**0.0000**	**4,003.085 9**	**4,003.085 9**	**1.2265**		**4,028.843 2**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.1141	0.9947	1.9400e-003	0.1780	1.3000e-003	0.1793	0.0472	1.1900e-003	0.0484		155.2790	155.2790	8.7100e-003		155.4620
Total	**0.0735**	**0.1141**	**0.9947**	**1.9400e-003**	**0.1780**	**1.3000e-003**	**0.1793**	**0.0472**	**1.1900e-003**	**0.0484**		**155.2790**	**155.2790**	**8.7100e-003**		**155.4620**

3.6 Grading - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**6.3387**	**3.3172**	**9.6558**	**3.3444**	**3.0518**	**6.3962**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.3663	38.3793	36.7937	0.1000	2.3107	0.4680	2.7787	0.6323	0.4305	1.0628		9,900.5924	9,900.5924	0.0676		9,902.0114
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0817	0.1268	1.1052	2.1500e-003	0.1977	1.4400e-003	0.1992	0.0524	1.3200e-003	0.0538		172.5323	172.5323	9.6800e-003		172.7355
Total	**3.4480**	**38.5060**	**37.8989**	**0.1021**	**2.5084**	**0.4695**	**2.9779**	**0.6847**	**0.4318**	**1.1165**		**10,073.1247**	**10,073.1247**	**0.0773**		**10,074.7469**

3.6 Grading - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.369 0	6,313.369 0	1.9344		6,353.991 5
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**6.3387**	**3.3172**	**9.6558**	**3.3444**	**3.0518**	**6.3962**	**0.0000**	**6,313.369 0**	**6,313.369 0**	**1.9344**		**6,353.991 5**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.3663	38.3793	36.7937	0.1000	2.3107	0.4680	2.7787	0.6323	0.4305	1.0628		9,900.592 4	9,900.592 4	0.0676		9,902.011 4
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0817	0.1268	1.1052	2.1500e-003	0.1977	1.4400e-003	0.1992	0.0524	1.3200e-003	0.0538		172.5323	172.5323	9.6800e-003		172.7355
Total	**3.4480**	**38.5060**	**37.8989**	**0.1021**	**2.5084**	**0.4695**	**2.9779**	**0.6847**	**0.4318**	**1.1165**		**10,073.12 47**	**10,073.12 47**	**0.0773**		**10,074.74 69**

3.7 Building Construction - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3902	2.2081	4.6969	5.0700e-003	0.1367	0.0294	0.1660	0.0390	0.0270	0.0660		496.6885	496.6885	4.1400e-003		496.7754
Worker	0.6207	0.9635	8.3998	0.0163	1.5027	0.0110	1.5136	0.3985	0.0100	0.4086		1,311.2453	1,311.2453	0.0736		1,312.7898
Total	**1.0109**	**3.1716**	**13.0967**	**0.0214**	**1.6393**	**0.0403**	**1.6797**	**0.4376**	**0.0370**	**0.4746**		**1,807.9337**	**1,807.9337**	**0.0777**		**1,809.5652**

3.7 Building Construction - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3902	2.2081	4.6969	5.0700e-003	0.1367	0.0294	0.1660	0.0390	0.0270	0.0660		496.6885	496.6885	4.1400e-003		496.7754
Worker	0.6207	0.9635	8.3998	0.0163	1.5027	0.0110	1.5136	0.3985	0.0100	0.4086		1,311.2453	1,311.2453	0.0736		1,312.7898
Total	**1.0109**	**3.1716**	**13.0967**	**0.0214**	**1.6393**	**0.0403**	**1.6797**	**0.4376**	**0.0370**	**0.4746**		**1,807.9337**	**1,807.9337**	**0.0777**		**1,809.5652**

3.8 Site Preparation - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					30.1104	0.0000	30.1104	16.5511	0.0000	16.5511			0.0000			0.0000
Off-Road	8.1513	84.4455	69.8138	0.0820		4.3249	4.3249		4.0123	4.0123		8,204.549 9	8,204.549 9	2.3547		8,253.998 4
Total	**8.1513**	**84.4455**	**69.8138**	**0.0820**	**30.1104**	**4.3249**	**34.4353**	**16.5511**	**4.0123**	**20.5635**		**8,204.549 9**	**8,204.549 9**	**2.3547**		**8,253.998 4**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.1004	0.8560	1.9300e-003	0.4873	1.2300e-003	0.4886	0.1231	1.1300e-003	0.1243		149.4152	149.4152	7.8400e-003		149.5798
Total	**0.0624**	**0.1004**	**0.8560**	**1.9300e-003**	**0.4873**	**1.2300e-003**	**0.4886**	**0.1231**	**1.1300e-003**	**0.1243**		**149.4152**	**149.4152**	**7.8400e-003**		**149.5798**

3.8 Site Preparation - Phase 3 - 2018

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					30.1104	0.0000	30.1104	16.5511	0.0000	16.5511			0.0000			0.0000
Off-Road	8.1513	84.4455	69.8138	0.0820		4.3249	4.3249		4.0123	4.0123	0.0000	8,204.549 8	8,204.549 8	2.3547		8,253.998 4
Total	**8.1513**	**84.4455**	**69.8138**	**0.0820**	**30.1104**	**4.3249**	**34.4353**	**16.5511**	**4.0123**	**20.5635**	**0.0000**	**8,204.549 8**	**8,204.549 8**	**2.3547**		**8,253.998 4**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.1004	0.8560	1.9300e-003	0.4873	1.2300e-003	0.4886	0.1231	1.1300e-003	0.1243		149.4152	149.4152	7.8400e-003		149.5798
Total	**0.0624**	**0.1004**	**0.8560**	**1.9300e-003**	**0.4873**	**1.2300e-003**	**0.4886**	**0.1231**	**1.1300e-003**	**0.1243**		**149.4152**	**149.4152**	**7.8400e-003**		**149.5798**

3.9 Grading - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3435	0.0000	6.3435	3.3449	0.0000	3.3449			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.8042	6,212.8042	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**6.3435**	**2.7880**	**9.1315**	**3.3449**	**2.5650**	**5.9099**		**6,212.8042**	**6,212.8042**	**1.9341**		**6,253.4209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0181	31.5000	32.7944	0.0901	2.0852	0.4158	2.5010	0.5706	0.3824	0.9530		8,783.8767	8,783.8767	0.0610		8,785.1580
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0693	0.1116	0.9511	2.1500e-003	0.1977	1.3600e-003	0.1991	0.0524	1.2600e-003	0.0537		166.0169	166.0169	8.7100e-003		166.1998
Total	**3.0874**	**31.6116**	**33.7454**	**0.0923**	**2.2829**	**0.4171**	**2.7000**	**0.6231**	**0.3837**	**1.0067**		**8,949.8937**	**8,949.8937**	**0.0697**		**8,951.3578**

3.9 Grading - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3435	0.0000	6.3435	3.3449	0.0000	3.3449			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650	0.0000	6,212.8041	6,212.8041	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**6.3435**	**2.7880**	**9.1315**	**3.3449**	**2.5650**	**5.9099**	**0.0000**	**6,212.8041**	**6,212.8041**	**1.9341**		**6,253.4209**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0181	31.5000	32.7944	0.0901	2.0852	0.4158	2.5010	0.5706	0.3824	0.9530		8,783.8767	8,783.8767	0.0610		8,785.1580
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0693	0.1116	0.9511	2.1500e-003	0.1977	1.3600e-003	0.1991	0.0524	1.2600e-003	0.0537		166.0169	166.0169	8.7100e-003		166.1998
Total	**3.0874**	**31.6116**	**33.7454**	**0.0923**	**2.2829**	**0.4171**	**2.7000**	**0.6231**	**0.3837**	**1.0067**		**8,949.8937**	**8,949.8937**	**0.0697**		**8,951.3578**

3.10 Building Construction - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.939 0	2,609.939 0	0.6387		2,623.351 7
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.939 0**	**2,609.939 0**	**0.6387**		**2,623.351 7**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3745	2.0183	4.5609	5.0600e-003	0.1366	0.0271	0.1637	0.0390	0.0249	0.0639		488.2303	488.2303	4.0600e-003		488.3156
Worker	0.5266	0.8481	7.2280	0.0163	1.5027	0.0104	1.5131	0.3985	9.5400e-003	0.4081		1,261.728 6	1,261.728 6	0.0662		1,263.118 7
Total	**0.9011**	**2.8664**	**11.7889**	**0.0214**	**1.6393**	**0.0374**	**1.6767**	**0.4376**	**0.0344**	**0.4720**		**1,749.958 9**	**1,749.958 9**	**0.0703**		**1,751.434 3**

3.10 Building Construction - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3745	2.0183	4.5609	5.0600e-003	0.1366	0.0271	0.1637	0.0390	0.0249	0.0639		488.2303	488.2303	4.0600e-003		488.3156
Worker	0.5266	0.8481	7.2280	0.0163	1.5027	0.0104	1.5131	0.3985	9.5400e-003	0.4081		1,261.7286	1,261.7286	0.0662		1,263.1187
Total	**0.9011**	**2.8664**	**11.7889**	**0.0214**	**1.6393**	**0.0374**	**1.6767**	**0.4376**	**0.0344**	**0.4720**		**1,749.9589**	**1,749.9589**	**0.0703**		**1,751.4343**

3.11 Site Preparation - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**		**3,876.7233**	**3,876.7233**	**1.2266**		**3,902.4810**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0897	0.7522	1.9300e-003	0.1780	1.1800e-003	0.1791	0.0472	1.1000e-003	0.0483		143.9905	143.9905	7.1700e-003		144.1410
Total	**0.0545**	**0.0897**	**0.7522**	**1.9300e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.1000e-003**	**0.0483**		**143.9905**	**143.9905**	**7.1700e-003**		**144.1410**

3.11 Site Preparation - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.723 3	3,876.723 3	1.2266		3,902.481 0
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**	**0.0000**	**3,876.723 3**	**3,876.723 3**	**1.2266**		**3,902.481 0**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0897	0.7522	1.9300e-003	0.1780	1.1800e-003	0.1791	0.0472	1.1000e-003	0.0483		143.9905	143.9905	7.1700e-003		144.1410
Total	**0.0545**	**0.0897**	**0.7522**	**1.9300e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.1000e-003**	**0.0483**		**143.9905**	**143.9905**	**7.1700e-003**		**144.1410**

3.12 Grading - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.8912	54.1978	40.2888	0.0617		2.5049	2.5049		2.3045	2.3045		6,111.312 1	6,111.312 1	1.9336		6,151.916 7
Total	**4.8912**	**54.1978**	**40.2888**	**0.0617**	**6.3387**	**2.5049**	**8.8436**	**3.3444**	**2.3045**	**5.6489**		**6,111.312 1**	**6,111.312 1**	**1.9336**		**6,151.916 7**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8203	28.4033	31.1182	0.0886	2.0541	0.4011	2.4552	0.5621	0.3690	0.9311		8,503.523 6	8,503.523 6	0.0596		8,504.775 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0605	0.0997	0.8357	2.1500e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2200e-003	0.0537		159.9895	159.9895	7.9600e-003		160.1567
Total	**2.8809**	**28.5030**	**31.9539**	**0.0908**	**2.2518**	**0.4024**	**2.6542**	**0.6146**	**0.3702**	**0.9847**		**8,663.513 1**	**8,663.513 1**	**0.0676**		**8,664.932 6**

3.12 Grading - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.8912	54.1978	40.2888	0.0617		2.5049	2.5049		2.3045	2.3045	0.0000	6,111.312 1	6,111.312 1	1.9336		6,151.916 7
Total	**4.8912**	**54.1978**	**40.2888**	**0.0617**	**6.3387**	**2.5049**	**8.8436**	**3.3444**	**2.3045**	**5.6489**	**0.0000**	**6,111.312 1**	**6,111.312 1**	**1.9336**		**6,151.916 7**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	2.8203	28.4033	31.1182	0.0886	2.0541	0.4011	2.4552	0.5621	0.3690	0.9311		8,503.523 6	8,503.523 6	0.0596		8,504.775 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0605	0.0997	0.8357	2.1500e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2200e-003	0.0537		159.9895	159.9895	7.9600e-003		160.1567
Total	**2.8809**	**28.5030**	**31.9539**	**0.0908**	**2.2518**	**0.4024**	**2.6542**	**0.6146**	**0.3702**	**0.9847**		**8,663.513 1**	**8,663.513 1**	**0.0676**		**8,664.932 6**

3.13 Building Construction - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3453	1.8518	4.3406	5.0500e-003	0.1366	0.0249	0.1616	0.0390	0.0229	0.0619		479.6715	479.6715	3.9600e-003		479.7546
Worker	0.4601	0.7578	6.3516	0.0163	1.5027	9.9900e-003	1.5127	0.3985	9.2500e-003	0.4078		1,215.9201	1,215.9201	0.0605		1,217.1910
Total	**0.8054**	**2.6095**	**10.6922**	**0.0214**	**1.6393**	**0.0349**	**1.6742**	**0.4375**	**0.0322**	**0.4697**		**1,695.5916**	**1,695.5916**	**0.0645**		**1,696.9457**

3.13 Building Construction - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3453	1.8518	4.3406	5.0500e-003	0.1366	0.0249	0.1616	0.0390	0.0229	0.0619		479.6715	479.6715	3.9600e-003		479.7546
Worker	0.4601	0.7578	6.3516	0.0163	1.5027	9.9900e-003	1.5127	0.3985	9.2500e-003	0.4078		1,215.9201	1,215.9201	0.0605		1,217.1910
Total	**0.8054**	**2.6095**	**10.6922**	**0.0214**	**1.6393**	**0.0349**	**1.6742**	**0.4375**	**0.0322**	**0.4697**		**1,695.5916**	**1,695.5916**	**0.0645**		**1,696.9457**

3.14 Site Preparation - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.7250	38.8640	32.9264	0.0391		1.9309	1.9309		1.7764	1.7764		3,792.2816	3,792.2816	1.2265		3,818.0381
Total	**3.7250**	**38.8640**	**32.9264**	**0.0391**	**18.0663**	**1.9309**	**19.9971**	**9.9307**	**1.7764**	**11.7071**		**3,792.2816**	**3,792.2816**	**1.2265**		**3,818.0381**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0492	0.0815	0.6766	1.9300e-003	0.1780	1.1600e-003	0.1791	0.0472	1.0800e-003	0.0483		138.1951	138.1951	6.6700e-003		138.3351
Total	**0.0492**	**0.0815**	**0.6766**	**1.9300e-003**	**0.1780**	**1.1600e-003**	**0.1791**	**0.0472**	**1.0800e-003**	**0.0483**		**138.1951**	**138.1951**	**6.6700e-003**		**138.3351**

3.14 Site Preparation - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.7250	38.8640	32.9264	0.0391		1.9309	1.9309		1.7764	1.7764	0.0000	3,792.281 6	3,792.281 6	1.2265		3,818.038 1
Total	**3.7250**	**38.8640**	**32.9264**	**0.0391**	**18.0663**	**1.9309**	**19.9971**	**9.9307**	**1.7764**	**11.7071**	**0.0000**	**3,792.281 6**	**3,792.281 6**	**1.2265**		**3,818.038 1**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0492	0.0815	0.6766	1.9300e-003	0.1780	1.1600e-003	0.1791	0.0472	1.0800e-003	0.0483		138.1951	138.1951	6.6700e-003		138.3351
Total	**0.0492**	**0.0815**	**0.6766**	**1.9300e-003**	**0.1780**	**1.1600e-003**	**0.1791**	**0.0472**	**1.0800e-003**	**0.0483**		**138.1951**	**138.1951**	**6.6700e-003**		**138.3351**

3.15 Grading - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.5501	49.3839	38.4257	0.0617		2.2619	2.2619		2.0810	2.0810		5,977.708 8	5,977.708 8	1.9333		6,018.308 4
Total	**4.5501**	**49.3839**	**38.4257**	**0.0617**	**6.3387**	**2.2619**	**8.6006**	**3.3444**	**2.0810**	**5.4254**		**5,977.708 8**	**5,977.708 8**	**1.9333**		**6,018.308 4**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	2.7952	24.0703	30.9418	0.0885	2.0543	0.3920	2.4463	0.5622	0.3606	0.9228		8,309.494 2	8,309.494 2	0.0596		8,310.746 4
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0547	0.0906	0.7518	2.1400e-003	0.1977	1.2900e-003	0.1990	0.0524	1.1900e-003	0.0536		153.5501	153.5501	7.4100e-003		153.7057
Total	**2.8499**	**24.1608**	**31.6936**	**0.0907**	**2.2520**	**0.3933**	**2.6453**	**0.6146**	**0.3618**	**0.9764**		**8,463.044 3**	**8,463.044 3**	**0.0670**		**8,464.452 1**

3.15 Grading - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.5501	49.3839	38.4257	0.0617		2.2619	2.2619		2.0810	2.0810	0.0000	5,977.7088	5,977.7088	1.9333		6,018.3084
Total	**4.5501**	**49.3839**	**38.4257**	**0.0617**	**6.3387**	**2.2619**	**8.6006**	**3.3444**	**2.0810**	**5.4254**	**0.0000**	**5,977.7088**	**5,977.7088**	**1.9333**		**6,018.3084**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7952	24.0703	30.9418	0.0885	2.0543	0.3920	2.4463	0.5622	0.3606	0.9228		8,309.4942	8,309.4942	0.0596		8,310.7464
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0547	0.0906	0.7518	2.1400e-003	0.1977	1.2900e-003	0.1990	0.0524	1.1900e-003	0.0536		153.5501	153.5501	7.4100e-003		153.7057
Total	**2.8499**	**24.1608**	**31.6936**	**0.0907**	**2.2520**	**0.3933**	**2.6453**	**0.6146**	**0.3618**	**0.9764**		**8,463.0443**	**8,463.0443**	**0.0670**		**8,464.4521**

3.16 Building Construction - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3313	1.5692	4.2486	5.0400e-003	0.1366	0.0219	0.1585	0.0390	0.0201	0.0591		468.6616	468.6616	3.8300e-003		468.7419
Worker	0.4155	0.6883	5.7139	0.0163	1.5027	9.8000e-003	1.5125	0.3985	9.0800e-003	0.4076		1,166.9811	1,166.9811	0.0563		1,168.1633
Total	**0.7468**	**2.2575**	**9.9624**	**0.0213**	**1.6393**	**0.0317**	**1.6710**	**0.4375**	**0.0292**	**0.4668**		**1,635.6426**	**1,635.6426**	**0.0601**		**1,636.9052**

3.16 Building Construction - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3313	1.5692	4.2486	5.0400e-003	0.1366	0.0219	0.1585	0.0390	0.0201	0.0591		468.6616	468.6616	3.8300e-003		468.7419
Worker	0.4155	0.6883	5.7139	0.0163	1.5027	9.8000e-003	1.5125	0.3985	9.0800e-003	0.4076		1,166.9811	1,166.9811	0.0563		1,168.1633
Total	**0.7468**	**2.2575**	**9.9624**	**0.0213**	**1.6393**	**0.0317**	**1.6710**	**0.4375**	**0.0292**	**0.4668**		**1,635.6426**	**1,635.6426**	**0.0601**		**1,636.9052**

3.17 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	156.9751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**157.1940**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0765	0.1255	1.0415	3.2200e-003	0.2966	1.9200e-003	0.2985	0.0787	1.7800e-003	0.0804		226.3433	226.3433	0.0105		226.5639
Total	**0.0765**	**0.1255**	**1.0415**	**3.2200e-003**	**0.2966**	**1.9200e-003**	**0.2985**	**0.0787**	**1.7800e-003**	**0.0804**		**226.3433**	**226.3433**	**0.0105**		**226.5639**

3.17 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	156.9751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**157.1940**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0765	0.1255	1.0415	3.2200e-003	0.2966	1.9200e-003	0.2985	0.0787	1.7800e-003	0.0804		226.3433	226.3433	0.0105		226.5639
Total	**0.0765**	**0.1255**	**1.0415**	**3.2200e-003**	**0.2966**	**1.9200e-003**	**0.2985**	**0.0787**	**1.7800e-003**	**0.0804**		**226.3433**	**226.3433**	**0.0105**		**226.5639**

3.18 Site Preparation - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.651 9	3,788.651 9	1.2253		3,814.383 7
Total	**3.4057**	**35.0050**	**30.8503**	**0.0391**	**18.0663**	**1.6995**	**19.7658**	**9.9307**	**1.5636**	**11.4943**		**3,788.651 9**	**3,788.651 9**	**1.2253**		**3,814.383 7**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0459	0.0753	0.6249	1.9300e-003	0.1780	1.1500e-003	0.1791	0.0472	1.0700e-003	0.0483		135.8060	135.8060	6.3000e-003		135.9383
Total	**0.0459**	**0.0753**	**0.6249**	**1.9300e-003**	**0.1780**	**1.1500e-003**	**0.1791**	**0.0472**	**1.0700e-003**	**0.0483**		**135.8060**	**135.8060**	**6.3000e-003**		**135.9383**

3.18 Site Preparation - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	**3.4057**	**35.0050**	**30.8503**	**0.0391**	**18.0663**	**1.6995**	**19.7658**	**9.9307**	**1.5636**	**11.4943**	**0.0000**	**3,788.6519**	**3,788.6519**	**1.2253**		**3,814.3837**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0459	0.0753	0.6249	1.9300e-003	0.1780	1.1500e-003	0.1791	0.0472	1.0700e-003	0.0483		135.8060	135.8060	6.3000e-003		135.9383
Total	**0.0459**	**0.0753**	**0.6249**	**1.9300e-003**	**0.1780**	**1.1500e-003**	**0.1791**	**0.0472**	**1.0700e-003**	**0.0483**		**135.8060**	**135.8060**	**6.3000e-003**		**135.9383**

3.19 Grading - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.1944	44.4928	36.7579	0.0617		2.0140	2.0140		1.8529	1.8529		5,979.1158	5,979.1158	1.9338		6,019.7249
Total	**4.1944**	**44.4928**	**36.7579**	**0.0617**	**6.3387**	**2.0140**	**8.3527**	**3.3444**	**1.8529**	**5.1973**		**5,979.1158**	**5,979.1158**	**1.9338**		**6,019.7249**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7264	19.0945	30.0600	0.0883	2.0543	0.3816	2.4359	0.5622	0.3510	0.9132		8,291.3942	8,291.3942	0.0607		8,292.6688
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0837	0.6943	2.1400e-003	0.1977	1.2800e-003	0.1990	0.0524	1.1900e-003	0.0536		150.8955	150.8955	7.0000e-003		151.0426
Total	**2.7773**	**19.1781**	**30.7543**	**0.0905**	**2.2520**	**0.3828**	**2.6349**	**0.6146**	**0.3522**	**0.9668**		**8,442.2897**	**8,442.2897**	**0.0677**		**8,443.7114**

3.19 Grading - Phase 6 - 2021

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.1944	44.4928	36.7579	0.0617		2.0140	2.0140		1.8529	1.8529	0.0000	5,979.115 7	5,979.115 7	1.9338		6,019.724 9
Total	**4.1944**	**44.4928**	**36.7579**	**0.0617**	**6.3387**	**2.0140**	**8.3527**	**3.3444**	**1.8529**	**5.1973**	**0.0000**	**5,979.115 7**	**5,979.115 7**	**1.9338**		**6,019.724 9**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	2.7264	19.0945	30.0600	0.0883	2.0543	0.3816	2.4359	0.5622	0.3510	0.9132		8,291.394 2	8,291.394 2	0.0607		8,292.668 8
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0837	0.6943	2.1400e-003	0.1977	1.2800e-003	0.1990	0.0524	1.1900e-003	0.0536		150.8955	150.8955	7.0000e-003		151.0426
Total	**2.7773**	**19.1781**	**30.7543**	**0.0905**	**2.2520**	**0.3828**	**2.6349**	**0.6146**	**0.3522**	**0.9668**		**8,442.289 7**	**8,442.289 7**	**0.0677**		**8,443.711 4**

3.20 Building Construction - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3158	1.2620	4.0846	5.0300e-003	0.1366	0.0192	0.1558	0.0390	0.0177	0.0567		467.6823	467.6823	3.8400e-003		467.7630
Worker	0.3875	0.6360	5.2769	0.0163	1.5027	9.7300e-003	1.5124	0.3985	9.0200e-003	0.4076		1,146.8059	1,146.8059	0.0532		1,147.9235
Total	**0.7034**	**1.8980**	**9.3614**	**0.0213**	**1.6393**	**0.0289**	**1.6682**	**0.4375**	**0.0267**	**0.4642**		**1,614.4882**	**1,614.4882**	**0.0571**		**1,615.6865**

3.20 Building Construction - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.781 7	2,542.781 7	0.6126		2,555.646 2
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**	**0.0000**	**2,542.781 7**	**2,542.781 7**	**0.6126**		**2,555.646 2**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3158	1.2620	4.0846	5.0300e-003	0.1366	0.0192	0.1558	0.0390	0.0177	0.0567		467.6823	467.6823	3.8400e-003		467.7630
Worker	0.3875	0.6360	5.2769	0.0163	1.5027	9.7300e-003	1.5124	0.3985	9.0200e-003	0.4076		1,146.805 9	1,146.805 9	0.0532		1,147.923 5
Total	**0.7034**	**1.8980**	**9.3614**	**0.0213**	**1.6393**	**0.0289**	**1.6682**	**0.4375**	**0.0267**	**0.4642**		**1,614.488 2**	**1,614.488 2**	**0.0571**		**1,615.686 5**

4.1 Operational Detail - Mobile

4.2 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.5465	12.6882	58.9666	0.1391	10.0058	0.1865	10.1923	2.6758	0.1720	2.8478		10,637.8931	10,637.8931	0.3792		10,645.8562
Unmitigated	6.7400	13.7712	62.6323	0.1535	11.0868	0.2045	11.2913	2.9648	0.1886	3.1534		11,744.3122	11,744.3122	0.4148		11,753.0237

4.3 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	164.65	104.35	133.65	216,952	195,799
Retirement Community	653.76	653.76	653.76	1,661,568	1,499,566
Single Family Housing	1,308.10	1,308.10	1308.10	3,324,611	3,000,461
Total	2,126.51	2,066.21	2,095.51	5,203,132	4,695,826

4.4 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	13.00	5.00	5.00	16.90	64.10	19.00	52	39	9
Retirement Community	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
Single Family Housing	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.454968	0.042327	0.214633	0.150226	0.067641	0.009835	0.017975	0.024142	0.002353	0.001408	0.008947	0.000814	0.004731

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300
NaturalGas Unmitigated	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	7128.13	0.0769	0.6569	0.2795	4.1900e-003		0.0531	0.0531		0.0531	0.0531		838.6031	838.6031	0.0161	0.0154	843.7067
Single Family Housing	10904.1	0.1176	1.0049	0.4276	6.4100e-003		0.0813	0.0813		0.0813	0.0813		1,282.8343	1,282.8343	0.0246	0.0235	1,290.6414
Health Club	298.082	3.2100e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003		35.0685	35.0685	6.7000e-004	6.4000e-004	35.2819
Total		**0.1977**	**1.6910**	**0.7317**	**0.0108**		**0.1366**	**0.1366**		**0.1366**	**0.1366**		**2,156.5059**	**2,156.5059**	**0.0413**	**0.0395**	**2,169.6300**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	10.9041	0.1176	1.0049	0.4276	6.4100e-003		0.0813	0.0813		0.0813	0.0813		1,282.8343	1,282.8343	0.0246	0.0235	1,290.6414
Health Club	0.298082	3.2100e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003		35.0685	35.0685	6.7000e-004	6.4000e-004	35.2819
Retirement Community	7.12813	0.0769	0.6569	0.2795	4.1900e-003		0.0531	0.0531		0.0531	0.0531		838.6031	838.6031	0.0161	0.0154	843.7067
Total		**0.1977**	**1.6910**	**0.7317**	**0.0108**		**0.1366**	**0.1366**		**0.1366**	**0.1366**		**2,156.5059**	**2,156.5059**	**0.0413**	**0.0395**	**2,169.6300**

6.1 Area Detail

6.2 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.0000	0.2447	21.0773	1.0800e-003		0.6004	0.6004		0.5953	0.5953	0.0000	7,689.0016	7,689.0016	0.1809	0.1403	7,736.2873
Unmitigated	12.6836	0.2582	22.4207	1.1800e-003		0.6083	0.6083		0.6032	0.6032	0.0000	7,692.0235	7,692.0235	0.1855	0.1403	7,739.4065

6.3 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0806					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7014	3.0000e-005	0.0383	0.0000		0.4846	0.4846		0.4795	0.4795	0.0000	7,651.7647	7,651.7647	0.1467	0.1403	7,698.3321
Landscaping	0.6761	0.2581	22.3824	1.1800e-003		0.1237	0.1237		0.1237	0.1237		40.2588	40.2588	0.0388		41.0745
Total	**12.6836**	**0.2582**	**22.4207**	**1.1800e-003**		**0.6083**	**0.6083**		**0.6032**	**0.6032**	**0.0000**	**7,692.0235**	**7,692.0235**	**0.1855**	**0.1403**	**7,739.4065**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4765					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7014	3.0000e-005	0.0383	0.0000		0.4846	0.4846		0.4795	0.4795	0.0000	7,651.7647	7,651.7647	0.1467	0.1403	7,698.3321
Landscaping	0.5966	0.2447	21.0390	1.0800e-003		0.1158	0.1158		0.1158	0.1158		37.2369	37.2369	0.0342		37.9552
Total	**12.0000**	**0.2447**	**21.0773**	**1.0800e-003**		**0.6004**	**0.6004**		**0.5953**	**0.5953**	**0.0000**	**7,689.0016**	**7,689.0016**	**0.1809**	**0.1403**	**7,736.2873**

7.1 Water Detail

7.2 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

8.1 Waste Detail

8.2 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

River Oaks II

San Luis Obispo County, Summer

1.1 Project Characteristics

1.2 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Health Club	5.00	1000sqft	0.11	5,000.00	0
Retirement Community	144.00	Dwelling Unit	28.80	144,000.00	412
Single Family Housing	127.00	Dwelling Unit	41.23	228,600.00	363

1.3 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.4 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - see notes per project description

Grading - Phasing assumed to be about 50 du/yr, and 20 acres disturned and graded in each phase

Trips and VMT - Grading and site prep trips assumed to be equal by phase

Vehicle Trips - Trip generation rates per traffic study.

Woodstoves - No woodstoves; fierplaces are gas-only

Water And Wastewater - No septic tanks will be in project. Water use modeled is the default vcalue, which is a worst case compared to actual anticipatred water use.

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	1,110.00	66.00
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tblConstructionPhase	PhaseEndDate	12/4/2017	12/1/2017
tblConstructionPhase	PhaseEndDate	11/30/2018	12/1/2018
tblConstructionPhase	PhaseEndDate	12/5/2019	9/3/2019
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tblConstructionPhase	PhaseEndDate	3/5/2018	9/1/2018
tblConstructionPhase	PhaseStartDate	12/2/2020	5/21/2021
tblConstructionPhase	PhaseStartDate	9/4/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	9/2/2020	9/1/2020

tblConstructionPhase	PhaseStartDate	9/2/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	9/2/2016	9/1/2016
tblConstructionPhase	PhaseStartDate	9/2/2017	9/1/2017
tblConstructionPhase	PhaseStartDate	9/2/2018	9/1/2018
tblConstructionPhase	PhaseStartDate	9/4/2019	6/3/2019
tblConstructionPhase	PhaseStartDate	9/2/2020	6/1/2020
tblConstructionPhase	PhaseStartDate	9/2/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	9/2/2016	6/1/2016
tblConstructionPhase	PhaseStartDate	9/2/2017	6/1/2017
tblConstructionPhase	PhaseStartDate	9/2/2018	6/1/2018
tblConstructionPhase	PhaseStartDate	12/2/2018	6/3/2019
tblConstructionPhase	PhaseStartDate	12/2/2019	6/1/2020
tblConstructionPhase	PhaseStartDate	9/3/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	12/2/2016	6/1/2017
tblConstructionPhase	PhaseStartDate	12/2/2017	6/1/2018
tblFireplaces	FireplaceDayYear	0.00	30.00
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tblFireplaces	FireplaceHourDay	0.00	4.00
tblFireplaces	FireplaceHourDay	0.00	4.00
tblFireplaces	NumberGas	0.00	144.00
tblFireplaces	NumberGas	0.00	127.00
tblGrading	AcresOfGrading	167.50	20.00
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tblGrading	AcresOfGrading	167.50	20.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
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tblSequestration	NumberOfNewTrees	0.00	1,800.00
tblTripsAndVMT	WorkerTripNumber	35.00	20.00
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tblWater	AerobicPercent	87.46	100.00
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tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
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tblWoodstoves	WoodstoveDayYear	60.00	0.00
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tblWoodstoves	WoodstoveWoodMass	2,016.50	0.00
tblWoodstoves	WoodstoveWoodMass	2,016.50	0.00

2.1 Emissions Summary

2.2 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	24.4848	267.7412	195.8891	0.3768	34.7248	10.8960	45.6208	15.9810	10.0622	26.0432	0.0000	37,953.3195	37,953.3195	4.7714	0.0000	38,053.5189
2017	17.9732	188.4867	144.2970	0.2542	28.7306	8.3616	37.0922	14.4446	7.7267	22.1713	0.0000	25,100.9844	25,100.9844	3.9732	0.0000	25,184.4218
2018	19.6295	200.9385	165.2568	0.2872	40.8634	9.0611	49.9246	21.0798	8.3996	29.4794	0.0000	27,979.4222	27,979.4222	5.0743	0.0000	28,085.9830
2019	14.5326	148.0768	124.9691	0.2428	28.4740	6.3772	34.8512	14.3744	5.8931	20.2675	0.0000	23,171.3704	23,171.3704	3.9262	0.0000	23,253.8213
2020	13.5737	133.1508	119.8832	0.2427	28.4741	5.7302	34.2044	14.3744	5.2945	19.6689	0.0000	22,645.3997	22,645.3997	3.9120	0.0000	22,727.5518
2021	169.8652	119.0657	117.1029	0.2488	28.7708	5.1759	33.9467	14.4531	4.7888	19.2419	0.0000	23,116.8834	23,116.8834	3.9314	0.0000	23,199.4437
Total	**260.0589**	**1,057.4597**	**867.3980**	**1.6524**	**190.0377**	**45.6021**	**235.6398**	**94.7073**	**42.1649**	**136.8722**	**0.0000**	**159,967.3796**	**159,967.3796**	**25.5886**	**0.0000**	**160,504.7404**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	24.4848	267.7412	195.8891	0.3768	34.7248	10.8960	45.6208	15.9810	10.0622	26.0432	0.0000	37,953.3195	37,953.3195	4.7714	0.0000	38,053.5189
2017	17.9732	188.4867	144.2970	0.2542	28.7306	8.3616	37.0922	14.4446	7.7267	22.1713	0.0000	25,100.9844	25,100.9844	3.9732	0.0000	25,184.4218
2018	19.6295	200.9385	165.2568	0.2872	40.8634	9.0611	49.9246	21.0798	8.3996	29.4794	0.0000	27,979.4222	27,979.4222	5.0743	0.0000	28,085.9830
2019	14.5326	148.0768	124.9691	0.2428	28.4740	6.3772	34.8512	14.3744	5.8931	20.2675	0.0000	23,171.3704	23,171.3704	3.9262	0.0000	23,253.8213
2020	13.5737	133.1508	119.8832	0.2427	28.4741	5.7302	34.2044	14.3744	5.2945	19.6689	0.0000	22,645.3997	22,645.3997	3.9120	0.0000	22,727.5518
2021	169.8652	119.0657	117.1029	0.2488	28.7708	5.1759	33.9467	14.4531	4.7888	19.2419	0.0000	23,116.8834	23,116.8834	3.9314	0.0000	23,199.4437
Total	**260.0589**	**1,057.4597**	**867.3980**	**1.6524**	**190.0377**	**45.6021**	**235.6398**	**94.7073**	**42.1649**	**136.8722**	**0.0000**	**159,967.3795**	**159,967.3795**	**25.5886**	**0.0000**	**160,504.7404**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.6836	0.2582	22.4207	1.1800e-003		0.6083	0.6083		0.6032	0.6032	0.0000	7,692.0235	7,692.0235	0.1855	0.1403	7,739.4065
Energy	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300
Mobile	6.2336	12.9652	55.6114	0.1590	11.0868	0.2036	11.2904	2.9648	0.1878	3.1526		12,142.2581	12,142.2581	0.4143		12,150.9574
Total	**19.1149**	**14.9144**	**78.7638**	**0.1709**	**11.0868**	**0.9484**	**12.0352**	**2.9648**	**0.9276**	**3.8924**	**0.0000**	**21,990.7874**	**21,990.7874**	**0.6411**	**0.1798**	**22,059.9939**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.0000	0.2447	21.0773	1.0800e-003		0.6004	0.6004		0.5953	0.5953	0.0000	7,689.0016	7,689.0016	0.1809	0.1403	7,736.2873
Energy	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300
Mobile	6.0388	11.9478	51.7691	0.1440	10.0058	0.1856	10.1914	2.6758	0.1712	2.8470		10,998.6367	10,998.6367	0.3786		11,006.5876
Total	**18.2365**	**13.8835**	**73.5781**	**0.1559**	**10.0058**	**0.9226**	**10.9284**	**2.6758**	**0.9031**	**3.5788**	**0.0000**	**20,844.1441**	**20,844.1441**	**0.6008**	**0.1798**	**20,912.5049**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.60	6.91	6.58	8.81	9.75	2.73	9.20	9.75	2.64	8.06	0.00	5.21	5.21	6.28	0.00	5.20

3.1 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation - Phase 1	Site Preparation	6/1/2016	9/1/2016	5	67	
2	Grading - Phase 1	Grading	6/1/2016	9/1/2016	5	67	
3	Building Construction - Phase 1	Building Construction	9/1/2016	12/1/2016	5	66	
4	Site Preparation - Phase 2	Site Preparation	6/1/2017	9/1/2017	5	67	
5	Grading - Phase 2	Grading	6/1/2017	9/1/2017	5	67	
6	Building Construction - Phase 2	Building Construction	9/1/2017	12/1/2017	5	66	
7	Site Preparation - Phase 3	Site Preparation	6/1/2018	9/1/2018	5	66	
8	Grading - Phase 3	Grading	6/1/2018	9/1/2018	5	66	
9	Building Construction - Phase 3	Building Construction	9/1/2018	12/1/2018	5	65	
10	Site Preparation - Phase 4	Site Preparation	6/3/2019	9/3/2019	5	67	
11	Grading - Phase 4	Grading	6/3/2019	9/3/2019	5	67	
12	Building Construction - Phase 4	Building Construction	9/1/2019	12/1/2019	5	65	
13	Site Preparation - Phase 5	Site Preparation	6/1/2020	9/1/2020	5	67	
14	Grading - Phase 5	Grading	6/1/2020	9/1/2020	5	67	
15	Building Construction - Phase 5	Building Construction	9/1/2020	12/1/2020	5	66	
16	Architectural Coating	Architectural Coating	5/21/2021	9/2/2021	5	75	
17	Site Preparation - Phase 6	Site Preparation	6/1/2021	9/1/2021	5	67	
18	Grading - Phase 6	Grading	6/1/2021	9/1/2021	5	67	
19	Building Construction - Phase 6	Building Construction	9/1/2021	12/1/2021	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 754,515; Residential Outdoor: 251,505; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation - Phase 1	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 1	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 1	Excavators	2	8.00	162	0.38
Grading - Phase 1	Graders	1	8.00	174	0.41
Grading - Phase 1	Pavers	2	8.00	125	0.42
Grading - Phase 1	Paving Equipment	2	8.00	130	0.36
Grading - Phase 1	Rollers	2	8.00	80	0.38
Grading - Phase 1	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 1	Scrapers	2	8.00	361	0.48
Grading - Phase 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 1	Cranes	1	7.00	226	0.29
Building Construction - Phase 1	Forklifts	3	8.00	89	0.20
Building Construction - Phase 1	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 1	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 1	Welders	1	8.00	46	0.45
Site Preparation - Phase 2	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 2	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 2	Excavators	2	8.00	162	0.38
Grading - Phase 2	Graders	1	8.00	174	0.41
Grading - Phase 2	Rubber Tired Dozers	1	8.00	255	0.40

Grading - Phase 2	Scrapers	2	8.00	361	0.48
Grading - Phase 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 2	Cranes	1	7.00	226	0.29
Building Construction - Phase 2	Forklifts	3	8.00	89	0.20
Building Construction - Phase 2	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 2	Welders	1	8.00	46	0.45
Site Preparation - Phase 3	Air Compressors	1	6.00	78	0.48
Site Preparation - Phase 3	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation - Phase 3	Excavators	3	8.00	162	0.38
Site Preparation - Phase 3	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation - Phase 3	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 3	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 3	Excavators	2	8.00	162	0.38
Grading - Phase 3	Graders	1	8.00	174	0.41
Grading - Phase 3	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 3	Scrapers	2	8.00	361	0.48
Grading - Phase 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 3	Cranes	1	7.00	226	0.29
Building Construction - Phase 3	Forklifts	3	8.00	89	0.20
Building Construction - Phase 3	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 3	Welders	1	8.00	46	0.45
Site Preparation - Phase 4	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 4	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 4	Excavators	2	8.00	162	0.38
Grading - Phase 4	Graders	1	8.00	174	0.41
Grading - Phase 4	Rubber Tired Dozers	1	8.00	255	0.40

Grading - Phase 4	Scrapers	2	8.00	361	0.48
Grading - Phase 4	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 4	Cranes	1	7.00	226	0.29
Building Construction - Phase 4	Forklifts	3	8.00	89	0.20
Building Construction - Phase 4	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 4	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 4	Welders	1	8.00	46	0.45
Site Preparation - Phase 5	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 5	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 5	Excavators	2	8.00	162	0.38
Grading - Phase 5	Graders	1	8.00	174	0.41
Grading - Phase 5	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 5	Scrapers	2	8.00	361	0.48
Grading - Phase 5	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 5	Cranes	1	7.00	226	0.29
Building Construction - Phase 5	Forklifts	3	8.00	89	0.20
Building Construction - Phase 5	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 5	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 5	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation - Phase 6	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation - Phase 6	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading - Phase 6	Excavators	2	8.00	162	0.38
Grading - Phase 6	Graders	1	8.00	174	0.41
Grading - Phase 6	Rubber Tired Dozers	1	8.00	255	0.40
Grading - Phase 6	Scrapers	2	8.00	361	0.48
Grading - Phase 6	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Phase 6	Cranes	1	7.00	226	0.29

Building Construction - Phase 6	Forklifts	3	8.00	89	0.20
Building Construction - Phase 6	Generator Sets	1	8.00	84	0.74
Building Construction - Phase 6	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction - Phase 6	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation - Phase 1	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 1	14	20.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 1	14	0.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 1	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 2	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 2	8	20.00	0.00	8,899.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 2	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 3	14	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 3	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 3	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 4	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 4	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 4	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 5	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 5	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 5	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Phase 6	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Phase 6	8	20.00	0.00	7,910.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Phase 6	9	152.00	30.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.2 Mitigation Measures Construction

3.3 Site Preparation - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0812	0.1154	1.1504	2.0300e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		169.4586	169.4586	9.7800e-003		169.6640
Total	**0.0812**	**0.1154**	**1.1504**	**2.0300e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**169.4586**	**169.4586**	**9.7800e-003**		**169.6640**

3.2 Site Preparation - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0812	0.1154	1.1504	2.0300e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		169.4586	169.4586	9.7800e-003		169.6640
Total	**0.0812**	**0.1154**	**1.1504**	**2.0300e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**169.4586**	**169.4586**	**9.7800e-003**		**169.6640**

3.3 Grading - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	8.5692	97.1997	63.9550	0.0840		4.8452	4.8452		4.4576	4.4576		8,731.357 5	8,731.357 5	2.6337		8,786.664 9
Total	**8.5692**	**97.1997**	**63.9550**	**0.0840**	**6.3387**	**4.8452**	**11.1839**	**3.3444**	**4.4576**	**7.8020**		**8,731.357 5**	**8,731.357 5**	**2.6337**		**8,786.664 9**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.2301	83.7777	56.7443	0.2004	8.1330	1.0959	9.2289	2.1265	1.0078	3.1344		20,188.33 22	20,188.33 22	0.1420		20,191.31 50
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0902	0.1283	1.2783	2.2600e-003	0.3696	1.5500e-003	0.3712	0.0946	1.4100e-003	0.0960		188.2874	188.2874	0.0109		188.5155
Total	**6.3203**	**83.9059**	**58.0226**	**0.2026**	**8.5026**	**1.0974**	**9.6001**	**2.2212**	**1.0092**	**3.2304**		**20,376.61 96**	**20,376.61 96**	**0.1529**		**20,379.83 05**

3.3 Grading - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	8.5692	97.1997	63.9550	0.0840		4.8452	4.8452		4.4576	4.4576	0.0000	8,731.357 5	8,731.357 5	2.6337		8,786.664 9
Total	**8.5692**	**97.1997**	**63.9550**	**0.0840**	**6.3387**	**4.8452**	**11.1839**	**3.3444**	**4.4576**	**7.8020**	**0.0000**	**8,731.357 5**	**8,731.357 5**	**2.6337**		**8,786.664 9**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.2301	83.7777	56.7443	0.2004	8.1330	1.0959	9.2289	2.1265	1.0078	3.1344		20,188.33 22	20,188.33 22	0.1420		20,191.31 50
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0902	0.1283	1.2783	2.2600e-003	0.3696	1.5500e-003	0.3712	0.0946	1.4100e-003	0.0960		188.2874	188.2874	0.0109		188.5155
Total	**6.3203**	**83.9059**	**58.0226**	**0.2026**	**8.5026**	**1.0974**	**9.6001**	**2.2212**	**1.0092**	**3.2304**		**20,376.61 96**	**20,376.61 96**	**0.1529**		**20,379.83 05**

3.4 Building Construction - Phase 1 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3451	2.4068	3.4344	5.1100e-003	0.1366	0.0341	0.1707	0.0390	0.0313	0.0704		510.6083	510.6083	4.2800e-003		510.6982
Worker	0.6857	0.9748	9.7148	0.0172	1.5027	0.0118	1.5145	0.3985	0.0107	0.4092		1,430.9839	1,430.9839	0.0826		1,432.7180
Total	**1.0308**	**3.3816**	**13.1492**	**0.0223**	**1.6393**	**0.0459**	**1.6852**	**0.4376**	**0.0420**	**0.4796**		**1,941.5922**	**1,941.5922**	**0.0869**		**1,943.4161**

3.4 Building Construction - Phase 1 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3451	2.4068	3.4344	5.1100e-003	0.1366	0.0341	0.1707	0.0390	0.0313	0.0704		510.6083	510.6083	4.2800e-003		510.6982
Worker	0.6857	0.9748	9.7148	0.0172	1.5027	0.0118	1.5145	0.3985	0.0107	0.4092		1,430.9839	1,430.9839	0.0826		1,432.7180
Total	**1.0308**	**3.3816**	**13.1492**	**0.0223**	**1.6393**	**0.0459**	**1.6852**	**0.4376**	**0.0420**	**0.4796**		**1,941.5922**	**1,941.5922**	**0.0869**		**1,943.4161**

3.5 Site Preparation - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.1007	0.9902	2.0300e-003	0.1780	1.3000e-003	0.1793	0.0472	1.1900e-003	0.0484		162.8485	162.8485	8.7100e-003		163.0314
Total	**0.0687**	**0.1007**	**0.9902**	**2.0300e-003**	**0.1780**	**1.3000e-003**	**0.1793**	**0.0472**	**1.1900e-003**	**0.0484**		**162.8485**	**162.8485**	**8.7100e-003**		**163.0314**

3.5 Site Preparation - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**	**0.0000**	**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.1007	0.9902	2.0300e-003	0.1780	1.3000e-003	0.1793	0.0472	1.1900e-003	0.0484		162.8485	162.8485	8.7100e-003		163.0314
Total	**0.0687**	**0.1007**	**0.9902**	**2.0300e-003**	**0.1780**	**1.3000e-003**	**0.1793**	**0.0472**	**1.1900e-003**	**0.0484**		**162.8485**	**162.8485**	**8.7100e-003**		**163.0314**

3.6 Grading - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.369 0	6,313.369 0	1.9344		6,353.991 5
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**6.3387**	**3.3172**	**9.6558**	**3.3444**	**3.0518**	**6.3962**		**6,313.369 0**	**6,313.369 0**	**1.9344**		**6,353.991 5**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8910	37.4985	26.3369	0.1000	2.3107	0.4664	2.7771	0.6323	0.4290	1.0613		9,923.681 3	9,923.681 3	0.0666		9,925.080 5
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.1118	1.1002	2.2600e-003	0.1977	1.4400e-003	0.1992	0.0524	1.3200e-003	0.0538		180.9428	180.9428	9.6800e-003		181.1460
Total	**2.9674**	**37.6104**	**27.4371**	**0.1023**	**2.5084**	**0.4679**	**2.9763**	**0.6847**	**0.4303**	**1.1151**		**10,104.62 40**	**10,104.62 40**	**0.0763**		**10,106.22 65**

3.6 Grading - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**6.3387**	**3.3172**	**9.6558**	**3.3444**	**3.0518**	**6.3962**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8910	37.4985	26.3369	0.1000	2.3107	0.4664	2.7771	0.6323	0.4290	1.0613		9,923.6813	9,923.6813	0.0666		9,925.0805
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.1118	1.1002	2.2600e-003	0.1977	1.4400e-003	0.1992	0.0524	1.3200e-003	0.0538		180.9428	180.9428	9.6800e-003		181.1460
Total	**2.9674**	**37.6104**	**27.4371**	**0.1023**	**2.5084**	**0.4679**	**2.9763**	**0.6847**	**0.4303**	**1.1151**		**10,104.6240**	**10,104.6240**	**0.0763**		**10,106.2265**

3.7 Building Construction - Phase 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3170	2.1746	3.1771	5.1000e-003	0.1367	0.0289	0.1655	0.0390	0.0265	0.0656		502.0866	502.0866	4.0000e-003		502.1705
Worker	0.5804	0.8500	8.3614	0.0171	1.5027	0.0110	1.5136	0.3985	0.0100	0.4086		1,375.1651	1,375.1651	0.0736		1,376.7096
Total	**0.8974**	**3.0245**	**11.5385**	**0.0222**	**1.6393**	**0.0398**	**1.6792**	**0.4376**	**0.0366**	**0.4741**		**1,877.2517**	**1,877.2517**	**0.0776**		**1,878.8802**

3.7 Building Construction - Phase 2 - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3170	2.1746	3.1771	5.1000e-003	0.1367	0.0289	0.1655	0.0390	0.0265	0.0656		502.0866	502.0866	4.0000e-003		502.1705
Worker	0.5804	0.8500	8.3614	0.0171	1.5027	0.0110	1.5136	0.3985	0.0100	0.4086		1,375.1651	1,375.1651	0.0736		1,376.7096
Total	**0.8974**	**3.0245**	**11.5385**	**0.0222**	**1.6393**	**0.0398**	**1.6792**	**0.4376**	**0.0366**	**0.4741**		**1,877.2517**	**1,877.2517**	**0.0776**		**1,878.8802**

3.8 Site Preparation - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					30.1104	0.0000	30.1104	16.5511	0.0000	16.5511			0.0000			0.0000
Off-Road	8.1513	84.4455	69.8138	0.0820		4.3249	4.3249		4.0123	4.0123		8,204.549 9	8,204.549 9	2.3547		8,253.998 4
Total	**8.1513**	**84.4455**	**69.8138**	**0.0820**	**30.1104**	**4.3249**	**34.4353**	**16.5511**	**4.0123**	**20.5635**		**8,204.549 9**	**8,204.549 9**	**2.3547**		**8,253.998 4**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0587	0.0886	0.8604	2.0300e-003	0.4873	1.2300e-003	0.4886	0.1231	1.1300e-003	0.1243		156.7137	156.7137	7.8400e-003		156.8783
Total	**0.0587**	**0.0886**	**0.8604**	**2.0300e-003**	**0.4873**	**1.2300e-003**	**0.4886**	**0.1231**	**1.1300e-003**	**0.1243**		**156.7137**	**156.7137**	**7.8400e-003**		**156.8783**

3.8 Site Preparation - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					30.1104	0.0000	30.1104	16.5511	0.0000	16.5511			0.0000			0.0000
Off-Road	8.1513	84.4455	69.8138	0.0820		4.3249	4.3249		4.0123	4.0123	0.0000	8,204.549 8	8,204.549 8	2.3547		8,253.998 4
Total	**8.1513**	**84.4455**	**69.8138**	**0.0820**	**30.1104**	**4.3249**	**34.4353**	**16.5511**	**4.0123**	**20.5635**	**0.0000**	**8,204.549 8**	**8,204.549 8**	**2.3547**		**8,253.998 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0587	0.0886	0.8604	2.0300e-003	0.4873	1.2300e-003	0.4886	0.1231	1.1300e-003	0.1243		156.7137	156.7137	7.8400e-003		156.8783
Total	**0.0587**	**0.0886**	**0.8604**	**2.0300e-003**	**0.4873**	**1.2300e-003**	**0.4886**	**0.1231**	**1.1300e-003**	**0.1243**		**156.7137**	**156.7137**	**7.8400e-003**		**156.8783**

3.9 Grading - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3435	0.0000	6.3435	3.3449	0.0000	3.3449			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.8042	6,212.8042	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**6.3435**	**2.7880**	**9.1315**	**3.3449**	**2.5650**	**5.9099**		**6,212.8042**	**6,212.8042**	**1.9341**		**6,253.4209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5954	30.7758	23.4490	0.0902	2.0852	0.4144	2.4996	0.5706	0.3811	0.9517		8,804.3790	8,804.3790	0.0601		8,805.6419
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0652	0.0984	0.9559	2.2500e-003	0.1977	1.3600e-003	0.1991	0.0524	1.2600e-003	0.0537		174.1263	174.1263	8.7100e-003		174.3092
Total	**2.6606**	**30.8742**	**24.4049**	**0.0924**	**2.2829**	**0.4157**	**2.6987**	**0.6231**	**0.3824**	**1.0054**		**8,978.5054**	**8,978.5054**	**0.0688**		**8,979.9511**

3.9 Grading - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3435	0.0000	6.3435	3.3449	0.0000	3.3449			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650	0.0000	6,212.804 1	6,212.804 1	1.9341		6,253.420 9
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**6.3435**	**2.7880**	**9.1315**	**3.3449**	**2.5650**	**5.9099**	**0.0000**	**6,212.804 1**	**6,212.804 1**	**1.9341**		**6,253.420 9**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5954	30.7758	23.4490	0.0902	2.0852	0.4144	2.4996	0.5706	0.3811	0.9517		8,804.379 0	8,804.379 0	0.0601		8,805.641 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0652	0.0984	0.9559	2.2500e-003	0.1977	1.3600e-003	0.1991	0.0524	1.2600e-003	0.0537		174.1263	174.1263	8.7100e-003		174.3092
Total	**2.6606**	**30.8742**	**24.4049**	**0.0924**	**2.2829**	**0.4157**	**2.6987**	**0.6231**	**0.3824**	**1.0054**		**8,978.505 4**	**8,978.505 4**	**0.0688**		**8,979.951 1**

3.10 Building Construction - Phase 3 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3050	1.9880	3.0731	5.0900e-003	0.1366	0.0266	0.1632	0.0390	0.0245	0.0635		493.5501	493.5501	3.9200e-003		493.6324
Worker	0.4956	0.7477	7.2652	0.0171	1.5027	0.0104	1.5131	0.3985	9.5400e-003	0.4081		1,323.3601	1,323.3601	0.0662		1,324.7502
Total	**0.8006**	**2.7357**	**10.3383**	**0.0222**	**1.6393**	**0.0370**	**1.6763**	**0.4376**	**0.0340**	**0.4716**		**1,816.9102**	**1,816.9102**	**0.0701**		**1,818.3826**

3.10 Building Construction - Phase 3 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.938 9	2,609.938 9	0.6387		2,623.351 7
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.938 9**	**2,609.938 9**	**0.6387**		**2,623.351 7**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3050	1.9880	3.0731	5.0900e-003	0.1366	0.0266	0.1632	0.0390	0.0245	0.0635		493.5501	493.5501	3.9200e-003		493.6324
Worker	0.4956	0.7477	7.2652	0.0171	1.5027	0.0104	1.5131	0.3985	9.5400e-003	0.4081		1,323.360 1	1,323.360 1	0.0662		1,324.750 2
Total	**0.8006**	**2.7357**	**10.3383**	**0.0222**	**1.6393**	**0.0370**	**1.6763**	**0.4376**	**0.0340**	**0.4716**		**1,816.910 2**	**1,816.910 2**	**0.0701**		**1,818.382 6**

3.11 Site Preparation - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**		**3,876.7233**	**3,876.7233**	**1.2266**		**3,902.4810**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0515	0.0791	0.7623	2.0300e-003	0.1780	1.1800e-003	0.1791	0.0472	1.1000e-003	0.0483		151.0355	151.0355	7.1700e-003		151.1860
Total	**0.0515**	**0.0791**	**0.7623**	**2.0300e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.1000e-003**	**0.0483**		**151.0355**	**151.0355**	**7.1700e-003**		**151.1860**

3.11 Site Preparation - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**	**0.0000**	**3,876.7233**	**3,876.7233**	**1.2266**		**3,902.4810**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0515	0.0791	0.7623	2.0300e-003	0.1780	1.1800e-003	0.1791	0.0472	1.1000e-003	0.0483		151.0355	151.0355	7.1700e-003		151.1860
Total	**0.0515**	**0.0791**	**0.7623**	**2.0300e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.1000e-003**	**0.0483**		**151.0355**	**151.0355**	**7.1700e-003**		**151.1860**

3.12 Grading - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.8912	54.1978	40.2888	0.0617		2.5049	2.5049		2.3045	2.3045		6,111.312 1	6,111.312 1	1.9336		6,151.916 7
Total	**4.8912**	**54.1978**	**40.2888**	**0.0617**	**6.3387**	**2.5049**	**8.8436**	**3.3444**	**2.3045**	**5.6489**		**6,111.312 1**	**6,111.312 1**	**1.9336**		**6,151.916 7**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	2.4442	27.7502	21.8426	0.0887	2.0541	0.3998	2.4539	0.5621	0.3678	0.9299		8,523.396 5	8,523.396 5	0.0588		8,524.630 2
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0879	0.8470	2.2500e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2200e-003	0.0537		167.8172	167.8172	7.9600e-003		167.9845
Total	**2.5014**	**27.8380**	**22.6896**	**0.0909**	**2.2518**	**0.4011**	**2.6529**	**0.6146**	**0.3690**	**0.9835**		**8,691.213 7**	**8,691.213 7**	**0.0667**		**8,692.614 7**

3.12 Grading - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.8912	54.1978	40.2888	0.0617		2.5049	2.5049		2.3045	2.3045	0.0000	6,111.3121	6,111.3121	1.9336		6,151.9167
Total	**4.8912**	**54.1978**	**40.2888**	**0.0617**	**6.3387**	**2.5049**	**8.8436**	**3.3444**	**2.3045**	**5.6489**	**0.0000**	**6,111.3121**	**6,111.3121**	**1.9336**		**6,151.9167**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	2.4442	27.7502	21.8426	0.0887	2.0541	0.3998	2.4539	0.5621	0.3678	0.9299		8,523.3965	8,523.3965	0.0588		8,524.6302
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0879	0.8470	2.2500e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2200e-003	0.0537		167.8172	167.8172	7.9600e-003		167.9845
Total	**2.5014**	**27.8380**	**22.6896**	**0.0909**	**2.2518**	**0.4011**	**2.6529**	**0.6146**	**0.3690**	**0.9835**		**8,691.2137**	**8,691.2137**	**0.0667**		**8,692.6147**

3.13 Building Construction - Phase 4 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2832	1.8245	2.8617	5.0800e-003	0.1366	0.0245	0.1612	0.0390	0.0226	0.0616		484.9130	484.9130	3.8100e-003		484.9930
Worker	0.4349	0.6678	6.4375	0.0171	1.5027	9.9900e-003	1.5127	0.3985	9.2500e-003	0.4078		1,275.4110	1,275.4110	0.0605		1,276.6820
Total	**0.7181**	**2.4923**	**9.2992**	**0.0222**	**1.6393**	**0.0345**	**1.6738**	**0.4375**	**0.0318**	**0.4694**		**1,760.3240**	**1,760.3240**	**0.0643**		**1,761.6750**

3.13 Building Construction - Phase 4 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2832	1.8245	2.8617	5.0800e-003	0.1366	0.0245	0.1612	0.0390	0.0226	0.0616		484.9130	484.9130	3.8100e-003		484.9930
Worker	0.4349	0.6678	6.4375	0.0171	1.5027	9.9900e-003	1.5127	0.3985	9.2500e-003	0.4078		1,275.4110	1,275.4110	0.0605		1,276.6820
Total	**0.7181**	**2.4923**	**9.2992**	**0.0222**	**1.6393**	**0.0345**	**1.6738**	**0.4375**	**0.0318**	**0.4694**		**1,760.3240**	**1,760.3240**	**0.0643**		**1,761.6750**

3.14 Site Preparation - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.7250	38.8640	32.9264	0.0391		1.9309	1.9309		1.7764	1.7764		3,792.281 6	3,792.281 6	1.2265		3,818.038 1
Total	**3.7250**	**38.8640**	**32.9264**	**0.0391**	**18.0663**	**1.9309**	**19.9971**	**9.9307**	**1.7764**	**11.7071**		**3,792.281 6**	**3,792.281 6**	**1.2265**		**3,818.038 1**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0719	0.6892	2.0200e-003	0.1780	1.1600e-003	0.1791	0.0472	1.0800e-003	0.0483		144.9651	144.9651	6.6700e-003		145.1051
Total	**0.0466**	**0.0719**	**0.6892**	**2.0200e-003**	**0.1780**	**1.1600e-003**	**0.1791**	**0.0472**	**1.0800e-003**	**0.0483**		**144.9651**	**144.9651**	**6.6700e-003**		**145.1051**

3.14 Site Preparation - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.7250	38.8640	32.9264	0.0391		1.9309	1.9309		1.7764	1.7764	0.0000	3,792.281 6	3,792.281 6	1.2265		3,818.038 1
Total	**3.7250**	**38.8640**	**32.9264**	**0.0391**	**18.0663**	**1.9309**	**19.9971**	**9.9307**	**1.7764**	**11.7071**	**0.0000**	**3,792.281 6**	**3,792.281 6**	**1.2265**		**3,818.038 1**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0719	0.6892	2.0200e-003	0.1780	1.1600e-003	0.1791	0.0472	1.0800e-003	0.0483		144.9651	144.9651	6.6700e-003		145.1051
Total	**0.0466**	**0.0719**	**0.6892**	**2.0200e-003**	**0.1780**	**1.1600e-003**	**0.1791**	**0.0472**	**1.0800e-003**	**0.0483**		**144.9651**	**144.9651**	**6.6700e-003**		**145.1051**

3.15 Grading - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.5501	49.3839	38.4257	0.0617		2.2619	2.2619		2.0810	2.0810		5,977.708 8	5,977.708 8	1.9333		6,018.308 4
Total	**4.5501**	**49.3839**	**38.4257**	**0.0617**	**6.3387**	**2.2619**	**8.6006**	**3.3444**	**2.0810**	**5.4254**		**5,977.708 8**	**5,977.708 8**	**1.9333**		**6,018.308 4**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4233	23.5144	21.6627	0.0886	2.0543	0.3908	2.4450	0.5622	0.3595	0.9216		8,328.939 0	8,328.939 0	0.0587		8,330.172 0
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0518	0.0799	0.7657	2.2500e-003	0.1977	1.2900e-003	0.1990	0.0524	1.1900e-003	0.0536		161.0723	161.0723	7.4100e-003		161.2279
Total	**2.4751**	**23.5942**	**22.4284**	**0.0908**	**2.2520**	**0.3921**	**2.6441**	**0.6146**	**0.3607**	**0.9753**		**8,490.011 3**	**8,490.011 3**	**0.0661**		**8,491.399 8**

3.16 Building Construction - Phase 5 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.479 9	2,542.479 9	0.6194		2,555.488 0
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.479 9**	**2,542.479 9**	**0.6194**		**2,555.488 0**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2719	1.5460	2.7856	5.0700e-003	0.1366	0.0216	0.1582	0.0390	0.0198	0.0588		473.8034	473.8034	3.6700e-003		473.8806
Worker	0.3937	0.6068	5.8195	0.0171	1.5027	9.8000e-003	1.5125	0.3985	9.0800e-003	0.4076		1,224.149 5	1,224.149 5	0.0563		1,225.331 7
Total	**0.6656**	**2.1529**	**8.6051**	**0.0222**	**1.6393**	**0.0314**	**1.6706**	**0.4375**	**0.0289**	**0.4664**		**1,697.953 0**	**1,697.953 0**	**0.0600**		**1,699.212 3**

3.16 Building Construction - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2719	1.5460	2.7856	5.0700e-003	0.1366	0.0216	0.1582	0.0390	0.0198	0.0588		473.8034	473.8034	3.6700e-003		473.8806
Worker	0.3937	0.6068	5.8195	0.0171	1.5027	9.8000e-003	1.5125	0.3985	9.0800e-003	0.4076		1,224.1495	1,224.1495	0.0563		1,225.3317
Total	**0.6656**	**2.1529**	**8.6051**	**0.0222**	**1.6393**	**0.0314**	**1.6706**	**0.4375**	**0.0289**	**0.4664**		**1,697.9530**	**1,697.9530**	**0.0600**		**1,699.2123**

3.17 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	156.9751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**157.1940**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0725	0.1107	1.0637	3.3700e-003	0.2966	1.9200e-003	0.2985	0.0787	1.7800e-003	0.0804		237.4408	237.4408	0.0105		237.6614
Total	**0.0725**	**0.1107**	**1.0637**	**3.3700e-003**	**0.2966**	**1.9200e-003**	**0.2985**	**0.0787**	**1.7800e-003**	**0.0804**		**237.4408**	**237.4408**	**0.0105**		**237.6614**

3.15 Grading - Phase 5 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.5501	49.3839	38.4257	0.0617		2.2619	2.2619		2.0810	2.0810	0.0000	5,977.708 8	5,977.708 8	1.9333		6,018.308 4
Total	**4.5501**	**49.3839**	**38.4257**	**0.0617**	**6.3387**	**2.2619**	**8.6006**	**3.3444**	**2.0810**	**5.4254**	**0.0000**	**5,977.708 8**	**5,977.708 8**	**1.9333**		**6,018.308 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4233	23.5144	21.6627	0.0886	2.0543	0.3908	2.4450	0.5622	0.3595	0.9216		8,328.939 0	8,328.939 0	0.0587		8,330.172 0
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0518	0.0799	0.7657	2.2500e-003	0.1977	1.2900e-003	0.1990	0.0524	1.1900e-003	0.0536		161.0723	161.0723	7.4100e-003		161.2279
Total	**2.4751**	**23.5942**	**22.4284**	**0.0908**	**2.2520**	**0.3921**	**2.6441**	**0.6146**	**0.3607**	**0.9753**		**8,490.011 3**	**8,490.011 3**	**0.0661**		**8,491.399 8**

3.17 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	156.9751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**157.1940**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0725	0.1107	1.0637	3.3700e-003	0.2966	1.9200e-003	0.2985	0.0787	1.7800e-003	0.0804		237.4408	237.4408	0.0105		237.6614
Total	**0.0725**	**0.1107**	**1.0637**	**3.3700e-003**	**0.2966**	**1.9200e-003**	**0.2985**	**0.0787**	**1.7800e-003**	**0.0804**		**237.4408**	**237.4408**	**0.0105**		**237.6614**

3.18 Site Preparation - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.6519	3,788.6519	1.2253		3,814.3837
Total	**3.4057**	**35.0050**	**30.8503**	**0.0391**	**18.0663**	**1.6995**	**19.7658**	**9.9307**	**1.5636**	**11.4943**		**3,788.6519**	**3,788.6519**	**1.2253**		**3,814.3837**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0435	0.0664	0.6382	2.0200e-003	0.1780	1.1500e-003	0.1791	0.0472	1.0700e-003	0.0483		142.4645	142.4645	6.3000e-003		142.5968
Total	**0.0435**	**0.0664**	**0.6382**	**2.0200e-003**	**0.1780**	**1.1500e-003**	**0.1791**	**0.0472**	**1.0700e-003**	**0.0483**		**142.4645**	**142.4645**	**6.3000e-003**		**142.5968**

3.18 Site Preparation - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	**3.4057**	**35.0050**	**30.8503**	**0.0391**	**18.0663**	**1.6995**	**19.7658**	**9.9307**	**1.5636**	**11.4943**	**0.0000**	**3,788.6519**	**3,788.6519**	**1.2253**		**3,814.3837**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0435	0.0664	0.6382	2.0200e-003	0.1780	1.1500e-003	0.1791	0.0472	1.0700e-003	0.0483		142.4645	142.4645	6.3000e-003		142.5968
Total	**0.0435**	**0.0664**	**0.6382**	**2.0200e-003**	**0.1780**	**1.1500e-003**	**0.1791**	**0.0472**	**1.0700e-003**	**0.0483**		**142.4645**	**142.4645**	**6.3000e-003**		**142.5968**

3.19 Grading - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.1944	44.4928	36.7579	0.0617		2.0140	2.0140		1.8529	1.8529		5,979.1158	5,979.1158	1.9338		6,019.7249
Total	**4.1944**	**44.4928**	**36.7579**	**0.0617**	**6.3387**	**2.0140**	**8.3527**	**3.3444**	**1.8529**	**5.1973**		**5,979.1158**	**5,979.1158**	**1.9338**		**6,019.7249**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3849	18.6469	20.7132	0.0884	2.0543	0.3804	2.4347	0.5622	0.3500	0.9121		8,310.8279	8,310.8279	0.0597		8,312.0823
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0483	0.0738	0.7091	2.2500e-003	0.1977	1.2800e-003	0.1990	0.0524	1.1900e-003	0.0536		158.2939	158.2939	7.0000e-003		158.4409
Total	**2.4333**	**18.7207**	**21.4223**	**0.0906**	**2.2520**	**0.3817**	**2.6337**	**0.6146**	**0.3511**	**0.9658**		**8,469.1218**	**8,469.1218**	**0.0667**		**8,470.5232**

3.19 Grading - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3387	0.0000	6.3387	3.3444	0.0000	3.3444			0.0000			0.0000
Off-Road	4.1944	44.4928	36.7579	0.0617		2.0140	2.0140		1.8529	1.8529	0.0000	5,979.115 7	5,979.115 7	1.9338		6,019.724 9
Total	**4.1944**	**44.4928**	**36.7579**	**0.0617**	**6.3387**	**2.0140**	**8.3527**	**3.3444**	**1.8529**	**5.1973**	**0.0000**	**5,979.115 7**	**5,979.115 7**	**1.9338**		**6,019.724 9**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3849	18.6469	20.7132	0.0884	2.0543	0.3804	2.4347	0.5622	0.3500	0.9121		8,310.827 9	8,310.827 9	0.0597		8,312.082 3
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0483	0.0738	0.7091	2.2500e-003	0.1977	1.2800e-003	0.1990	0.0524	1.1900e-003	0.0536		158.2939	158.2939	7.0000e-003		158.4409
Total	**2.4333**	**18.7207**	**21.4223**	**0.0906**	**2.2520**	**0.3817**	**2.6337**	**0.6146**	**0.3511**	**0.9658**		**8,469.121 8**	**8,469.121 8**	**0.0667**		**8,470.523 2**

3.20 Building Construction - Phase 6 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.781 7	2,542.781 7	0.6126		2,555.646 2
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.781 7**	**2,542.781 7**	**0.6126**		**2,555.646 2**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2613	1.2419	2.6261	5.0600e-003	0.1366	0.0189	0.1555	0.0390	0.0174	0.0564		472.8257	472.8257	3.6800e-003		472.9029
Worker	0.3674	0.5611	5.3893	0.0171	1.5027	9.7300e-003	1.5124	0.3985	9.0200e-003	0.4076		1,203.033 3	1,203.033 3	0.0532		1,204.151 0
Total	**0.6287**	**1.8030**	**8.0154**	**0.0222**	**1.6393**	**0.0286**	**1.6679**	**0.4375**	**0.0264**	**0.4640**		**1,675.859 0**	**1,675.859 0**	**0.0569**		**1,677.053 9**

3.20 Building Construction - Phase 6 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.781 7	2,542.781 7	0.6126		2,555.646 2
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**	**0.0000**	**2,542.781 7**	**2,542.781 7**	**0.6126**		**2,555.646 2**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2613	1.2419	2.6261	5.0600e-003	0.1366	0.0189	0.1555	0.0390	0.0174	0.0564		472.8257	472.8257	3.6800e-003		472.9029
Worker	0.3674	0.5611	5.3893	0.0171	1.5027	9.7300e-003	1.5124	0.3985	9.0200e-003	0.4076		1,203.033 3	1,203.033 3	0.0532		1,204.151 0
Total	**0.6287**	**1.8030**	**8.0154**	**0.0222**	**1.6393**	**0.0286**	**1.6679**	**0.4375**	**0.0264**	**0.4640**		**1,675.859 0**	**1,675.859 0**	**0.0569**		**1,677.053 9**

4.1 Operational Detail - Mobile

4.2 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.0388	11.9478	51.7691	0.1440	10.0058	0.1856	10.1914	2.6758	0.1712	2.8470		10,998.63 67	10,998.63 67	0.3786		11,006.58 76
Unmitigated	6.2336	12.9652	55.6114	0.1590	11.0868	0.2036	11.2904	2.9648	0.1878	3.1526		12,142.25 81	12,142.25 81	0.4143		12,150.95 74

4.3 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	164.65	104.35	133.65	216,952	195,799
Retirement Community	653.76	653.76	653.76	1,661,568	1,499,566
Single Family Housing	1,308.10	1,308.10	1308.10	3,324,611	3,000,461
Total	2,126.51	2,066.21	2,095.51	5,203,132	4,695,826

4.4 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	13.00	5.00	5.00	16.90	64.10	19.00	52	39	9
Retirement Community	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
Single Family Housing	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.454968	0.042327	0.214633	0.150226	0.067641	0.009835	0.017975	0.024142	0.002353	0.001408	0.008947	0.000814	0.004731

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300
NaturalGas Unmitigated	0.1977	1.6910	0.7317	0.0108		0.1366	0.1366		0.1366	0.1366		2,156.5059	2,156.5059	0.0413	0.0395	2,169.6300

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	10904.1	0.1176	1.0049	0.4276	6.4100e-003		0.0813	0.0813		0.0813	0.0813		1,282.8343	1,282.8343	0.0246	0.0235	1,290.6414
Health Club	298.082	3.2100e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003		35.0685	35.0685	6.7000e-004	6.4000e-004	35.2819
Retirement Community	7128.13	0.0769	0.6569	0.2795	4.1900e-003		0.0531	0.0531		0.0531	0.0531		838.6031	838.6031	0.0161	0.0154	843.7067
Total		**0.1977**	**1.6910**	**0.7317**	**0.0108**		**0.1366**	**0.1366**		**0.1366**	**0.1366**		**2,156.5059**	**2,156.5059**	**0.0413**	**0.0395**	**2,169.6300**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	10.9041	0.1176	1.0049	0.4276	6.4100e-003		0.0813	0.0813		0.0813	0.0813		1,282.8343	1,282.8343	0.0246	0.0235	1,290.6414
Health Club	0.298082	3.2100e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003		35.0685	35.0685	6.7000e-004	6.4000e-004	35.2819
Retirement Community	7.12813	0.0769	0.6569	0.2795	4.1900e-003		0.0531	0.0531		0.0531	0.0531		838.6031	838.6031	0.0161	0.0154	843.7067
Total		**0.1977**	**1.6910**	**0.7317**	**0.0108**		**0.1366**	**0.1366**		**0.1366**	**0.1366**		**2,156.5059**	**2,156.5059**	**0.0413**	**0.0395**	**2,169.6300**

6.1 Area Detail

6.2 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.0000	0.2447	21.0773	1.0800e-003		0.6004	0.6004		0.5953	0.5953	0.0000	7,689.0016	7,689.0016	0.1809	0.1403	7,736.2873
Unmitigated	12.6836	0.2582	22.4207	1.1800e-003		0.6083	0.6083		0.6032	0.6032	0.0000	7,692.0235	7,692.0235	0.1855	0.1403	7,739.4065

6.3 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0806					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7014	3.0000e-005	0.0383	0.0000		0.4846	0.4846		0.4795	0.4795	0.0000	7,651.7647	7,651.7647	0.1467	0.1403	7,698.3321
Landscaping	0.6761	0.2581	22.3824	1.1800e-003		0.1237	0.1237		0.1237	0.1237		40.2588	40.2588	0.0388		41.0745
Total	**12.6836**	**0.2582**	**22.4207**	**1.1800e-003**		**0.6083**	**0.6083**		**0.6032**	**0.6032**	**0.0000**	**7,692.0235**	**7,692.0235**	**0.1855**	**0.1403**	**7,739.4065**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4765					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.7014	3.0000e-005	0.0383	0.0000		0.4846	0.4846		0.4795	0.4795	0.0000	7,651.7647	7,651.7647	0.1467	0.1403	7,698.3321
Landscaping	0.5966	0.2447	21.0390	1.0800e-003		0.1158	0.1158		0.1158	0.1158		37.2369	37.2369	0.0342		37.9552
Total	**12.0000**	**0.2447**	**21.0773**	**1.0800e-003**		**0.6004**	**0.6004**		**0.5953**	**0.5953**	**0.0000**	**7,689.0016**	**7,689.0016**	**0.1809**	**0.1403**	**7,736.2873**

7.1 Water Detail

7.2 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

8.1 Waste Detail

8.2 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Attachment 12
Preliminary Biological Assessment

Biological Report

for

River Oaks II, 2013 Revised Study Area

City of El Paso de Robles
San Luis Obispo County
California

Prepared for

Estrella Associates
2727 Buena Vista Drive
Paso Robles, CA 93446

by

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES
1602 Spring Street
Paso Robles, CA 93446
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Updated October 2013

590.01

Table of Contents

Synopsis

- This biological report examines a 130+ acre Study Area in the City of Paso Robles, San Luis Obispo County, California.
- A larger study area that included additional properties was previously examined in 2007 and a report was prepared. This report includes information from previous findings and includes information from site inspection in 2013 to update conditions and biological resources on the site.
- The applicant proposes a residential development north of the River Oaks I residential development.
- The Study Area consists of seven habitat types: riparian, annual grassland, blue oak woodland, wetland, agrestal (dryland grain crop), ruderal, and anthropogenic. Floristic surveys of the Study Area identified 188 species of plants. A complete list of landscape species is not included.
- Eight special status plants and nineteen special status animals have the potential to occur in or near the Study Area. Appendix B, Figure 4 shows the current GIS data from the California Natural Diversity Database for rare species occurrences near the site.
- Biological resources that could be impacted by a proposed residential development project in the Study Area include common habitat types, wetlands, oak trees, common plant and animal species, special status plant and animal species, and nesting birds. The applicant intends to avoid impacts to all oak trees in the Study Area. All impacts to biological resources can be mitigated to a less than significant level.
- Potential impacts to biological resources are outlined, and mitigation recommendations are provided.

1.0 Introduction

This biological report examines botanical, zoological, and aquatic resources associated with a 130± acre property (Study Area) in the City of Paso Robles, San Luis Obispo County, California. A biological assessment that included a larger project area was completed by Althouse and Meade, Inc. in August 1999, and revised in August 2001, and in June 2007. This updated Biological Report provides results of previous studies, and current information on existing conditions, current land use, and potential special status species within the 130± acre Study Area.

Results are reported for floristic and wildlife surveys of the Study Area conducted in 1999, 2000, 2001, 2007, and 2013. Also reported is a habitat inventory, and results of database and literature searches of special status species reports within five miles of the Study Area. Natural communities on the site are identified, special status species that could occur in the Study Area or be affected by the proposed project are discussed, and lists of plant and animal species that were identified or are expected in the Study Area are provided. This report provides information regarding biological resources on the site, and assesses potential impacts to biological resources that could occur from the proposed project. An evaluation of the effect of the proposed project on biological resources is included, and mitigation measures are provided.

1.1 Project Location and Description

The Study Area is located in the City of Paso Robles, San Luis Obispo County, California (Appendix B, Figure 1). River Oaks II is situated north of State Highway 46 East, and east of the Salinas River. Approximate coordinates for the center of the Study Area are N35.65412° / W120.678889°, in the Paso Robles United States Geological Survey (USGS) 7.5 minute quadrangle (Appendix B, Figure 2). Elevation varies from approximately 665 to 830 feet above sea level.

The applicant proposes to design and build a planned residential community in the Study Area. River Oaks I is an existing planned community bordering the south side of the Study Area. The currently proposed project would expand on the existing infrastructure and design at River Oaks I. Concept Plan maps created for the project by RRM Design Group, included here in Appendix A, are designed to identify land planning goals and opportunities on the site. The project would include multiple residential areas with different densities, hospitality and recreation areas, a community facility, and open space.

TABLE 1. PARCEL INFORMATION. Assessor's Parcel Numbers (APN), size, and current land use are provided for each of the eleven parcels comprising the Study Area.

APN	Size (acres)	Current Land Use
025-390-002	57±	Residential, agriculture
025-390-003	71.92±	Hot spring resort facilities, radio tower, agriculture

1.2 Responsible Parties

TABLE 2. RESPONSIBLE PARTIES. Applicant, agent, biological consultant, and lead agency are provided.

Applicant (Owner)	
Estrella Associates, Inc. 2727 Buena Vista Drive Paso Robles, CA 93446 (805) 238-1031 Contact: Dick Willhoit	
Biological Consultant	**Lead Agency**
Althouse and Meade, Inc. 1602 Spring Street Paso Robles, CA 93446 (805) 237-9626 Contact: Daniel E. Meade, Ph.D.	City of Paso Robles 1000 Spring Street Paso Robles, CA 93446 (805) 227-7276

2.0 Methods

Biological surveys of the Study Area were conducted between May 10 and August 10, 1999 by Lynne Dee Althouse. Eight site visits were made during that time. Susan Christopher, a County of San Luis Obispo approved herpetologist, conducted surveys for rare reptiles and amphibians on August 9, 1999, and later re-visited the site to observe bullfrog abundance. Daniel Meade made supplemental visits in June of 1999 and May of 2001. Surveys were conducted on February 5, March 26, April 10, 13, and 19, and June 12, 2007 by Daniel E. Meade, Ph.D. and Jason Dart. Meg Perry, Senior Biologist, conducted additional surveys on August 7 and 8, 2013. Floristic and wildlife surveys were conducted in all portions of the Study Area. All surveys were conducted on foot in order to compile species lists, to search for special status plants and animals, and to photograph the site. Each habitat type in the Study Area was inspected, described, and catalogued. Wildlife documentation included observations of animal presence, nests, tracks, and sign. Birds were identified by sight, using binoculars, or by vocalizations. Identification of botanical resources included field observations and laboratory analysis of collected material. Botanical nomenclature follows the Jepson Manual, unless otherwise noted. Aquatic organisms were identified by sight without capturing them. All plant and animal species observed in the Study Area were identified and recorded. Information from previous biological surveys of the Study Area was used in the preparation of this report (Althouse and Meade, Inc., 1999, 2001, and 2007).

We conducted a search of the California Natural Diversity Database (CNDDB June 30, 2013 data) and the California Native Plant Society (CNPS) On-line Inventory of Rare and

Endangered Plants of California for special status species known to occur within five miles of the Study Area. The search area included the Adelaida, Paso Robles, Estrella, York Mountain, Templeton, and Creston quadrangles (7.5 minute USGS).

Additional special status species research consisted of reviewing previous biological reports for the area and searching on-line museum and herbarium specimen records for locality data within San Luis Obispo County. We reviewed online databases of specimen records maintained by the Museum of Vertebrate Zoology (MVZ) at the University of California, Berkeley, and the Consortium of California Herbaria. Additional special status species with potential to occur in or near the Study Area were added to our special status species list.

Special status species lists produced by database and literature searches were cross-referenced with the known habitat types in the Study Area to identify all potential special status species that could occur in or near the Study Area. Each special status species with a potential for occurrence on or near the project site is individually discussed. A report was made to the CNDDB if field surveys found special status species in the Study Area.

3.0 Results

3.1 Existing Conditions

The River Oaks II property (Study Area) is composed of two parcels extending from just west of Buena Vista Drive west to the Salinas River (Appendix B, Figures 1 and 2). Most of the Study Area is situated on a terrace east of the Salinas River and North River Road. North River Road passes along the toe of the terrace, between it and the Salinas River. This terrace is characterized by rolling hills and ephemeral grassy or farmed swales. Swales become more incised and oak studded at the west end of the terrace, draining off the bluff and beneath the road to the river. The western end of the Study Area extends to the center of the Salinas River. The Study Area becomes flat in the eastern end terminating at Buena Vista Drive.

In 2007, agriculture was the primary land use on the site, with the majority planted in commercial grain. Grain fields are still present in most of the previously mapped agricultural areas. In August 2013, these fields were fallow, and the stubble from the most recent crop had recently been grazed down by sheep. One grain field photographed with a young grain crop in 2007 is no longer being farmed. This field was located on a low terrace near the Salinas River, west of River Road, and has since been disturbed for construction of utilities, including the Nacimiento pipeline project. The terrace is now colonized with coyote brush (*Baccharis pilularis*) and non-native annual weeds. A well-worn, unpaved access road crosses the terrace and slopes up to meet River Road.

During our earlier site visits in 1999 through 2007, narrow dirt ranch roads provided access to each parcel, but most of the Study Area consisted of road-less rolling hills. In 2013, some paved roads are present, including a road around the south edge of the largest grain field. This road previously provided access to the River Oaks Hot Springs and Spa but has since been closed to through traffic. The Hot Springs and Spa is situated in the center of the Study Area at the northern boundary, just northwest of a large man-made pond. The pond is surrounded by manicured lawns used to stage events, and numerous landscape trees. A communications tower stands at the western end of the property on the bluff overlooking North River Road. An approximately 100-foot radius vegetation-free area surrounding the tower is maintained as a fire break. Maintenance shops, sheds, and other facilities are located on the terrace edge near the tower, and on the north side of the hot springs building.

The winter of 2006-2007 was very dry, with Paso Robles totaling less than half of its average annual rainfall. The ephemeral drainages in the Study Area likely never flowed. Wetland vegetation was not obvious, and many plant species withered before flowering. A wetland delineation was conducted in 2009 that included the Study Area. Ephemeral and seasonal drainages found during the wetland delineation are shown on the Habitat Map of the Study Area. Drought conditions occurred in the Paso Robles area again in 2012 and 2013.

3.2 Soils

The United Stated Department of Agriculture (USDA) Soil Survey of San Luis Obispo County, California, Paso Robles Area (1984) indicates six soil types occur in the Study Area: Arbuckle fine sandy loam, 0 to 2 percent slopes (100), Arbuckle-Positas complex, 30 to 50 percent slopes (104), Arbuckle-San Ysidro complex, 2 to 9 percent slopes (106), Mocho clay loam, 0 to 2 percent slopes (173), Nacimiento-Ayar complex, 9 to 30 percent slopes (177), and Xerofluvents-Riverwash association (212). Map units typically encompass one or two dominant soils, which cover more than 50 percent of the mapped area, and one to several included soils, which occur in small patches that are not differentiated in mapping. Complete, accurate description of soil types and capabilities for specific uses on a specific site generally requires additional soil investigations by a qualified professional soil scientist. A map of the USDA Soil map units in the Study Area is included in Appendix B, Figure 3.

Arbuckle fine sandy loam (100) is a very deep, nearly level, well-drained soil formed in alluvium derived from mixed rocks. Permeability of Arbuckle soils is moderately slow, and available water capacity is moderate to high. Surface runoff is slow and hazard of erosion is slight due to the gentle slopes. Included in this map unit are about five percent San Ysidro loam and five percent small areas of Cropley clay and Hanford fine sandy loam. This soil type has no limitations or hazards for farming and for building sites, roads, and streets. Most of the Arbuckle fine sandy loam soil type is located on the flat terrace west of Clubhouse Drive, and has not been farmed since prior to our 2007 site visits. This Arbuckle soil is in soil capability class is I (14) irrigated and IVc-1 (14) non-irrigated. When irrigated, this soil is considered prime farmland with no limitations (I). When not irrigated this soil has severe limitations for field crops (IV) due to the high sand content. These limitations are due to dry summer climate that cannot support crops without irrigation (c), and the potential for wind erosion of fine sandy loams (1).

The Arbuckle-Positas complex (104) consists of approximately 40 percent Arbuckle fine sandy loam, 30 percent Positas coarse sandy loam, 15 percent Shimmon loam on north slopes, 10 percent is a soil similar to Positas coarse sandy loam except that is has a very gravelly sandy clay subsoil, and 5 percent is small areas of Ayar silty clay, Balcom loam, Greenfield fine sandy loam, Linne Shaly clay loam, Nacimiento silty clay loam, and Badland. The complex is very deep and well drained, with a moderate to high available water capacity. In the Study Area it occurs along River Road where the hillside slopes up steeply. The Arbuckle-Positas complex with 30 to 50 percent slopes is in capability subclass VIe (14) non-irrigated.

The Arbuckle-San Ysidro complex (106) consists of approximately forty percent Arbuckle fine sandy loam and twenty percent San Ysidro loam. Also included in this map unit are areas of Greenfield fine sandy loam, Hanford fine sandy loam, Cropley clay, Rincon clay loam, and Ryer clay loam. The Arbuckle soil is a very deep, well drained soil formed in alluvium from mixed rocks. It has a moderately slow permeability and a moderate to high available water capacity. The San Ysidro soil is a very deep soil located in low areas associated with old drainageways. It is moderately well drained, with a very slow permeability and a moderate to high available water capacity. This complex is in capability units IIe-1 (14) irrigated, and IVe-1 (14) non-irrigated. The Arbuckle-San Ysidro complex is mapped on gentler slopes of the terrace between North River Road and Buena Vista Drive.

The Mocho clay loam soil type (173) is a very deep, nearly level, well drained soil formed in calcareous alluvium derived from sedimentary rocks. It occurs on alluvial plains. The soil is calcareous throughout. Included with this soil type in mapping are about 10 percent Still clay loam, five percent of a soil having light brownish grey, calcareous loam and clay loam textures throughout, five percent of a soil having a gravelly sandy loam or gravelly loam overwash 4 to 10 inches thick, and five percent small areas of Sorrento clay loam and Tujunga fine sand. This Mocho soil has moderately slow permeability and a high to very high available water capacity. Surface runoff is slow, and the hazard of erosion is slight. This map unit is in capability class I (14) irrigated, and capability unit IVc-1 (14) non-irrigated. This is one of the most productive soils in the survey area, and is considered prime farmland. It occurs in a long narrow strip between River Road and the Salinas River, and was farmed for dryland grain in 2007. This area has not been farmed in recent years.

The Nacimiento-Ayar complex (177) consists of moderately steep soils on hills. This complex consists of approximately 35 percent Nacimiento silty clay loam and 30 percent Ayar silty clay loam. Areas of these soil types are so intricately mixed that it is not practical to separate them in mapping. Included with these soils in mapping are about 15 percent Linne shaly clay loam, 10 percent Diablo clay, five percent Balcom loam, and five percent small areas of Calodo clay loam, Dibble clay loam, Positas coarse sandy loam, and Shimmon loam. A few areas have deep gullies and rock outcrop. The Nacimiento soil is a moderately deep, well drained soil that formed in material weathered from calcareous sandstone and shale. This Nacimiento soil has moderately slow permeability, and a low to moderate available water capacity. The Ayar soil is a deep, well drained soil that formed in material weathered from calcareous sandstone and shale. This Ayar soil has a slow permeability, and the available water capacity is high to very high. This complex is in capability units IVe-1 (15) irrigated, and IVe-1 (15) non-irrigated. The Nacimiento Ayar complex is the most prevalent soil type on USDA maps for the Study Area. Much of this area was dry farmed in 2013.

Xerofluvents-Riverwash association (212) consists of soils and barren areas on flood plains. The complex consists of approximately 50 percent xerofluvents and 30 percent riverwash. Xerofluvents occur on the flood plains and generally flood twice every four years. Riverwash is on barren areas in and along stream channels, flooding annually. Included in this map unit are areas of Elder loam, Metz loamy sand, and Tujunga fine sand. This map unit occurs along the Salinas River and its floodplain.

3.3 Habitat Types

Seven habitat types occur in the Study Area: agrestal (dryland grain crop), annual grassland, riparian, blue oak woodland, wetland, ruderal, and anthropogenic. A habitat map is provided in Appendix B for reference.

3.3.1 Agrestal (dryland grain crop)

Approximately half the Study Area was planted in cultivated oats and barley during the 2007 spring season (Photos 1, 2, 4). Grain fields were primarily on the eastern half of the Study Area, with an additional field planted in a narrow strip immediately adjacent to the Salinas River, west of North River Road. In 2013, the farmed area was largely consistent with 2007 maps and photos, except that the western river-side field has not been planted in several years and has reverted to ruderal habitat with scattered coyote brush (*Baccharis pilularis*) shrubs.

Dryland grain is a non-irrigated crop on rolling hills, terraces, and swales. The Study Area has a perimeter fence in some areas of old 3-line barbed wire, but does not have wildlife exclusion fencing. Dryland grain crops are typically sprayed with a broad-leaf herbicide to reduce the amount of weeds in the crop. The lack of non-grass plant species in the barley fields is likely due to this type of spraying. Bindweed (*Convolvulus arvensis*) and stickwort (*Spergula arvensis*) are weeds that were found to persist with the grain crops. Milkweed (*Asclepias fascicularis*) and Jimson weed (*Datura wrightii)* were observed growing through grain stubble remaining in August 2013. The agrestal habitat is generally poor wildlife habitat, but does attract certain birds, including red-winged blackbird (*Agelaius phoeniceus*) and savanna sparrow (*Passerculus sandwichensis*). Western meadowlark (*Sturnella neglecta*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), and European starling (*Sturnus vulgaris*) were observed in fallow fields in 2013, foraging or perching on the ground. Mule deer (*Odocoileus hemionus*) are likely to forage in the grain where accessible. Special status plants are not expected to occur in the agrestal habitat on site.

Two soil map units in the Study Area are considered prime farmland because the soils are in Class I irrigated. The soil types are: Arbuckle fine sandy loam, 0 to 2 percent slopes (100) and Mocho clay loam, 0 to 2 percent slopes (173). Neither of the areas shown by USDA maps to contain these soil map units was farmed in 2013.

3.3.2 Annual grassland

Grassland plant associations in the Study Area consist of old farm fields that have not recently been in production, seasonally maintained and periodically grazed residential yards, and marginal areas adjacent to roads and drainages (Photo 1). The grasslands are weedy, composed of naturalized Mediterranean grasses such as soft chess (*Bromus hordeaceus*), foxtail barley (*Hordeum murinum*), wild oat (*Avena fatua*), and a mixture of native and non-native forbs. Coyote brush (*Baccharis pilularis*) is sometimes present, notably between North River Road and the Salinas River, where some young valley oaks (*Quercus lobata*) are also present. All of the grassland areas are disturbed, primarily from previous farming and construction activities. Annual grassland habitat comprises 24± acres of the Study Area. The condition of annual grasslands are similar in 2013 to previous years. One area immediately adjacent to the Hot Springs and Spa has been maintained frequently to provide event parking. This area is discussed further under section 3.3.6, Ruderal.

Landscape plantings along the old paved access road from Buena Vista to the Hot Springs and Spa are mapped with annual grassland habitat because they form a narrow, irregular strip that is impractical to map separately, and because understory and spaces between plantings support annual grassland similar to grassland described elsewhere in the Study Area. Landscape plantings include clusters of coast live oak (*Quercus agrifolia*), as well as box elder, cypress, ash, chitalpa, toyon, coffeeberry, and ceanothus plantings.

3.3.3 Riparian

Mature riparian habitat is present within the Salinas River corridor along the western edge of the Study Area (Photos 5, 6). The river consists of a primary flow channel, with secondary flood channels along the margins. Secondary channels are mapped in the

Study Area, and are jurisdictional drainages. Several riparian plant associations are present, including willow scrub, coyote brush scrub, willow-cottonwood riparian forest, and wetland. The dominant canopy species are red willow (*Salix laevigata*), Fremont cottonwood (*Populus fremontii*), box-elder (*Acer negundo*), and valley oak (*Quercus lobata*). Common shrub components are narrow-leaved willow (*Salix exigua*), mulefat (*Baccharis salicifolia*) and coyote brush. Riparian habitat comprises approximately 11 acres of the Study Area, extending for 1,630 linear feet.

The diverse vegetation structure in the Salinas River creates excellent wildlife habitat. Songbirds, raptors, and waterfowl are common. In 2007, a beaver had built a system of dams that create ponded water where ducks, frogs, and minnows congregate. Numerous mammal species are residents in the riparian habitat, moving to upland areas at night to forage and returning to the river to spend the day in hiding. Steelhead trout and California red-legged frog, both federally listed threatened species, are potential inhabitants of the Salinas River riparian habitat. Appropriate habitat for two federally listed bird species, Southwestern willow flycatcher and Least Bell's vireo, is also present (see section 3.6.5).

Ephemeral drainages are also present within the Study Area. We describe the drainages as ephemeral, meaning surface flows are only present during and shortly after rain events that cause run-off to enter the watershed. Drainages were mapped during a wetland delineation conducted in 2009, and include flow from the pond offsite into a natural drainage channel. Ephemeral drainages primarily support upland vegetation rather than the hydrophytic willows, cottonwoods, and box elders found near the Salinas River.

3.3.4 Blue oak woodland

Blue oak woodland in the Study Area occurs on the edge of the terrace bluff overlooking North River Road and the Salinas River (Photos 1, and 3). Approximately 4 acres of blue oak woodland occur in the Study Area. This habitat type is dominated by a single species of tree, blue oak (*Quercus douglasii*). It is a dry habitat with a grassy understory. Some valley oaks (*Quercus lobata*) are present near the ephemeral drainages, but are generally uncommon. On the bluff the canopy is open and patchy, varying from approximately 20 to 60 percent cover. The canopy is denser in the drainages, averaging approximately 80 percent cover. There is very little recruitment (establishment and presence of young trees) of blue oak trees in the Study Area. The trees are variable in age structure, but tend toward middle to late stage growth. Young trees in the ten to fifty year age range are not present. The slope down to River Road provides moderately appropriate habitat for native wildflowers typically found on banks and slopes in oak woodland such as Booth's primrose (*Camissonia boothii*) and larkspur (*Delphinium parryi*).

3.3.5 Wetland

Wetland habitat was identified in two areas of the Study Area. A formal wetland delineation has been conducted in the Study Area in 2009.Current conditions on the property appear to be consistent with the 2009 delineation. Criteria for federal and state jurisdictional wetlands are defined in section 3.6.7. The largest wetland area occurs in the Salinas River at the western Study Area boundary. The boundaries of this wetland were not mapped, but generally follow the low flow channel of the river. Perennial surface water is supported in this section of the river by discharges from the wastewater treatment facility on the west bank of the river. The water level fluctuates seasonally with the addition of winter run-off and subsequent spring drying. Beaver activity also affects the water level. The stream margins and elevated sandbars support an herbaceous wetland association composed of umbrella sedge (*Cyperus eragrostis*), toad rush (*Juncus bufonius*), brown-headed rush (*Juncus phaeocephalus*), common threesquare (*Scirpus pungens*), water speedwell (*Veronica anagallis-aquatica*), mosquito fern (*Azolla filiculoides*), cocklebur (*Xanthium strumarium*), and others.

In the center of the Study Area, a man-made perennial pond is located within an ephemeral drainage that connects with the Salinas River. The pond margins support small patches of American rush (*Scirpus americanus*), an emergent species. Also present are toad rush, yellow nutsedge (*Cyperus esculentus*), marsh cudweed (*Gnaphalium palustre*), cocklebur, spikerush (*Eleocharis parishii*) and others. Pacific chorus frog (*Pseudacris regilla*) and bullfrog (*Rana catesbeiana*) were identified in the pond in both larval and adult stages. Introduced fish species are also present.

Vernal pools were not observed on the property during any of our surveys. Vernal pools are loosely defined as ephemeral bodies of water, typically filled by rainfall, that do not have connectivity to a drainage, and support specialized flora and fauna. Although rainfall during the winter of 2006-2007 was not adequate to maintain water for more than one month in many of the vernal pools in the Paso Robles region, vernal pool features such as ringed vegetation, or depressions with evidence of standing water, were still detectable offsite, locally. We found no indicators of vernal pools in the Study Area. Several potential ephemeral low spots were noted in the disturbed annual grassland habitat near the southern property line, west of Clubhouse Drive. Water was not present during our site surveys, but the soil and vegetation suggested one to two inches of shallow standing water was present for durations of perhaps one week. These depressions occur along the Study Area boundary and are likely the result of past earth-moving activities associated with the construction of the adjacent River Oaks I project.

These ephemeral depressions were sampled for fairy shrimp during dry and wet season surveys in 2007/2008. No fairy shrimp or other rare branchiopods were found. Wetland vegetation and specialized vernal pool flora were not observed, thus these areas were described as ephemeral depressions rather than vernal pools. The ephemeral depressions observed in 2008 are not apparent in 2013, due to landscape management and maintenance.

Other patches of wetland documented in the wetland delineation occur outside the Study Area.

3.3.6 Ruderal

Habitat areas bordering roads and farm fields that are composed primarily of weedy forbs are described as ruderal habitat. Ruderal species are those that are quick to colonize disturbed areas, such as cut and fill slopes from road construction, and tilled margins of farm fields that did not get seeded with grain. The most common ruderal species in the Study Area are field mustard (*Hirschfeldia incana*), tocolote (*Centaurea melitensis*), yellow star thistle (*Centaurea solstitialis*) and several low growing species such as knotweed (*Polygonum arenastrum*) and sand spurrey (*Spergularia rubra*). All of these plants are non-native in origin and weedy in habit.

In 2007 a grain field bordered riparian habitat, situated between the Salinas River and River Road. This field was disturbed for construction of the Nacimiento pipeline project and has not been farmed recently. By 2013 this field was a mix of ruderal, coyote brush scrub, annual and grassland, with occasional mulefat and sandbar willows recruiting (Photo 6).

One area previously mapped as annual grassland is frequently used for event parking adjacent to the River Oaks Hot Spring and Spa. Irrigation valves and some stand pipes are present, and mow lines indicate frequent maintenance. Dominant vegetation in this frequently maintained area is non-native Bermuda grass (*Cynodon dactylon*). Thus this area was mapped in 2013 as ruderal habitat. Approximately 13± acres of ruderal habitat were mapped in the Study Area.

3.3.7 Anthropogenic

Anthropogenic habitat is mapped where human influence has altered the landscape such that natural habitat areas are no longer present (Photo 8). These areas include the hot springs facility and surrounding landscape and high use areas, the communications tower and surrounding vegetation-free zone, a construction staging area, paved roads landscaped areas, and old homesteads where structures have been removed but cultivated vegetation and site alterations remain. Tree of Heaven (*Ailanthus altissima*), a noxious species, was identified in anthropogenic areas at the northeast portion of the Study Area. We recommend removal of this plant because this species is highly invasive. A total of 23± acres of anthropogenic habitat were mapped in the Study Area. Special status plants and animals are not expected to occur in the anthropogenic habitat areas.

3.4 Plant List

Floristic surveys conducted in 1999, 2000, 2001, and 2007 identified 141 species of plants on the property (Table 3). Follow-up surveys in August 2013 conducted to verify conditions of the site had not changed significantly found 46 additional plant species. The majority of species added to the list in 2013 are cultivated plants and weeds. Taxonomy has been updated to Jepson Manual 2nd edition, with older names given in brackets. Surveys were floristic in nature, identifying all species encountered, and were conducted at appropriate times of the year to locate potential special status species. The high number of introduced species is indicative of long-term disturbance to natural communities on the property from farming and construction.

TABLE 3. PLANT LIST. The 187 species of plants identified on the property consist of 80 native species and 107 introduced or planted species. Special status plants were not identified on the property.

Scientific Name	Special Status	Origin	Common Name
Ferns - 1 Species			
Azolla filiculoides	None	Native	Mosquito fern

Scientific Name	Special Status	Origin	Common Name
Trees - 24 Species			
Acer negundo	None	Native	Box-elder
Acer sp.	None	Planted	Maple
Albizia julibrissin	None	Planted	Silk tree
Ailanthus altissima	{noxious}	Introduced	Tree of Heaven
Cercis occidentalis	None	Native (Planted)	Redbud
Chitalpa tashkentensis	None	Planted	Chitalpa
Cupressus sempervirens	None	Planted	Italian cypress
Fraxinus sp.	None	Planted	Ash
Hesperocyparis [=Cupressus] macrocarpa	None	Planted	Monterey cypress
Juglanshindsii [=J. californica var. *hindsii]*	None	Native	California walnut
Morus alba	None	Planted	Fruitless mulberry
Olea europaea	None	Planted	Olive
Pinus sp.	None	Planted	Pine
Platanus racemosa	None	Native	Western sycamore
Platanus x hispanica [=*P. x acerifolia*]	None	Planted	Plane tree
Populus fremontii ssp. *fremontii*	None	Native	Fremont cottonwood
Prunus armeniaca	None	Planted	Apricot
Prunus cerasifera	None	Planted	Purple leaf plum
Quercus agrifolia	None	Planted	Coast live oak
Quercus douglasii	None	Native	Blue oak
Quercus lobata	None	Native	Valley oak
Salix babylonica	None	Planted	Weeping willow
Salix laevigata	None	Native	Red willow
Ulmus parvifolia	None	Planted	Chinese elm
Shrubs – 25 Species			
Arbutus unedo	None	Planted	Strawberry tree
Arctostaphylos sp.	None	Planted	Manzanita
Atriplex semibaccata	None	Introduced	Australian saltbush
Baccharis pilularis	None	Native	Coyote brush
Baccharis salicifolia	None	Native	Mule fat
Buddleja sp.	None	Planted	Butterfly bush
Callistemon sp.	None	Planted	Bottlebrush

Scientific Name	Special Status	Origin	Common Name
Ceanothus sp.	None	Native (Planted)	California lilac
Cistus sp.	None	Planted	Rock rose
Datura wrightii	None	Native	Jimsonweed
Eriogonum elongatum	None	Native	Elongate buckwheat
Frangula [=Rhamnus] californica	None	Planted	Coffeeberry
Heteromeles arbutifolia	None	Native (Planted)	Toyon
Lavandula sp.	None	Planted	Lavendar
Lupinus albifrons	None	Native	Bush lupine
Nerium oleander	None	Planted	Common oleander
Opuntia ficus-indica	None	Planted	Prickly pear
Pyracantha sp.	None	Planted	Firethorn
Rosa californica	None	Native	California rose
Rosmarinus officinalis	None	Planted	Rosemary
Salix exigua	None	Native	Narrow-leaved willow
Salix lasiolepis	None	Native	Arroyo willow
Sambucus nigra ssp. *caerulea [=S. mexicana]*	None	Native	Blue elderberry
Syringa sp.	None	Planted	Lilac
Toxicodendron diversilobum	None	Native	Poison oak
Herbs – 113 Species			
Acmispon brachycarpus [=Lotus purshianus]	None	Native	Spanish clover
Acmispon [=Lotus] humistratus	None	Native	Hill lotus
Alisma triviale [=A. plantago-aquatica]	None	Native	Water plantain
Amaranthus albus	None	Introduced	Tumbleweed amaranth
Amaranthus palmeri	None	Introduced	Pigweed
Amaranthus blitoides	None	Native	Pigweed
Ambrosia acanthicarpa	None	Native	Annual bursage
Amsinckia intermedia [=A. menziesii var. *i.*]	None	Native	Common fiddleneck
Amsinckia menziesii	None	Native	Common fiddleneck
Anagallis arvensis	None	Introduced	Scarlet pimpernel
Anthriscus caucalis	None	Introduced	Bur chervil
Artemisia douglasiana	None	Native	Mugwort
Asclepias eriocarpa	None	Native	Kotolo milkweed
Asclepias fascicularis	None	Native	Narrow-leaved milkweed

Scientific Name	Special Status	Origin	Common Name
Brassica nigra	None	Introduced	Black mustard
Camissonia sp.	None	Native	Sun cups
Capsella bursa-pastoris	None	Introduced	Shepherd's purse
Cardamine oligosperma	None	Native	Bitter-cress
Carduus pycnocephalus	None	Introduced	Italian thistle
Carex sp.	None	Native	Sedge
Centaurea melitensis	None	Introduced	Tocolote
Centaurea solstitialis	None	Introduced	Yellow star thistle
Centromadia [Hemizonia] pungens ssp. *pungens*	None	Native	Common tarweed
Cerastium glomeratum	None	Introduced	Mouse-eared chickweed
Chenopodium album	None	Introduced	Lamb's-quarters
Cirsium occidentale	None	Native	California thistle
Cirsium vulgare	None	Introduced	Bull thistle
Claytonia perfoliata	None	Native	Miner's lettuce
Conium maculatum	None	Introduced	Poison hemlock
Convolvulus arvensis	None	Introduced	Bindweed
Cotula australis	None	Introduced	Southern brass buttons
Cotula coronopifolia	None	Introduced	Brass buttons
Crassula tillaea	None	Introduced	Moss pygmyweed
Croton setiger [=C. setigerus]	None	Native	Dove weed
Cuscuta subinclusa	None	Native	Riparian dodder
Cyperus eragrostis	None	Native	Umbrella sedge
Cyperus esculentus	None	Introduced	Yellow nutsedge
Dichelostemma capitatum	None	Native	Blue dicks
Eleocharis parishii	None	Native	Small spikerush
Epilobium ciliatum	None	Native	Willow herb
Erigeron [=Conyza] bonariensis	None	Introduced	Asthmaweed
Erigeron [=Conyza] canadensis	None	Native	Common horseweed
Erodium botrys	None	Introduced	Fillaree
Erodium cicutarium	None	Introduced	Redstem filaree
Erodium moschatum	None	Introduced	Greenstem filaree
Eschscholzia californica	None	Native	California poppy
Euthamia occidentalis	None	Native	Western goldenrod
Galium aparine	None	Native	Goose grass
Geranium molle	None	Introduced	Geranium

Scientific Name	Special Status	Origin	Common Name
Gnaphalium palustre	None	Native	Marsh cudweed
Helenium puberulum	None	Native	Sneezeweed
Heterotheca grandiflora	None	Native	Telegraph weed
Hirschfeldia incana	None	Introduced	Perennial mustard
Hypochaeris glabra	None	Introduced	Smooth cat's ear
Iris sp.	None	Planted	Bearded iris
Juncus bufonius	None	Native	Toadrush
Juncus phaeocephalus	None	Native	Brown-headed rush
Lactuca serriola	None	Introduced	Prickly lettuce
Lamium amplexicaule	None	Introduced	Henbit
Lemna minor	None	Native	Duckweed
Lepidium latifolium	None	Introduced	Perennial pepperweed
Lepidium nitidum	None	Native	Pepperwort
Lotus corniculatus	None	Introduced	Birdsfoot trefoil
Ludwigia peploides ssp. *peploides*	None	Native	Yellow waterweed
Lupinus nanus	None	Native	Sky blue lupine
Lythrum hyssopifolia	None	Introduced	Loosestrife
Malva nicaeensis	None	Introduced	Bull mallow
Malvella leprosa	None	Native	Alkali mallow
Marrubium vulgare	None	Introduced	Horehound
Matricaria discoidea [=*Chamomilla suaveolens*]	None	Introduced	Pineapple weed
Medicago polymorpha	None	Introduced	California burclover
Medicago sativa	None	Introduced (waif)	Alfalfa
Melilotus albus	None	Introduced	White sweetclover
Melilotus indicus	None	Introduced	Annual sweetclover
Mimulus guttatus	None	Native	Stream monkeyflower
Nasturtium officinale	None	Native	Common watercress
Persicaria [=*Polygonum*] *hydropiperoides*	None	Native	Smartweed
Phoradendron serotinum ssp. *tomentosum* [=*P. villosum*]	None	Native	Oak mistletoe
Phoradendron serotinum ssp. *macrophyllum* [*P. macrophyllum*]	None	Native	Big-leaf mistletoe
Plagiobothrys canescens	None	Native	Popcorn flower
Plantago coronopus	None	Introduced	Cutleaf plantain
Plantago lanceolata	None	Introduced	English plantain

Scientific Name	Special Status	Origin	Common Name
Plantago major	None	Introduced	Common plantain
Polygonum aviculare ssp. *depressum [P. arenastrum]*	None	Introduced	Common knotweed
Portulaca oleracea	None	Introduced	Purslane
Pseudognaphalium [=Gnaphalium] canescens	None	Native	Everlasting
Pseudognaphalium [=Gnaphaliam] luteoalbum	None	Introduced	Cudweed
Rumex crispus	None	Introduced	Curly dock
Salsola tragus	None	Introduced	Russian thistle
Schoenoplectus [=Scirpus] americanus	None	Native	Threesquare
Schoenoplectus [=Scirpus] californicus	None	Native	Bulrush
Schoenoplectus pungens var. longispicatus [Scirpus pungens]	None	Native	Common threesquare
Silybum marianum	None	Introduced	Milk thistle
Sonchus asper	None	Introduced	Prickly sow-thistle
Sonchus oleraceus	None	Introduced	Common sow thistle
Spergula arvensis	None	Introduced	Stickwort
Spergularia rubra	None	Introduced	Sand spurrey
Stellaria media	None	Native	Chickweed
Thysanocarpus curvipes	None	Native	Lacepod
Trichostema lanceolatum	None	Native	Vinegar weed
Trifolium fragiferum	None	Introduced	Strawberry clover
Tropidocarpum gracile	None	Native	Dobiepod
Typha angustifolia	None	Native	Narrow-leaved cattail
Urtico dioica ssp. *holosericea*	None	Native	Nettle
Verbena lasiostachys	None	Native	Verbena
Veronica anagallis-aquatica	None	Introduced	Water speedwell
Veronica persica	None	Introduced	Persian speedwell
Vicia sativa	None	Introduced	Common vetch
Vicia villosa	None	Introduced	Winter vetch
Wolffia columbiana	None	Native	Water-meal
Xanthium spinosum	None	Native	Spiny cocklebur
Xanthium strumarium	None	Native	Common cocklebur
Zannichellia palustris	None	Native	Horned pondweed

Scientific Name	Special Status	Origin	Common Name
Grasses – 24 Species			
Avena barbata	None	Introduced	Slender wild oat
Avena fatua	None	Introduced	Wild oat
Avena sativa	None	Introduced	Cultivated oat
Bromus diandrus	None	Introduced	Ripgut brome
Bromus hordeaceus	None	Introduced	Soft chess brome
Bromus madritensis ssp. *rubens*	None	Introduced	Red top brome
Bromus tectorum	None	Introduced	Cheat grass
Cortaderia selloana	None	Planted	Pampas grass
Crypsis schoenoides	None	Introduced	Swamp grass
Cynodon dactylon	None	Introduced	Bermuda grass
Eragrostis pectinacea	None	Native	Love grass
Festuca arundinacea	None	Introduced	Tall fescue
Festuca [=Vulpia] myuros	None	Introduced	Rattail fescue
Festuca perennis [=Lolium multiflorum]	None	Introduced	Italian ryegrass
Hordeum murinum	None	Introduced	Foxtail barley
Hordeum vulgare	None	Introduced	Barley
Leptochloa fusca ssp. fascicularis [=Leptochloa fascicularis]	None	Introduced	Bearded sprangletop
Muhlenbergia rigens	None	Planted	Deer grass
Paspalum dilatatum	None	Introduced	Dallis grass
Phalaris aquatica	None	Introduced	Harding grass
Poa annua	None	Introduced	Annual bluegrass
Polypogon interruptus	None	Introduced	Ditch beardgrass
Polypogon monspeliensis	None	Introduced	Annual beardgrass
Stipa [=Nassella] pulchra	None	Native	Purple needlegrass

3.5 Wildlife List

More than 148 animal species have the potential to occur on the property (Table 4). These include at least 11 fish, 8 amphibians, 13 reptiles, 96 birds, and 21 mammals. Several rodent species (e.g., California vole, harvest mouse, etc.) are expected to be residents on the property; however, no trapping was conducted as part of this study.

The grasslands and farmland provide foraging habitat for raptors and predators, including golden eagle, red-tail hawk, red-shouldered hawk, white-tailed kite, American kestrel, fox, coyote, and bobcat. Amphibians, including chorus frog, bullfrog, and western toad were observed in the permanent pond on the property, and are also likely to occur in the Salinas River. Western spadefoot toad will breed in ephemeral pools, when present, and may use rodent burrows in upland habitat through the dry season. Gopher snake and king snake are likely residents on site, and other common snake species may also occur. Raccoon, opossum, and striped skunk will forage in the Salinas River, and bobcat, grey and red foxes, and coyotes hunt cottontails and other rodents in the riparian habitat. Mule deer tracks are common in the Salinas River. Deer are likely to forage on the property occasionally, particularly where grain fields are accessible. The permanent lake contains numerous introduced fish species, including catfish, bluegill, mosquito fish, and bass. Sixty species of birds were observed on the property.

TABLE 4. WILDLIFE LIST. More than 148 animal species have the potential to occur on the property. The Special Status column indicates listing status of the organism under the Federal Endangered Species Act, the State Endangered Species Act, or by the CDFG (see Appendix D for status definitions). Species observed on the property during our surveys are designated by the check symbol (✓) in the fourth column.

Common Name	Scientific Name	Special Status	Found in the project areas?	Habitat Type
Fish - 11 species				
Sacramento Sucker	*Catostomus occidentalis*	None		Rivers, creeks, lakes, ponds
Mosquito Fish	*Gambusia affinis*	None	✓	Rivers, creeks, lakes, ponds
Three-spine Stickleback	*Gasterosteus aculeatus*	None		Rivers, creeks, lakes, ponds
California Roach	*Hesperoleucus symmetricus*	None		Rivers, creeks, lakes, ponds
Black Bullhead Catfish	*Ictalurus melas*	None	✓	Rivers, creeks, lakes, ponds
Bluegill	*Lepomis macrochirus*	None	✓	Rivers, creeks, lakes, ponds
Green Sunfish	*Lepomis cyanellus*	None		Rivers, creeks, lakes, ponds
Large Mouth Bass	*Micropterus salmoides*	None	✓	Rivers, lakes, ponds

Common Name	Scientific Name	Special Status	Found in the project areas?	Habitat Type
Steelhead - South/Central ESU	*Oncorhynchus mykiss*	FT[1]		Rivers and streams with an ocean connection
Sacramento Squawfish	*Ptychocheilus grandis*	None		Rivers, creeks, lakes, ponds
Speckled Dace	*Rhinichthys osculus*	None		Rivers, creeks, lakes, ponds
Amphibians - 8 species				
Arboreal Salamander	*Aneides lugubris*	None		Oak Woodland
Black-bellied Slender Salamander	*Batrachoseps nigriventris*	None		Oak woodlands, moist areas, found under cardboard on the site
Western Toad	*Bufo boreas halophilus*	None	✔	Grassland, woodland
Monterey Ensatina	*Ensatina eschscholzi*	None		Riparian, oak woodlands, grasslands
Pacific Chorus Frog	*Pseudacris regilla*	None	✔	Many habitats near water
Bullfrog	*Rana catesbeiana*	None	✔	Perennial streams, ponds
California Red-legged Frog	*Rana draytonii*	FT		Streams, creeks, and ponds
Western Spadefoot Toad	*Spea hammondii*	SSC[2]		Grassland habitat with seasonal pools
Reptiles - 13 species				
Southwestern Pond Turtle	*Clemmys marmorata pallida*	SSC		Lakes, ponds, streams
Western Yellow-bellied Racer	*Coluber constrictor mormon*	None		Grasslands, open areas
Northern Pacific Rattlesnake	*Crotalus oreganus oreganus*	None		Dry, rocky habitats
Monterey Ringneck Snake	*Diadophis punctatus vandenburgii*	None		Woodlands, grasslands, chaparral
California Alligator Lizard	*Elgaria multicarinata multicarinata*	None		Open grassland, woodland, chaparral
Western Skink	*Eumeces skiltonianus skiltonianus*	None		Woodland, grassland, chaparral
California Kingsnake	*Lampropeltis getula californiae*	None		Woodland, grassland, streams
California Striped Racer	*Masticophis lateralis lateralis*	None		Chaparral, brush habitats

[1] FT = Federally listed Threatened
[2] CSC = California Special Concern species

Common Name	Scientific Name	Special Status	Found in the project areas?	Habitat Type
Pacific gopher Snake	*Pituophis catenifer catenifer*	None	✔	Woodland, grassland
Western Fence Lizard	*Sceloporus occidentalis*	None	✔	Wide range
Two-striped Garter Snake	*Thamnophis hammondii*	SSC		Rocky streams, ponds, wetlands.
Common Garter Snake	*Thamnophis sirtalis*	None		Many habitats near water
Birds - 96 species				
Cooper's Hawk	*Accipiter cooperii*	SSC	✔	Woodlands
Sharp-shinned Hawk	*Accipiter striatus*	SSC		Oak, riparian woodland
White-throated Swift	*Aeronautes saxatilis*	None		Nests in cliffs
Red-winged Blackbird	*Agelaius phoeniceus*	None	✔	Marshes, fields
Grasshopper Sparrow	*Ammodramus savannarum*	PRBO 2nd Priority[3]		Grassland
Cinnamon Teal	*Anas cyanoptera*	None	✔	Aquatic habitats
Mallard	*Anas platyrhynchos*	None	✔	Aquatic habitats
American Pipit	*Anthus rubescens*	None	✔	Fields, beaches, etc.
Western Scrub Jay	*Aphelocoma californica*	None	✔	Oak and riparian woodlands
Golden Eagle	*Aquila chrysaetos*	SSC	✔	Mountainous areas, hunts over open plains, fields, valleys
Great Egret	*Ardea alba*	None	✔	Water habitats, grassland
Great Blue Heron	*Ardea herodias*	None	✔	Water habitats, grassland
Burrowing Owl	*Athene cunicularia*	SSC		Grasslands with ground squirrel burrows
Cedar Waxwing	*Bombycella cedrorum*	None		Variety habitats with berry source
Great Horned Owl	*Bubo virginianus*	None		Varied habitats
Bufflehead	*Bucephala albeola*	None	✔	Ponds, lakes
Red-tailed Hawk	*Buteo jamaicensis*	None	✔	Open, semi-open country
Red-shouldered Hawk	*Buteo lineatus*	None	✔	Oak and riparian woodlands
Ferruginous Hawk	*Buteo regalis*	SSC		Open habitats
Green Heron	*Butorides virescens*	None	✔	Water habitats
Least Sandpiper	*Calidris minutilla*	None	✔	Pond margins, shorelines
California Quail	*Callipepla californica*	None	✔	Oak, riparian woodlands

[3] PRBO 2nd Priority: Point Reyes Bird Observatory Bird Species of Special Concern Lists.

Common Name	Scientific Name	Special Status	Found in the project areas?	Habitat Type
Anna's Hummingbird	*Calypte anna*	None	✔	Oak, riparian woodland, scrub
Lesser Goldfinch	*Carduelis psaltria*	None	✔	Riparian, oak woodlands
American Goldfinch	*Carduelis tristis*	None	✔	Weedy fields, woodlands
House Finch	*Carpodacus mexicanus*	None	✔	Wide habitat range
Purple Finch	*Carpodacus purpureus*	None		Woodlands, urban areas
Turkey Vulture	*Cathartes aura*	None	✔	Open country, oak woodlands
Hermit Thrush	*Catharus guttatus*	None		Moist woodlands
Belted Kingfisher	*Cerle alcyon*	None		Water habitats
Killdeer	*Charadrius vociferous*	None	✔	Mud flats, stream banks
Lark Sparrow	*Chondestes grammacus*	None	✔	Woodland edges
Northern Flicker	*Colaptes auratus*	None	✔	Woodlands
Band-tailed Pigeon	*Columba fasciata*	None		Woodlands, urban trees
Rock Pigeon	*Columba livia*	None	✔	Urban areas
Western Wood Pewee	*Contopus sordidulus*	None	✔	Riparian woodlands
American Crow	*Corvus brachyrhynchos*	None	✔	Open oak, riparian woodland,
Common Raven	*Corvus corax*	None		Woodlands, chaparral
Yellow-rumped Warbler	*Dendroica coronata*	None	✔	Riparian, oak woodlands
Townsend's Warbler	*Dendroica townsendi*	None		Riparian, oak woodlands
Yellow Warbler	*Dendroica petechia brewsteri*	SSC		Riparian, oak woodlands
White-tailed Kite	*Elanus leucurus*	SSC		Nests in dense live oaks
Pacific-slope Flycatcher	*Empidonax difficilis*	None	✔	Riparian, oak woodlands
Brewer's Blackbird	*Euphagus cyanocephalus*	None	✔	Open habitats
American Kestrel	*Falco sparverius*	None	✔	Open, semi-open country
American Coot	*Fulica americana*	None	✔	Aquatic habitats
Wilson's Snipe	*Gallinago gallinago*	None	✔	Marshes, wetlands, stream-sides
Common Yellowthroat	*Geothlypis trichas*	None		Marshes, streamsides
Barn Swallow	*Hirundo rustica*	None		Open country, farmyards
Bullock's Oriole	*Icterus bullockii*	None		Variety of habitats with trees and nectar source

Common Name	Scientific Name	Special Status	Found in the project areas?	Habitat Type
Dark-eyed Junco	*Junco hyemalis*	None	✔	Oak woodland
Loggerhead Shrike	*Lanius ludovicianus*	SSC	✔	Nests in shrubs, trees near open areas
Acorn Woodpecker	*Melanerpes formicivorus*	None	✔	Oak woodland
Wild Turkey	*Meleagris gallopavo merriami*	None		Woodlands
Song Sparrow	*Melospiza melodia*	None	✔	Oak and Riparian woodland
Northern Mockingbird	*Mimus polyglottos*	None	✔	Riparian, chaparral and woodlands. Also urban
Brown-headed Cowbird	*Molothrus oter*	None		Rural areas, ranches
Ash-throated Flycatcher	*Myiarchus cinerascens*	None		Open areas near oaks
Western Screech-owl	*Otus kennicottii*	None		Oak woodlands
Oak Titmouse	*Parus inornatus*	None	✔	Oak woodlands
House Sparrow	*Passer domesticus*	None	✔	Urban areas
Savanna Sparrow	*Passerculus sandwichensis*	None	✔	Open habitats, marshes, grasslands
Cliff Swallow	*Petrochelidon pyrrhonota*	None	✔	Urban; open areas near water
Phainopepla	*Phainopepla nitens*	None		Dry woodlands
Yellow-billed Magpie	*Pica nuttalli*	None	✔	Oak savanna
Nuttall's Woodpecker	*Picoides nuttollii*	None	✔	Oak woodland, savanna
Downy Woodpecker	*Picoides pubescens*	None		Riparian, oak woodlands
Hairy Woodpecker	*Picoides villosus*	None		Woodlands
California Towhee	*Pipilo crissalis*	None	✔	Brushy habitats
Spotted Towhee	*Pipilo erythrophthalmus*	None		Dense brushy areas
Western Tanager	*Piranga ludoviciana*	None		Woodlands
Chestnut-backed Chickadee	*Poecile hudsonica*	None	✔	Mixed woods
Bushtit	*Psaltriparus minimus*	None	✔	Oak, riparian, chaparral, scrub
Great-tailed Grackle	*Quiscalus mexicanus*	None	✔	Varied upland, urban
Ruby-crowned Kinglet	*Regulus calundula*	None		Oak and riparian woodlands
Black Phoebe	*Sayornis nigricans*	None	✔	Near water
Say's Phoebe	*Sayornis saya*	None		Open country, grassland

Common Name	Scientific Name	Special Status	Found in the project areas?	Habitat Type
Western Bluebird	*Sialia mexicana*	None	✓	Riparian woodland, ranch land
White-breasted Nuthatch	*Sitta carolinensis*	None	✓	Oak savanna
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	None		Riparian, lakes
Western Meadowlark	*Sturnella neglecta*	None	✓	Grasslands
European Starling	*Sturnus vulgaris*	None	✓	Agricultural, urban
Tree Swallow	*Tachycineta bicolor*	None	✓	Wooded habitats, water
Violet-green Swallow	*Tachycineta thalassina*	None	✓	Woodland habitats
Bewick's Wren	*Thryomanes bewickii*	None	✓	Shrubby areas
House Wren	*Troglodytes aedon*	None		Shrubby areas
American Robin	*Turdus migratorius*	None		Streamsides, woodlands
Western Kingbird	*Tyrannus verticalis*	None	✓	Nests in trees, hunts in grasslands
Barn Owl	*Tyto alba*	None		Agricultural, woodlands
Orange-crowned Warbler	*Vermivora celata*	None		Oak, riparian woodlands
Warbling Vireo	*Vireo gilvus*	None		Oak, riparian woodlands
Hutton's Vireo	*Vireo huttonii*	None		Oak, riparian woodlands
Wilson's Warbler	*Wilsonia pusilla*	None	✓	Oak, riparian woodlands
Mourning Dove	*Zenaida macroura*	None	✓	Open and semi-open area
Golden-crowned Sparrow	*Zonotrichia atricapilla*	None	✓	Shrubby, weedy areas
White-crowned Sparrow	*Zonotrichia leucophrys*	None	✓	Shrubby, weedy areas
Mammals - 21 species				
Coyote	*Canus latrans*	None		Open woodlands, prairies, brushy areas, wide ranging.
American Beaver	*Castor canadensis*	None	✓	Ponds, rivers, creeks
Opossum	*Didelphis marsupialis*	None		Woodlands, streams
Feral Cat	*Felis catus*	None	✓	Varied
Mountain Lion	*Felis concolor*	None		Woodlands
Black-tailed Jackrabbit	*Lepus californicus*	None		Grasslands
Bobcat	*Lynx rufus*	None		Chaparral and woodlands
Striped Skunk	*Mephitis mephitis*	None		Mixed woods, brush, semi-open country

Common Name	**Scientific Name**	**Special Status**	**Found in the project areas?**	**Habitat Type**
California Vole	*Microtus californicus*	None		Grassland meadows
Long-tailed Weasel	*Mustela frenata*	None		Grasslands
Dusky-footed Woodrat	*Neotoma fuscipes*	None		Riparian, oak woodlands
Mule Deer	*Odocoileus hemionus*	None	✓	Many habitats
Deer Mouse	*Peromyscus maniculatus*	None		All dry land habitats
Raccoon	*Procyon lotor*	None		Streams, lakes, rock cliffs, dens in trees
Western Harvest Mouse	*Reithodontomys megalotis*	None		Grassland, dense vegetation near water
Ornate Shrew	*Sorex ornatus*	None		Streamsides, woodlands
California Ground Squirrel	*Otospermophilus beecheyi*	None	✓	Grasslands
Desert Cottontail	*Sylvilagus auduboni*	None		Brushy areas, meadows
Brush Rabbit	*Sylvilagus bachmani*	None	✓	Brushy habitats
American Badger	*Taxidea taxus*	SSC		Grasslands
Valley Pocket Gopher	*Thomomys bottae*	None	✓	Variety of habitats
Gray Fox	*Urocyon cinereoargenteus*	None		Chaparral
Red Fox	*Vulpes fulva*	None		Forest and open country

3.6 Special Status Plants and Animals

The CNDDB and the CNPS On-line Inventory of Rare and Endangered Plants of California contain records for 39 special status species and one sensitive natural community within the designated search area (Table 5). The search area included the Adelaida, Paso Robles, Estrella, York Mountain, Templeton, and Creston USGS 7.5 minute quadrangles. Sixteen additional special status species and one sensitive natural community were added to the list from our knowledge of the area (Table 4). These elements are marked with an asterisk (*). Appropriate habitat and soil conditions are present for four special status plants and seventeen special status animals. Appendix B, Figure 4 depicts the current GIS data for special status species mapped in the vicinity of the project areas.

3.6.1 Introduction to California Rare Plant Ranks (Formerly CNPS lists)

Plant species are considered rare when their distribution is confined to localized areas, when there is a threat to their habitat, when they are declining in abundance, or are threatened in a portion of their range. The listing categories range from species with a low threat (List 4) to species that are presumed extinct (List 1A). The 1058 plants of List 1B are rare throughout their range. All but a few species are endemic to California. All of them are judged to be vulnerable under present circumstances, or to have a high potential for becoming vulnerable.

3.6.2 Introduction to CNDDB definitions

"Special plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status. Special plants include vascular plants and high priority bryophytes (mosses, liverworts, and hornworts).

"Special Animals" is a general term that refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status. The Special Animals list is also referred to by the California Department of Fish and Wildlife (CDFW), formerly California Department of Fish and Game (CDFG), as the list of "species at risk" or "special status species". These taxa may be listed or proposed for listing under the State and/or Federal Endangered Species Acts, but they may also be species deemed biologically rare, restricted in range, declining in abundance, or otherwise vulnerable.

Each species included on the Special Animals list has a corresponding Global and State Rank. This ranking system utilizes a numbered hierarchy from one to five following the Global (G-rank) or State (S-rank) category. The threat level of the organism decreases with an increase in the rank number (1=Critically Imperiled, 5=Secure). In some cases where an uncertainty exists in the designation, a question mark (?) is placed after the rank. More information is available at www.natureserve.org.

Animals listed as California Species of Special Concern (SSC) may or may not be listed under California or Federal Endangered Species Acts. They are considered rare or declining in abundance in California. The Special Concern designation is intended to provide the Department of Fish and Wildlife, biologists, land planners and managers with lists of species that require special consideration during the planning process in order to avert continued population declines and potential costly listing under federal and state endangered species laws. For many species of birds, the primary emphasis is on the breeding population in California. For some species that do not breed in California but winter here, emphasis is on wintering range. The SSC designation thus may include a comment regarding the specific protection provided such as nesting or wintering.

Animals listed as Fully Protected are those species considered by CDFW as rare or faced with possible extinction. Most, but not all, have subsequently been listed under the California Endangered Species Act (CESA) or the Federal Endangered Species Act (FESA). Fully Protected species may not be taken or possessed at any time and no provision of the CDFG code authorizes the issuance of permits or licenses to take any Fully Protected species.

3.6.3 Special status species list

Table 5 lists all 57 special status species known to occur in the vicinity of the project site. Federal and state status, global and state rank, CNPS listing status (plants), and CDFW designation (animals) for each species are given. Typical blooming period, habitat preference, potential habitat on site, whether or not the species was observed on the property, and the effect of the proposed activity are also provided.

TABLE 5. SPECIAL STATUS SPECIES LIST. Fifty-seven special status species and two sensitive natural communities were determined by our research to occur in the Adelaida, Paso Robles, Estrella, York Mountain, Templeton, and Creston quadrangles. Eight special status plants and nineteen special status animals could potentially occur on the property. Potential impacts are outlined in section 5.0, and mitigation recommendations are provided in section 6.0.

	Common and Scientific Names	Fed/State Status Global/State Rank CRPR List	Blooming Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
			Plants				
1.	**Douglas's fiddleneck** *Amsinckia douglasiana*	None/none G3/S3.2 CRPR 4.2	Mar - Jun	Unstable shaly sedimentary slopes; (100) 150–1600 m. SCoR, w WTR	Yes. Slopes between River Road and the upper terrace are moderately appropriate.	No	Not Significant
2.	**Oval-leaved Snapdragon** *Antirrhinum ovatum*	None/none G3/S3.2 CRPR 4.2	May November	Heavy, adobe-clay soils on gentle, open slopes, also disturbed areas; 200-1000 m. s SnJV, s SCoRI	No. Recorded on the Chandler Ranch in 1991, but not reported there since. Appropriate soils not found on site.	No	Not Significant
3.	**Bishop Manzanita** *Arctostaphylos obispoensis*	None/none G3?/S3? CRPR 4.3	February - March	Rocky, gen serpentine soils, chaparral, open close-cone forest near coast; 60-950 m; SCoRO	No. Appropriate soil and habitat are not present.	No	Not Significant
4.	**Salinas Milk-Vetch** *Astragalus macrodon*	None/none G3/S3.3 CRPR 4.3	April – July	Eroded pale shales or sandstone, or serpentine alluvium; 300-950 m. SCoR	No. Appropriate soil type not found on site.	No	Not Significant
5.	**Round-leaved Filaree** *California (=Erodium) macrophyllum*	None/none G4/S2.1 CRPR 2.1	March - May	Clay soils in cismontane woodland, valley and foothill grassland; 15-1200 m. ScV, n SnJV, CW, SCo, n ChI	No. Farming has eliminated potential habitat from the site.	No	Not Significant
6.	**Dwarf Calycadenia** *Calycadenia villosa*	None/none G2/S2.1 CRPR 1B.1	May - October	Dry, rocky hills, ridges, in chaparral, woodland, meadows and seeps; <1100 m. c&s SCoRO	Unlikely. Barren areas of the steep bluff on the east side of River Road are moderately appropriate for this species.	No	Not Significant

	Common and Scientific Names	Fed/State Status Global/State Rank CRPR List	Blooming Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
7.	**Santa Cruz Mountains Pussypaws** *Calyptridium parryi* var. *hesseae*	None/none G3G4T2/S2 CRPR 1B.1	May – August	Sandy or gravelly openings in chaparral and cismontane woodland. 700-1100 m. n SCoRI, s SnFrB	No. Appropriate habitat is not present.	No	Not Significant
8.	**Obispo Indian Paintbrush** *Castilleja densiflora* ssp. *obispoensis*	None/none G5T2/S2.2 CRPR 1B.2	April	Coastal grassland, <100 m. Endemic to SLO County.	Unlikely. Farming has eliminated most of the potential habitat from the site.	No	Not Significant
9.	**Lemmon's Jewelflower** *Caulanthus coulteri* var. *lemmonii*	None/none G4T2/S2.2 CRPR 1B.2	March – May	Dry, exposed slopes; 80-800 m. sw SnJV, se SnFrB, c SCoRO, SCoRI	No. Appropriate drying slopes are not present on site.	No	Not Significant
10.	**Douglas' Spineflower*** *Chorizanthe douglasii*	None/none G3/S3.3 CRPR 4.3	April - July	Foothill woodland, pine forest, chaparral, sandy or gravelly soils; 200-1600 m. e SCoRO, SCoRI	Unlikely. Barren areas of the steep bluff on the east side of River Road are moderately appropriate for this species.	No	Not Significant
11.	**Eastwood's larkspur** *Delphinium parryi* ssp. *eastwoodiae*	None/none G4T2/S2 CRPR 1B.2	March – May	Coastal chaparral, grassland, on serpentine; 100-500m sCCo, SCoRO (San Luis Obispo County)	No. Appropriate soil and habitat are not present.	No	Not Significant
12.	**Umbrella Larkspur** *Delphinium umbraculorum*	None/none G2G3/S2S3.3 CRPR 1B.3	April - June	Moist oak forest; 400-1600 m. SCoRO, WTR	No. Appropriate moist oak forest is not present on site.	No	Not Significant
13.	**Yellow-flowered Eriastrum** *Eriastrum luteum*	None/none G2/S2.2 CRPR 1B.2	May – June	Drying slopes; <1000 m. SCoR Monterey, SLO Counties	Unlikely. Barren areas of the steep bluff on the east side of River Road are moderately appropriate for this species.	No	Not Significant
14.	**Elegant Wild Buckwheat** *Eriogonum elegans*	None/none G3/S3 CRPR 4.3	May – November	Sand or gravel; 200 – 1200 m. SnFrB, SCoR, WTR	Yes. Moderately appropriate gravel soils are present in the Salinas River upper floodplain where dry sandy soils are present during the dry season.	No	Not Significant

	Common and Scientific Names	Fed/State Status Global/State Rank CRPR List	Blooming Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
15.	**Hogwallow Starfish** *Hesperevax caulescens*	None/none G3/S3.2 CRPR 4.2	March - June	Clay soils, mesic sites in valley and foothill grassland, 0-505 m.	No. Areas with appropriate soils have been farmed for many years.	No	Not Significant
16.	**Mesa Horkelia** *Horkelia cuneata* ssp. *puberula*	None/none G4T2/S2.1 CRPR 1B.1	February - September	Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo.	No. Appropriate soil and habitat combination not present on site.	No	Not Significant
17.	**Kellogg's Horkelia** *Horkelia cuneata* ssp. *sericea*	None/none G4T1/S1.1 CRPR 1B.1	April - September	Old dunes, coastal sand hills; <200 m. CCo	No. Appropriate dune soils not present on site.	No	Not Significant
18.	**Santa Lucia dwarf rush** *Juncus luciensis*	None/none G2G3/S2S3 List 1B.2	April – July	Vernal pools, ephemeral drainages, wet meadow habitats, and streams; 300-2040 m. n SNH, SCoRO, TR, PR	Yes. Moderately appropriate habitat is present near a man-made pond.	No	Not Significant
19.	**Salinas Valley Goldfields*** *Lasthenia leptalea*	None/none G3/S3.3 CRPR 4.3	April	Open areas in woods, valley and foothill grassland; <500 m. Monterey & SLO Counties	No. Farming has eliminated potential habitat from the site.	No	Not Significant
20.	**Pale-Yellow Layia** *Layia heterotricha*	None/none G1/S1.1 CRPR 1B	March - June	Alkaline or clay soils, open areas, in pinyon-juniper woodland, grassland; 270-1705 m. Teh, SnJV, SCoR, n WTR	No. Appropriate soil and habitat types are not present on site.	No	Not Significant
21.	**Jared's Peppergrass** *Lepidium jaredii* ssp. *jaredii*	None/none G1T1/S1.2 CRPR 1B.2	March - May	Alkali bottoms, slopes, washes, <500 m. SCoRI, SnJV	No. Appropriate soil and habitat types are not present on site.	No	Not Significant
22.	**Santa Lucia Bush Mallow** *Malacothamnus palmeri* var. *palmeri*	None/none G3T2Q/S2.2 CRPR 1B.2	May - July	Chaparral, cismontane woodland, coastal scrub; 30-1100 m. s CCo, SCoRO	No. Appropriate habitat not present on site.	No	Not Significant
23.	**Woodland Woollythreads** *Monolopia gracilens*	None/none G2G3/S2S3 CRPR 1B.2	March – July	Chaparral, serpentine grassland, cismontane woodland, sandy to rocky soils; SnFrB, SCoR	No. Appropriate soil and habitat are not present.	No	Not Significant
24.	**Paso Robles Navarretia*** *Navarretia jaredii*	None/none G3S3.3 CRPR 4.3	April - July	Open, grassy areas, often in clay, limestone, or serpentine. 200-500 m. SCoRI, SW	No. Appropriate habitat is not present on site.	No	Not Significant

	Common and Scientific Names	Fed/State Status Global/State Rank CRPR List	Blooming Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
25.	**Spreading Navarretia** *Navarretia fossalis*	Threatened/None G1/S1 CRPR 1B.1	April - June	Chenopod scrub, marshes and swamps, playas, and vernal pools; 30-1300m. SCoRO, SCo, to Baja Cal.	No. Appropriate soil and habitat are not present.	No	Not Significant
26.	**Shining Navarretia** *Navarretia nigelliformis* ssp. *radians*	None/none G4T1/S1.1 CRPR 1B.2	May - July	Vernal pools, clay depressions, open areas in mesic grasslands; 100-1000 m.	No. Appropriate habitat and soil types not present on site.	No	Not Significant
27.	**Large-Flowered Nemacladus** *Nemacladus secundiflorus var. secundiflorus*	None/none G3T3?/S3? CRPR 4.3	April May	Dry, gravelly slopes; 200-2000m. s SNH, SCoR	Yes. Slopes between River Road and the upper terrace are moderately appropriate.	No	Not Significant
28.	**Rayless Ragwort*** *Senecio aphanactis*	None/none G3?/S1.2 CRPR 2.2	January - April	Drying alkaline flats, chaparral, cismontane woodland, coastal scrub; <400 m. CW, SCo, Chi	No. Appropriate soils and habitat types not present.	No	Not Significant
29.	**San Bernardino Aster*** *Symphyotrichum defoliatum*	None/none G3/S3.2 CRPR 1B.2	July - November	Vernally mesic grasslands near ditches, streams, springs, or disturbed areas; 2-2040 m.	No. Collection record for "North of Creston" is not positively identified. Location possibly too far north.	No	Not Significant
30.	**Cook's Triteleia** *Triteleia ixioides* ssp. *cookii*	None/none G5G2/S2.3 CRPR 1B.3	May - June	Streamsides, ravines on serpentine near cypresses; <500 m. SCoRO	No. Appropriate serpentine soil and cypress forest habitat not present on site.	No	Not Significant

Habitat characteristics are from the Jepson Manual and the CDNNB.
*not listed in the CNDDB or CNPS for the search area, but possible for the location.

Abbreviations:

CCo: Central Coast
SCo: South Coast
SCoR: South Coast Ranges
SCoRO: Outer South Coast Ranges
SCoRI: Inner South Coast Ranges
SnFrB: San Francisco Bay
TR: Transverse Ranges
WTR: Western Transverse Ranges
SnJV: San Joaquin Valley
SLO: San Luis Obispo
SN: Sierra Nevada
SnJt: San Jacinto Mtns
Teh: Tehachapi Mtn Area
CW: Central West
SW: South West

	Common and Scientific Names	Fed/State Status Global/State Rank DFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
			Animals				
1.	**Cooper's Hawk*** *Accipiter cooperii*	None/none G5S3 Special Animal (Nesting)	March 15 through August 15	Oak woodland, riparian, open fields. Nests in dense trees, esp. coast live oak.	Yes. Appropriate nesting habitat is present in riparian and oak woodland on the property.	Yes	Not Significant With Mitigation
2.	**Sharp-shinned Hawk*** *Accipiter striatus*	None/none G5/S3 Special Animal (Nesting)	March 15 through August 15	Riparian, coniferous, and deciduous woodlands near water.	Yes. Appropriate nesting habitat is present in riparian and oak woodland on the property.	No	Not Significant With Mitigation
3.	**Silvery Legless Lizard** *Anniella pulchra pulchra*	None/none G3G4T3T4Q/S3 SSC	May - September	Sandy or loose loamy soils under coastal scrub or oak trees. Soil moisture essential.	Yes. Moderately appropriate loose soils are present in blue oak woodland and the Salinas River floodplain	No	Not Significant
4.	**Pallid Bat*** *Antrozous pallidus*	None/none G5/S3 SSC	Spring – Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Yes. Appropriate roosting areas are found in oak trees on the property.	No	Not Significant With Mitigation
5.	**Golden Eagle** *Aquila chrysaetos*	None/none G5/S3 SSC	March 1 through August 31	Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source.	Yes. Appropriate foraging and nesting habitat is present on site.	No	Not Significant
6.	**Burrowing Owl*** *Athene cunicularia*	None/none G4/S2 SSC	March 1 through August 31	Burrows in squirrel holes in open habitats with low vegetation.	Yes. Appropriate habitat is present on site. Farming has reduced the amount of appropriate habitat on site.	No	Not Significant With Mitigation

	Common and Scientific Names	Fed/State Status Global/State Rank DFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
7.	**Vernal Pool Fairy Shrimp** *Branchinecta lynchi*	Threatened/none G3/S2S3 None	Rainy Season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	Unknown. Vernal pools were not observed on the property during our surveys in 1999, 2000, 2001, and 2007. Ephemeral pools were few in 2007, but may be present in better rainfall years.	No	Not Significant With Mitigation
8.	**Yellow Warbler*** *Dendroica petechia brewsteri*	None/none G5T3?/S2 SSC	March 1 through August 31	Nests in riparian plant associations, including willows, cottonwoods, etc.	Yes. Appropriate nesting habitat is present in the Salinas River riparian corridor.	No	Not Significant With Mitigation
9.	**White-tailed Kite*** *Elanus leucurus*	None/none G5/S3 None	March 1 through August 31	Nests in dense tree canopy near open foraging areas	Yes. Potential nesting and foraging habitat is present on site.	No	Not Significant with Mitigation
10.	**Southwestern Willow Flycatcher*** (*Empidonax traillii extimus*)	Endangered/ Endangered G5T1T2/S1 None	March 1 through August 31	Riparian woodlands in Southern California.	Unlikely. Appropriate nesting habitat is present in Salinas River, but no known occurrences in SLO County.	No	Not Significant
11.	**Western Pond Turtle** *Emys marmorata*	None/none G3G4T2T3Q/S2 SSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	Yes. Expected to occur in the Salinas River within the property boundaries. Permanent pond on site is appropriate habitat.	No	Not Significant
12.	**Horned Lark*** *Eremophila alpestris actia*	None/none G5T3/S3 SSC	March 31 to August 31	Nests on the ground in open habitats with short grass. More common in the interior.	Unlikely. Adults could occur on property but are unlikely to nest on site due to current land use activities.	No	Not Significant
13.	**Loggerhead Shrike*** *Lanius ludovicianus*	None/none G4/S4 SSC	March 1 through August 31	Open areas with appropriate perches, near shrubby vegetation for nesting	Yes. Appropriate foraging and nesting habitat is found on site.	Yes	Not Significant With Mitigation

	Common and Scientific Names	Fed/State Status Global/State Rank DFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
14.	**California Linderiella*** *Linderiella occidentalis*	None/none G2G3/S2S3 None	Rainy season	Seasonal pools in unplowed grasslands with alluvial soils.	No. Vernal pools were not observed on the property during our surveys in 1999, 2000, 2001, and 2007.	No	Not Significant
15.	**Monterey Dusky-footed Woodrat** *Neotoma macrotis luciana*	None/none G5T3?/S3? SSC	n/a	Variety of habitats with moderate to dense understory vegetation	Unlikely. Appropriate habitat is present in the Salinas River.	No	Not Significant
16.	**Steelhead - South/Central California Coast ESU*** *Oncorhynchus mykiss irideus*	Threatened/none G5T2Q/S2 None	February - April	Fed listing refers to runs in coastal basins from Pajaro River south to, but not including, the Santa Maria River.	Yes. Steelhead are known to occur in the Salinas River to the vicinity of Santa Margarita	No	Not Significant
17.	**San Joaquin Pocket Mouse** *Perognathus inornatus inornatus*	None/none G4T2T3/S2S3 None	n/a	Grasslands and blue oak savannahs with friable soil and occasional shrubs. Also chaparral.	No. Farming has removed potential habitat from the property.	No	Not Significant
18.	**Salinas Pocket Mouse** *Perognathus inornatus psammophilus*	None/none G4T2?/S2? SSC	n/a	Annual grassland and desert shrub in Salinas Valley, with friable soils	No. Farming has removed potential habitat from the property.	No	Not Significant
19.	**Atascadero June Beetle** *Polyphylla nubila*	None/none G1/S1 None	n/a	Known only from sand dunes in Atascadero and San Luis Obispo, San Luis Obispo County.	No. Appropriate dune habitat not present on site.	No	Not Significant
20.	**California Red-legged Frog** *Rana draytonii*	Threatened/none G4T2T3/S2S3 SSC	January – March	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation.	Yes. Appropriate habitat is present in the Salinas River. The permanent pond on site is suitable for use by this species.	No	Not Significant With Mitigation
21.	**Western Spadefoot Toad** *Spea hammondii*	None/none G3?/S3? SSC	January – August	Vernal pools in grassland and woodland habitats	Yes. Appropriate breeding habitat may present in ephemeral pools on site.	No	Not Significant With Mitigation
22.	**Coast Range Newt** *Taricha torosa torosa*	None/none G5T4/S4 SSC	December - May	Slow moving streams, ponds, and lakes with surrounding evergreen/oak forests along coast.	No. Appropriate upland and aquatic habitat not present on site.	No	Not Significant

	Common and Scientific Names	Fed/State Status Global/State Rank DFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Observed on Site?	Effect of Proposed Activity
23.	**American Badger** *Taxidea taxus*	None/none G5/S4 SSC	February – May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	Yes. Appropriate habitat is present in annual grasslands and farmland on site.	No	Not Significant With Mitigation
24.	**Two-striped Garter Snake*** *Thamnophis hammondii*	None/none G2G3/S2 SSC	Spring	Coastal California from Salinas to Baja, sea level to 7000', aquatic, in or near permanent water, streams with rocky beds and riparian growth	Yes. Appropriate habitat is present in the Salinas River for this species. No records in the vicinity.	No	Not Significant
25.	**Lompoc Grasshopper** *Trimerotropis occulens*	None/none G1G2/S1S2 None	n/a	Unknown. Known only from Santa Barbara and San Luis Obispo Counties	Unlikely. Thought to be extirpated from the area. Only source of info is a 1909 collection.	No	Not Significant
26.	**Least Bell's Vireo** *Vireo bellii pusillus*	Endangered/ Endangered G5T2/S2 None	March 1 through August 31	Summer resident of S. Calif., in low riparian in vicinity of water, or dry riverbed. Nests in willow, mesquite, Baccharis, often on edges of shrubs or on twigs in pathways.	Yes. Moderately appropriate nesting habitat is present in the Salinas River riparian habitat.	No	Not Significant
27.	**San Joaquin Kit Fox** *Vulpes macrotis mutica*	Endangered/ Threatened G4T2T3/S2S3 None	December – July	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose textured sandy soil and prey base.	Yes. Appropriate denning and foraging habitat is present on site.	No	Not Significant With Mitigation

	Common Name	Federal/State Status Global/State Rank	Potential Habitat?	Effect of Proposed Activity
Sensitive Natural Communities				
1.	**Freshwater Vernal Pool***	No federal or state status. Habitat of local concern.	No. Vernal pools are not present on the property.	Not Significant
2.	**Valley Oak Woodland**	None/none G3/S2.1	No. Valley oak trees occur on site but do not form an oak woodland habitat..	Not Significant

3.6.4 Special status plants that could or do occur on the property

This section provides an explanation of the potential for occurrence of eight special status plant species thought to be potentially compatible with conditions on the property. We discuss each species and describe habitat, range restrictions, known occurrences, and survey results for the property.

A. **Douglas' Fiddleneck** (*Amsinckia douglasiana*) is a CRPR 4.2 species known from unstable shaly sedimentary slopes. Moderately appropriate habitat is present on the embankment between River Road and the upper terrace. This species was not found during many years of site work and is not expected to occur in project areas.

B. **Dwarf Calycadenia** (*Calycadenia villosa*) is a CRPR 1B.1 species. The species is known from dry, rocky hills and gravelly outwashes in Monterey, San Luis Obispo, Santa Barbara, Fresno and Kern Counties. The CNPS considers this species to be seriously endangered. Occurrences in the CNDDB for San Luis Obispo and Monterey Counties include the vicinity of Nacimiento and San Antonio Lakes, north to Jolon, with scattered occurrences in Parkfield to the east and in La Panza District, east of Santa Margarita. The closest reported occurrence to the project site is approximately seven miles northwest, near Chimney Rock in the Adelaida quadrangle (CNDDB #2). Moderately appropriate habitat is present for this species on the steep bluff at the edge of North River Road. Dwarf calycadenia was not identified on the property during focused surveys in April and May 2007.

C. **Obispo Indian paintbrush** (*Castilleja densiflora* ssp. *obispoensis*) is a CRPR 1B.2 subspecies known only from San Luis Obispo County. It is an annual wildflower that typically occurs in coastal grasslands in sandy or clay soils. Inland occurrences of this subspecies have been reported to the CNDDB in 2002, 2003, and 2005 (CNDDB #22, 23, 36, 37, and 42). The closest reported occurrence to the River Oaks II property is from annual grassland at the intersection of Airport Road and Dry Creek Road , approximately two miles east (CNDDB #42). Moderately appropriate habitat is present in grassland areas on the bluff west of the River Oaks Hot Spring and Spa. Obispo Indian paintbrush was not identified on the property during focused surveys in March and April 2007.

D. **Douglas' spineflower** (*Chorizanthe douglasii*) is a CRPR 4.3 species known from San Benito, Monterey, and San Luis Obispo Counties. It is considered rare, but found in sufficient numbers and distributed widely enough within its known range that the threat of extinction is low at this time. This spineflower grows in gravelly or sandy substrates in the Santa Margarita area (Hoover #11352, Crampton #6978, etc.), Adelaida (Rose #36265), Nacimiento River (Hardham #4396), Bee Rock (Bacigalupi #7434), and other areas of San Luis Obispo County. Moderately appropriate habitat is present for this species on the steep bluff at the edge of North River Road, and along a road-cut near the northern property line. Douglas' spineflower was not identified on the property during focused surveys in April and May 2007.

E. **Elegant wild buckwheat** (*Eriogonum elongatum*) is a CRPR 4.3 species known from sand and gravelly soils, often in washes. Moderately appropriate habitat is present in the Salinas River floodplain in sandy and gravelly secondary channels and on low terraces. This species was not observed during many years of site work and is not expected to occur in project areas.

F. **Yellow-flowered Eriastrum** (*Eriastrum luteum*) is a CRPR List 1B.2 species known only from Monterey and San Luis Obispo Counties. It grows on drying slopes less than 1000 meters in elevation, usually on decomposed granite. Locality records indicate this species occurs locally from southeast San Luis Obispo County (Santa Margarita, Creston) to western Monterey County (Jolon, Pleyto). The closest reported occurrence is from a 1937 collection two miles east of Lime Mountain, just over 15 miles west of the River Oaks II property. Habitat appropriate for this species is generally steep chaparral hillsides. Moderately appropriate habitat is present for this species on the steep bluff at the edge of North River Road, and along a road-cut near the northern property line. Yellow-flowered eriastrum was not identified on the property during focused surveys in April and May 2007.

G. **Santa Lucia dwarf rush** (*Juncus luciensis*) is a CRPR List 1B.2 species known from vernal pools, ephemeral wetlands, and other wet habitats. In the Paso Robles region, it is known from an occurrence 5.1 miles southeast of the Study Area (CNDDB #8). It could occur around the existing man-made pond where other wetland vegetation was documented, though it has not been found there during numerous years of survey.

H. **Large-flowered Nemacladus** (*Nemacladus secundiflorus* var. *secundiflorus*) is a CRPR 4.3 species known from dry gravelly slopes. The slope between River Road and the upper terrace is moderately appropriate. This species has not been seen on the hillside during numerous years of survey and is not expected to occur there.

3.6.5 Special status animals that could occur on the property

This section provides an explanation of the potential for occurrence of nineteen special status animal species thought to be compatible with conditions in the project areas. We discuss each species and describe habitat, range restrictions, known occurrences, and survey results for the property.

A. **Silvery legless lizard** (*Anniella pulchra pulchra*) is a California Species of Special Concern. This burrowing reptile requires loose, friable soil with adequate moisture. Legless lizards are reported approximately 4.7 miles northwest of the Study Area (CNDDB #85), and could occur under leaf litter in blue oak woodland within the Study Area.

B. **Cooper's hawk** (*Accipiter cooperii*) is a California Special Animal that frequents oak and riparian woodland habitats. It is a regular fall and winter migrant that nests regularly but in low numbers in San Luis Obispo County. Its secretive nature makes locating nests difficult, and it is no doubt under-reported. Appropriate nesting habitat is present in the riparian forest in the

Salinas River. An occupied Cooper's hawk nest was observed on the property in the Salinas River in 1999 (Althouse and Meade, Inc., 2001). Cooper's hawks were not observed to be nesting on the property in 2007 or 2013, but could occur in the future.

C. **Sharp-shinned hawk** (*Accipiter striatus*) is a California Species of Special Concern that frequents open oak and riparian woodland habitats. It is a regular fall and winter migrant that rarely nests in San Luis Obispo County. Sharp-shinned hawks will forage in habitats on the property, but are not expected to nest on site.

D. **Pallid bat** *(Antrozous pallidus)* is a California Species of Special Concern. This is a large, long-eared bat occurring throughout the state from deserts to moist forests. *Antrozous pallidus* is primarily a crevice roosting species and selects roosts where they can retreat from view. They frequently occur in oak woodlands where they roost in tree cavities. These roosts are generally day or night roosts for one or a few bats. Attics may be used as roosts. Communal wintering or maternity colonies are more common in rock crevices and caves. Pallid bat could occur in oak tree cavities on the subject property. Focused surveys for bats were not conducted as part of this study, and are not necessary.

E. **Golden eagle** (*Aquila chrysaetos*) is a California Species of Special Concern with no state or federal status. Golden eagles are a fully protected species under federal and state law. They require large trees for nesting and open hunting grounds with abundant prey. The closest reported nest site to the property is along Huerhuero Creek, approximately 1.5 miles east. Appropriate hunting and nesting habitat is present on site. California ground squirrels (*Spermophilus beecheyi*) are abundant on site. Activities associated with current land uses on the property outside of the Salinas River may discourage golden eagles from nesting in large oak trees on site. Mature cottonwoods and oaks in the Salinas River continue to be appropriate nesting sites. Golden eagles were not nesting on the River Oaks II in 2007 through 2013, although adults and second year juvenile eagles have been observed foraging on River Oaks II croplands.

F. **Burrowing owl** (*Athene cunicularia*) is a California Species of Special Concern owl that nests in abandoned holes in the ground, most notably burrows of the California ground squirrel. It is a common breeding resident in local areas of the interior, from Bitterwater Valley to the Carizzo Plains, and on Camp Roberts. Less frequent reports are from coastal grasslands. Wintering burrowing owls are occasionally observed in the Paso Robles region and are to be expected elsewhere. Most of the prime habitat for burrowing owl on the property is currently dry farmed. Ground squirrel burrows are abundant in some areas of the site, but in general the habitat is too disturbed to be used by burrowing owl. No signs of burrowing owls were found on the property during our site surveys in 2007 or 2013.

G. **Vernal Pool Fairy Shrimp** (*Branchinecta lynchi*) is a federally listed threatened species known from the vicinity of the Study Area. Occurrence #287 in the CNDDB is from a series of vernal pools approximately 2.3 miles east of the subject property, just south of Highway 46 East. Occurrence #380 is from Blacks Hatchery and Turkey Farm, also 2.3 miles east of the property, but on the north side of Highway 46 East. Vernal pools were not identified on the property. No pools were found to contain water during the winter of 2006-2007. In December 2007, a dry-season protocol survey was conducted by Helm Biological Consulting (Helm 2008), followed by wet-season surveys between January and April 2008 conducted by Dave Hacker (Hacker 2008). No vernal pool branchiopods were observed in ephemeral depressions during protocol surveys.

H. **Yellow warbler** (*Dendroica petechia brewsteri*) is a California Species of Special Concern with a restricted breeding range in central and southern California. The status of this subspecies of yellow warbler is described by the CNDDB as "restricted range, rare". They frequent riparian habitats, nesting in sycamores, cottonwoods, willows, and other riparian trees. There are no breeding records in the CNDDB for yellow warbler in SLO County; however yellow warbler is a regular spring and fall migrant that does breed in the County. The riparian habitat in the Salinas River is suitable for nesting yellow warblers. This species was not observed on or near the property during our site surveys in 2007 and 2013.

I. **White-tailed kite** (*Elanus leucurus*) is a California Species of Special Concern that nests in dense tree canopy near open areas throughout San Luis Obispo County. Nesting in San Luis Obispo County is primarily in mature coast live oak trees (*Quercus agrifolia*), which do not occur naturally on the property (some small live oaks have been planted). Appropriate foraging habitat is present on site, but nesting would be unlikely due to a lack of appropriate nesting sites.

J. **Southwestern willow flycatcher** (*Empidonax traillii extimus*) is a federally listed endangered species known to nest in riparian woodlands of Southern California. The Salinas River in the vicinity of Paso Robles does contain appropriate habitat for this species, however the location is farther north than any documented nesting records. The Santa Ynez River in Santa Barbara County is the closest occurrence of nesting Southwestern willow flycatcher listed in the CNDDB (approximately 50 miles distant). It is possible that this species may move through the property in the Salinas River during migration, but it is very unlikely that nesting would occur on site.

K. **Western pond turtle** (*Emys marmorata*) is a California Species of Special Concern that inhabits ponds and slow moving streams with adequate pools. During the dry season pond turtles will move overland and take refuge in woodland habitats. Perennial water in the Salinas River from the wastewater treatment facility provides very good habitat for pond turtles. Pond turtles were not observed, but are expected to occur in the Salinas River portion of the property. The perennial pond in the Study Area also provides good habitat for pond turtles. Pond turtles were observed in the perennial pond in 1999, but were not observed in 2007 or 2013.

L. **Loggerhead shrike** (*Lanius ludovicianus*) is a California Species of Special Concern. It requires open areas with appropriate perches for hunting, and shrubby trees or bushes for nesting. One shrike was observed on the property in April 2007; its breeding condition was unknown. Appropriate nesting habitat is present on the property for loggerhead shrikes.

M. **Monterey Dusky-footed Woodrat** (*Neotoma macrotis luciana*) is a California Species of Special Concern known only from the Santa Lucia Mountains in southeastern Monterey and northwestern San Luis Obispo Counties. The nearest collection record for *N. macrotis luciana* is from the Camp Roberts area, northwest of property. Occurrence numbers 1, 2, and 6 in the CNDDB are on Camp Roberts military reservation. These records are from 8.0 to 8.3 miles from the site. Small mammal trapping was not conducted within the Study Area. The common dusky-footed woodrat (*Neotoma fuscipes*) could occur in riparian habitat in the Study Area, however the Monterey dusky-footed woodrat is unlikely to occur. If a woodrat nest is located in a construction zone, the nest may be dismantled using hand tools so as to allow any inhabitants to escape into adjacent open space areas. .

N. **Steelhead - South/Central California ESU** (*Oncorhynchus mykiss irideus*) is a federally listed threatened species in this area of California. Steelhead are known to occur in coastal streams and rivers in San Luis Obispo County, including the Salinas River to the vicinity of Santa Margarita. The Salinas River is considered to be critical spawning habitat for steelhead. The National Marine Fisheries Service (NMFS) is the agency responsible for review for this federally listed species. The nexus for NMFS review is the permit process with the United States Army Corps of Engineers. Steelhead were not observed on site during our surveys in 2007 or 2013.

O. **California red-legged frog** (*Rana draytonii*) is a federally listed threatened species with occurrences documented throughout San Luis Obispo County. It generally requires seasonal pools or streams that hold water until mid to late summer for successful breeding. Bullfrogs and introduced fish can be detrimental to its breeding success, and have severely reduced many populations in larger watercourses and perennial ponds. Appropriate habitat for red-legged frog (CRLF) is present in the Salinas River and in the perennial pond in the center of the property.

The perennial pond was surveyed for CRLF in August 1999 by Dan Meade and Susan Christopher. The survey consisted of one day-time and one night-time survey. CRLF were not found to be present in the pond. More than 40 bullfrogs were counted during the survey, including four metamorphosing tadpoles. Three adult bullfrogs and numerous bullfrog tadpoles were observed in the pond in 2007 during daytime surveys. Due to the presence of bullfrogs, introduced fish, and a lack of emergent vegetation, the perennial pond is not expected to harbor a breeding population of CRLF. Some portions of the Salinas River are also appropriate habitat for CRLF. The closest reported occurrence to the River Oaks II is from the confluence of Paso Robles Creek and the Salinas River, 8.6 miles south (CNDDB #617). The lack of a closer source population limits the chance that CRLF will move into habitats on the property in the future. CRLF was not observed during our surveys of the property in 2007, and are very unlikely to occur. A protocol level survey was not conducted as part of this study.

P. **Western spadefoot toad** (*Spea hammondii*) is a California Species of Special Concern known from ephemeral pools in open grassland habitats across the interior region of San Luis Obispo County. Spadefoot toads remain underground for most of the year, emerging to breed in seasonal wetland pools during the rainy season. As opportunistic breeders, they occasionally utilize stockponds, reservoirs, and slow-moving streams. Development of the larvae from egg to metamorphosis can occur in three weeks or less, depending upon water temperature. In ponds and reservoirs, where bottom temperatures are cooler, tadpoles remain in larval form longer, often becoming very large.

Spadefoot toad tadpoles were observed in roadside puddles on Buena Vista Drive in 2005 and 2006 (Dart, pers. obs.), approximately 1.1 and 2.1 miles northeast of the River Oaks II property. The only potential breeding habitat on the property in 2007 was the perennial pond. Above-average rainfall years could provide spadefoot toads with additional breeding sites on the property that had not filled during the 2007 below-average rainfall season. We expect spadefoot toads to occur on or in the vicinity of the property. However, long-term farming may have eliminated spadefoot toads from most upland areas on the property.

Q. **American badger** (*Taxidea taxus*) is a California Species of Special Concern known from open grassland habitats throughout San Luis Obispo County and elsewhere in California. Appropriate habitat for badgers is found on the property, although current farming practices have reduced the habitat quality substantially. No signs of badgers were observed on site during our surveys in 2007 or in 2013.

R. **Least Bell's vireo** (*Vireo bellii pusillus*) is an endangered species under both the state and federal endangered species acts. This vireo nests in low riparian vegetation in Southern California, preferring to place its nest on low branches of willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), and mesquite bushes (*Prosopis* spp.) that extend into pathways. Nesting least Bell's vireos were found in the Salinas River in the Bradley quadrangle of Monterey County in 1983 (CNDDB #120). This occurrence is approximately twenty miles downstream from the subject property. Moderately appropriate habitat is present in the Salinas River riparian habitat. Least Bell's vireo was not observed on the property during our biological surveys.

S. **San Joaquin kit fox** (*Vulpes macrotis mutica*) is a federally listed endangered species and a state listed threatened species. Kit fox are known from the Carizzo Plains and Camp Roberts, with transient individuals known to move between the two populations. Huerhuero Creek is considered to be a movement corridor for kit fox. The open farmland and grasslands on the property provide appropriate seasonal habitat for San Joaquin kit fox. Development on the property will permanently remove habitat for San Joaquin kit fox. The property is located within the three to one mitigation ratio area (as per the San Luis Obispo County Standard Kit Fox Mitigation Ratios map, which is found at: http://slocountymaps.calpoly.edu/kitfox.htm.

3.6.6 Special status species not expected to occur on the property

The remaining 28 special status species known to occur in the Adelaida, Paso Robles, Estrella, York Mountain, Templeton, and Creston quadrangles are not expected to occur in the Study Area due to the absence of required soil type, lack of appropriate habitat, or because the project site is substantially outside the known range of the species.

3.6.7 Sensitive natural communities and special aquatic sites

No habitats listed by the California Department of Fish and Wildlife (CDFW) as sensitive natural communities occur in the Study Area. Wetland habitat is defined as a special aquatic site under USACE definitions. Wetlands are present on the property, but have not been formally delineated. Federal jurisdictional wetlands are defined in the 1987 Army Corps of Engineers wetland determination methods as an area five feet in diameter dominated by wetland plants (obligate or facultative wetland species), which has hydrologic conditions that allow water to saturate the soil for several weeks per year, and contains hydric soils.

The State of California uses a broader definition of wetlands. Like the USACE definition, the definition of a wetland adopted by the State (Cowardin, et al., 1979) incorporates the three key parameters of hydrophytic vegetation, hydric soils, and hydrology:

> *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For the purpose of this classification, wetlands must have one or more of the following attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; (3) the substrate is nonsoil and is saturated or covered with shallow water at some time during the growing season of each year* (Cowardin et al. 1979).

The key difference between the federal and state wetland definitions is that for state wetlands, under some circumstances, only one of the three criteria need be met.

4.0 Discussion

4.1 General Discussion of Property Conditions

The River Oaks II Study Area is primarily used as an agricultural operation consisting of dryland grain crops. The other major land use is a hot spring and spa facility that hosts outdoor events. Cultivated oat and barley fields cover approximately 48± acres of the Study Area. The Salinas River riparian habitat is the most valuable resource on the property for wildlife and special status species. Blue oak woodlands on site are restricted in range by the farming operations. Cooper's hawk was nesting on the property in 1999, in the riparian habitat of the Salinas River. Special status species have not been documented on the property outside the Salinas River habitat.

4.2 Regulatory Framework

The California Environmental Quality Act (CEQA) requires the lead agency (in this case, the City of Paso Robles) to determine potential environmental effects of the project. The lead agency must also identify other involved agencies that become responsible or trustee agencies.

All of the plants constituting CNPS CRPR 1B meet the definitions of Sec. 1901, Chapter 10 of the California Native Plant Protection Act (CNPPA) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA (CEQA section 15065).

Rare plants protected under the CNPPA must be fully considered under CEQA (CEQA sections 15380, 15386). Proposed impacts that affect more than 10 percent of a local breeding population generally require mitigation at a minimum 2:1 ratio.

The California Department of Fish and Wildlife (CDFW) recognizes that CRPR 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and recommends they be addressed in CEQA projects.

Rare plants and animals protected under the Federal Endangered Species Act (FESA) are protected. The United States Fish and Wildlife Service is the agency that regulates activities affecting federally listed species.

Nesting birds are protected from disturbance by The Migratory Bird Treaty Act of 1918, (as regulated by the United States Fish and Wildlife Service) and by sections 3503, 3503.5, and 3800 of the California Department of Fish and Game code.

The Salinas River and ephemeral tributaries on the property may be under the permitting jurisdiction of the U.S. Army Corps of Engineers (section 404), the California Department of Fish and Game (code 1603), and the Regional Water Quality Control Board (section 401). Areas affected could include four locations: the Salinas River riparian zone, the drainage containing the pond, a drainage swale west of the pond that leaves the property to the north, and a drainage along the northern property boundary. The applicant should demonstrate to the lead agency that all applicable permits have been obtained for work affecting drainages and wetlands. All work that affects the bed or banks of the drainages, including culverts and bridges, is likely to require USACE, RWQCB, and CDFW authorizations.

5.0 Potential Impacts

Construction of the proposed project could affect special status animal species, blue oak woodlands and individual oak trees, wetlands, annual grasslands, and common wildlife species. The project is in the conceptual phase. Maps used in our evaluation of potential impacts are included in Appendix A.

Sections 5.1 through 5.5 address potential impacts to biological resources from construction of the proposed project. We include in our analysis impacts to both common and special status species, as well as to habitats that are not sensitive. This consideration contributes to understanding cumulative impacts to the environment that may result from the loss of common species and habitat.

5.1 Potential Habitat Impacts

5.1.1 Agrestal (dryland grain crop)

The proposed project would convert all of the 48± acres of farmland to other uses. Special status species are not expected to occur in the agrestal habitat. Impacts to agrestal habitat do not require mitigation.

The Arbuckle fine sandy loam map unit (100) and the Mocho clay loam map unit (173) are in capability class I irrigated. These soil map units are considered prime farmland. Neither of the areas shown by USDA maps to contain these soil map units was farmed in 2013. Approximately 32± acres of potential prime farmland are present on the property. Because actual soil types in the field may differ from the generalized soil map units, the determination of presence and acreage of prime farmland on site would be made by a qualified soil scientist. Preliminary soil investigations by Althouse and Meade, Inc. (unpublished results) found some areas of map unit 100 that may not qualify as prime farmland.

5.1.2 Annual grassland

Approximately 24 acres of annual grassland habitat would be permanently removed by the proposed project design. Much of the grassland habitat is highly disturbed. Plant species in many areas are indicative of disturbed soils, either from past farming or from construction-related activities. Annual grassland in the Paso Robles region is considered potential habitat for San Joaquin kit fox. The loss of San Joaquin kit fox habitat, if determined to be a significant impact to the kit fox, would require mitigation (see section 6.5.10).

5.1.3 Blue oak woodland

Blue oak woodland habitat on the property would be protected in open space areas. Impacts to the oak woodland habitat are not anticipated. Section 5.2 addresses potential impacts to individual oak trees on the property.

5.1.4 Riparian

Construction of an athletic field in the ruderal area west of North River Road may affect riparian habitat and Salinas River secondary channels which are in close proximity. Additionally, there are utility markers indicating below ground utilities throughout the area. Currently, there are no project plans for this area.

5.1.5 Wetland

Two areas of wetland were identified on the property: the Salinas River flow path, and the large landscape/agricultural pond. The extent of jurisdictional wetlands on the property has been determined through a formal wetland delineation study conducted in

2009. Impacts to jurisdictional wetlands, if determined to be significant in the CEQA document, would require mitigation (see section 6.1.5).

As part of the proposed project a substantial pond and drainage basin would be built in the north east corner of the property. This pond and basin would create additional aquatic habitat on the property; a potential beneficial impact to biological resources. In recent years, the RWQCB has indicated that stormwater basins will not be accepted for wetland mitigation.

5.1.6 Ruderal

Most of the mapped ruderal habitat areas lie within proposed open space areas. Some small areas of ruderal habitat may be impacted during construction. Impacts to ruderal habitat do not require mitigation.

5.1.7 Anthropogenic

Approximately 23 acres of anthropogenic habitat were mapped on the property. Impacts to anthropogenic habitat do not require mitigation.

5.2 Potential Oak Tree Impacts

The City of Paso Robles requires mitigation for removal of oak trees with a diameter at breast height (dbh) of 6 inches or greater. Diameter at breast (dbh) is measured at 4.5 feet from the ground or, if the trunk is split below 4 feet, at the narrowest point below the split. Impacts include any ground disturbance within the critical root zone (CRZ), or any trimming of branches 4 inches in diameter or greater. The critical root zone (CRZ), as defined by the City of Paso Robles, is an area of root space that is within a circle circumscribed around the trunk of a tree using a radius of 1 foot per inch dbh, e.g., a 20-inch diameter tree has a CRZ with a radius of 20 feet as measured from the center of the tree (City of El Paso de Robles - Ordinance No. 835 N.S). This measurement often extends beyond the actual drip-line of the tree.

The applicant intends to develop the property with no impacts to native oak trees on the property.

5.3 Potential Impacts to Common Wildlife

5.3.1 Nesting habitat

Impacts to or take of nesting birds could occur if grading or tree removal/trimming is conducted during nesting season (March 1 through August 31). Take of common nesting birds is prohibited by federal and state code. Impacts to or take of common nesting birds can be avoided (see section 6.3.1).

5.3.2 Reduction of wildlife movement corridors

Wildlife movement through the property is primarily restricted to the Salinas River corridor. The riparian habitat provides cover and food sources for a variety of wildlife, and animals can move long distances with few impediments. The steep bluff at the edge of North River Road limits terrestrial animal movement up to the terrace, focusing movements into the ephemeral drainages. Mule deer, bobcat, coyote, and foxes are expected to occur in the Salinas River habitat, and may occasionally forage on the property. Development immediately south, north and east of the property reduces opportunities for wildlife to use the property as a corridor.

5.3.3 *Displacement and/or take*

Common wildlife species currently living in the project site or using the site as transients would be permanently displaced from a portion of the property. Take of common species may occur.

5.4 Potential Impacts to Special Status Plant Species

Focused floristic surveys conducted on the property in 2007 did not locate any special status plant species. We do not expect special status plants to occur on the property in the future. The proposed project would not result in impacts to special status plants. Site visits in 2013 determined that site conditions have not changed substantially, and the potential for rare plants to occur is unchanged from conditions reported in 2007.

5.5 Potential Impacts to Special Status Animal Species

5.5.1 *Special status birds*

Special status birds could potentially occur on the property (see section 3.6). Disturbance and/or take could occur if any of these species nest in proposed project areas. Impacts to or take of special status bird species can be avoided (see section 6.5.1).

5.5.2 *Silvery legless lizard*

Appropriate habitat for the silvery legless lizard is found beneath oak trees in blue oak woodland habitat. Blue oak woodland habitat on the property would be protected in open space areas, therefore impacts to silvery legless lizard are not anticipated.

5.5.3 *Pallid bat*

The proposed project is not expected to impact native oak trees on the property that could potentially harbor roosting pallid bats or other bat species. Any buildings that will be removed should be inspected for bats prior to demolition.

5.5.4 *Vernal pool fairy shrimp*

Ephemeral depressions in the Study Area were surveyed during both dry and wet-seasons. Protocol level surveys did not detect federally-listed branchiopods.

5.5.5 *Western pond turtle*

Western pond turtles are known to occur in the Salinas River in the Paso Robles area. Pond turtles were observed in the perennial pond on the property in 1999. Because pond turtles will move overland between water sources, project activities near the pond and the Salinas River have the potential to result in take. The potential for take of western pond turtle, if determined to be significant in the CEQA document, can be reduced to a less than significant level (see section 6.5.5).

5.5.6 *Western spadefoot toad*

Western spadefoot toad is known to breed in roadside ephemeral pools along Buena Vista Drive. The closest location is approximately 1.1 miles from the Study Area. Spadefoot toads were not found on site in 2007 or 2013. Aestivating spadefoot toads could potentially be present in rodent burrows in upland habitat in the Study Area. Breeding could occur in the perennial pond or other ephemeral pools on site. Grading and other project construction activities could result in take of spadefoot toads, if present. The project would result in a net loss of spadefoot toad habitat. The potential for take of

Western spadefoot toad, if determined to be significant in the CEQA document, can be reduced to a less than significant level (see section 6.5.6).

5.5.7 Steelhead - South/Central California ESU

Steelhead could potentially be present seasonally in the Salinas River. Ephemeral drainages on the property are tributaries to the Salinas River. Run-off from the project site into the ephemeral drainages could impair water quality in the river. The potential for direct impacts to occur to steelhead and their habitat is dependent upon the nature of the recreation activity proposed on the floodplain (see land use map in Appendix A). The potential for take, if determined to be significant in the CEQA document, can be reduced to a less than significant level (see section 6.5.7).

5.5.8 California red-legged frog

California red-legged frog could potentially be present in the Salinas River and the perennial pond. Appropriate habitat is present. CRLF has not been identified on the property or within five miles of the site. There is no known CRLF source population in the vicinity that would allow colonization of habitats on the property.

Project activities that affect the perennial pond or riparian habitat in the Salinas River could degrade potential CRLF habitat. Potential impacts to CRLF habitat, if determined to be significant in the CEQA document, can be reduced to a less than significant level (see section 6.5.8).

5.5.9 American badger

The property is within the known range of the American badger. Annual grassland habitat usable by badgers occurs on the property and could be removed by development and subsequent use of the land. Suitable prey items are present to support resident or transient badgers. Indirect impacts to badgers include the loss of foraging and denning habitat. Direct impacts could occur if a badger takes up residence on the site. The loss of grassland habitat is not a significant impact, although the cumulative loss of habitat in the Paso Robles region has negatively affected badger populations in the area. Disturbance of denning badgers, if present, and if determined to be significant in the CEQA document, can be reduced to a less than significant level (see section 6.5.9).

5.5.10 San Joaquin kit fox

The property is within the known range of San Joaquin kit fox. Development on the property would result in a loss of kit fox habitat. Construction activities and subsequent use could discourage kit fox from utilizing remaining habitat on site. If walls or wooden fences are built around the property boundaries, the entire property could be removed from potential use by kit fox. Precise acreages cannot be calculated without a finalized project and grading plan; however loss of any designated San Joaquin kit fox habitat may be significant under CEQA. If determined to be significant in the CEQA document, impacts can be reduced to a less than significant level (see section 6.5.10).

6.0 Recommendations to Address Project Effects

If the CEQA document finds that the effects of the project are significant under CEQA, we recommend the following biological resource (BR) mitigation measures to address such impacts. With these recommended measures, potential impacts would be reduced to a less than significant level.

6.1 Habitat Mitigations

Proposed changes to anthropogenic, ruderal, and agrestal habitats do not require mitigation.

6.1.1 Agrestal

Proposed changes to agrestal habitat do not require mitigation.

6.1.2 Annual grassland

By itself, the loss of approximately 24 acres of annual grassland habitat is not typically a significant impact; therefore no mitigation is recommended for the loss of this resource. However, the loss of grassland could potentially reduce the habitat of the San Joaquin kit fox. Loss or permanent degradation of San Joaquin kit fox habitat on the property is addressed in section 6.5.10.

6.1.3 Blue oak woodland

All of the blue oak woodland habitat on the property would be protected in open space areas; therefore no mitigation is recommended.

6.1.4 Riparian

The property includes approximately 11 acres of riparian habitat in the Salinas River. The project will not remove riparian habitat. Setback from riparian vegetation is typically 50 feet as per CDFW recommendations. If the project encroaches on riparian habitat, additional impact and mitigation analysis must be considered. Alteration of natural flood plains must be consistent with FEMA guidelines.

6.1.5 Wetland

If project activities are proposed that may result in fill of wetland areas, the formal wetland delineation should be submitted to the USACE to verify extent of federal jurisdiction under Clean Water Act section 404. Wetlands are known to be present in the Salinas River and the perennial pond.

BR-1. If impacts to wetlands would occur as a result of proposed project activities, a mitigation, monitoring, and reporting plan should be prepared and approved by the City and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Wetland mitigation will increase the areal extent of wetland habitat on site at a two-to-one ratio (created wetland area to impacted wetland area), or other ratio determined by the permitting agency. Mitigation implementation and success will be monitored for a minimum of three years, depending on the jurisdictional agencies' requirements.

6.2 Oak Tree Mitigations

The proposed project is not expected to impact oak trees on the property. If future changes to the project result in impacts to or removal of oak trees, the following mitigation measures may be appropriate to address such effects. require impacts to or removal of native oak trees, the following mitigation recommendations should be implemented.

BR-2. Tree canopies and trunks within 50 feet of proposed disturbance zones should be mapped and numbered by a certified arborist of qualified biologist and a licensed land surveyor. Data for each tree should include date, species, number of stems, diameter at breast height (dbh) of each stem, critical root zone (CRZ) diameter, canopy diameter, tree height, health, habitat notes, and nests observed.

BR-3. An oak tree protection plan should be prepared and approved by the City of Paso Robles.

BR-4. Impacts to the oak canopy or critical root zone (CRZ) should be avoided where practicable. Impacts include pruning, any ground disturbance within the dripline or CRZ of the tree (whichever distance is greater), and trunk damage.

BR-5. Impacts to oak trees should be assessed by a licensed arborist. Mitigations for impacted trees should comply with the City of Paso Robles tree ordinance.

BR-6. Replacement oaks for removed trees must be equivalent to 25% of the diameter of the removed tree(s). For example, the replacement requirement for removal of two trees of 15 inches dbh (30 total diameter inches), would be 7.5 inches (30" removed x 0.25 replacement factor). This requirement could be satisfied by planting five 1.5 inch trees, or three 2.5 inch trees, or any other combination totaling 7.5 inches. A minimum of two 24 inch box, 1.5 inch trees should be required for each oak tree removed.

BR-7. Replacement trees should be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least three years. Replacement trees should be of local origin, and of the same species as was impacted or removed.

6.3 Common Wildlife Mitigations

6.3.1 Nesting habitat

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).

BR-8. **Within one week of ground disturbance or tree removal/trimming activities**, if work occurs between March 15 and August 15, nesting bird surveys should be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees and grasslands should not be conducted during the breeding season from March 1 to August 31. If construction activities must be conducted during this period, nesting bird surveys should take place within one week of habitat disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities should occur within 100 feet of nests until chicks are fledged. Construction activities should observe a 300-foot buffer for occupied raptor nests. A 500-foot buffer should be observed from occupied nests of all special status species. A pre-construction survey report should be submitted to the lead agency immediately upon completion of the survey. The report should detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements.

6.3.2 Reduction of wildlife movement corridors

Impacts to significant wildlife movement corridors are not anticipated from the proposed project; therefore no mitigation is recommended.

6.3.3 Displacement and/or take

Wildlife expected to occur on the property includes common species such as gray fox, mule deer, coyote, bobcat, striped skunk, and several species of rodents. Mitigations for impacts to common wildlife species are usually not required.

6.4 Mitigations for Special Status Plant Species

Special status plants were not found and are not expected to occur in the Study Area; therefore no mitigation is recommended.

6.5 Mitigations for Special Status Animal Species

6.5.1 Special status birds

If construction activities are conducted during the nesting season, from March 15 through August 15, pre-construction nesting bird surveys should be conducted (see BR-8). If occupied nests of special status birds (e.g. Cooper's hawk, sharp-shinned hawk, golden eagle, burrowing owl, yellow warbler, white-tailed kite, loggerhead shrike, and least Bell's vireo) are present, the following additional mitigation recommendations should be implemented: shall

BR-9. **All occupied nests of special status bird species should be mapped using GPS or survey equipment.** The mapped locations should be placed on a copy of the grading plans with a 500-foot buffer indicated. Work should not be allowed within the 500 foot buffer while the nest is in use. The buffer zone should be delineated on the ground with orange construction fencing where it overlaps work areas.

BR-10. **Occupied nests of special status bird species that are within 500 feet of project** work areas should be monitored bi-monthly through the nesting season to document nest success and check for project compliance with buffer zones. Once nests are deemed inactive and/or chicks have fledged and are no longer dependent on the nest, work can commence.

6.5.2 Silvery legless lizard

The project is not expected to have an impact on silvery legless lizard because blue oak woodland habitat on the property would be protected in open space areas, therefore no mitigation is required.

6.5.3 Pallid bat

The project is not expected to have an impact on potential pallid bat roost sites on the property; therefore no mitigation is required.

6.5.4 Vernal pool fairy shrimp

If vernal pool fairy shrimp are found on the property in the future, mitigations may be required.

6.5.5 Western pond turtle

If work is proposed within 50 feet of the Salinas River or the perennial pond, the following mitigation measure should be implemented to reduce the potential for take.

BR-11. Grubbing, grading, and other ground disturbance activities conducted within 50 feet of the Salinas River or the perennial pond should be monitored by a qualified biologist. If pond turtles are found in the project areas, they should be moved to an appropriate safe location on site. The biological monitor must have appropriate permits for handling pond turtles.

6.5.6 Western spadefoot toad

Spadefoot toads breed in ephemeral pools in the Paso Robles region. They are known to occur in the vicinity of the subject property. Surveys of the property conducted during the 2006-2007 rainfall year were not definitive due to the extreme below normal rainfall, and ephemeral pools did not adequately fill. Therefore, additional surveys for spadefoot toad in potential ephemeral pool locations should be conducted prior to project construction.

issuance of grading permit

BR-12. Prior to ~~development~~, a survey of any ephemeral pools should be conducted within three weeks of saturating winter rainfall to determine the presence or absence of spadefoot toad on the property. If spadefoot toad is found, a mitigation plan, which may include avoidance, capture, and relocation, will be developed by a qualified biologist to reduce project effects on this species to a less than significant level.

6.5.7 Steelhead - South/Central California ESU

Specific project details were not available regarding the type of recreation proposed for the Salinas River riparian habitat. The following mitigation measures are provided as guidelines to protect steelhead and their habitat.

BR-13. All construction related activities must observe a 100-foot set-back from the Salinas River, as measured from the outer edge of riparian canopy. A minimum 50-foot set-back should be observed from the ephemeral drainages and flood channels, as measured from the outer edge of riparian vegetation.

BR-14. The project should develop a Stormwater Pollution Prevention Plan (SWPPP) acceptable to the Regional Water Quality Control Board (RWQCB). Appropriate erosion control measures should be implemented at all times in areas that could potentially flow into the Salinas River. Erosion control measures should include, but are not limited to, effective placement of silt fence, straw waddles, hydroseed applications, and erosion control fabric. Project planning should strive for temporary and permanent erosion control.

6.5.8 California red-legged frog

If the project requires work to be conducted in the perennial pond or the Salinas River, a protocol level survey for California red-legged frog (USFWS 2005) should be conducted on the entire property in all potential CRLF habitat. If CRLF are found to be present, consultation with the United States Fish and Wildlife Service must occur. Project-specific avoidance and mitigation measures should be developed in consultation with the Service. If CRLF are not found to be present, work may proceed upon acceptance of the negative finding by the Service.

6.5.9 American badger

American badger could occur in the project areas. The project will result in a net loss of badger habitat. Mitigation is not required for loss of badger habitat. To ensure take of live badgers does not occur, the following measure is recommended:

BR-15. A pre-construction survey should be conducted within thirty days of beginning work on the project to identify if badgers are using the site. The results of the survey should be sent to the project manager, CDFG, and the City of Paso Robles.

If the pre-construction survey finds potential badger dens, they should be inspected to determine whether they are occupied. The survey should cover the entire property, and should examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope should be used to examine the den to the end. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers from becoming trapped in burrows during construction activity, no grading should occur within 100 feet of active badger dens between February and July. Between July 1 and February 1 all potential badger dens should be inspected to determine if badgers are present. During the winter, badgers do not truly hibernate but are inactive and asleep in their dens for several days at a time. Because they can be torpid during the winter, they are vulnerable to disturbances that may collapse their dens before they rouse and emerge. Therefore, surveys should be conducted for badger dens throughout the year. If badgers are found on the property from July 1 through February 1, a qualified biologist may capture badgers and relocate them to an appropriate location off the property.

6.5.10 San Joaquin kit fox

San Joaquin kit fox could occur in the project area. The project will result in a net loss of kit fox habitat. The applicant should follow the City's standard San Joaquin fox mitigation program, in consultation with CDFW, to mitigate for any direct impacts to kit fox to a less than significant level.

As a modification to the City's standard mitigation program, we recommend that kit fox mitigation be partially fulfilled by habitat enhancements for San Joaquin kit fox on the property. These enhancements can include: kit fox friendly fencing, and artificial dens and escape structures in open space areas, drainage basins, and on the golf course, and signage and information to increase public awareness regarding San Joaquin kit fox. Areas of the existing golf course on the project to the south could also be included in this kit fox habitat area.

In consultation with the CDFW, a kit fox mitigation program will be developed that could incorporate onsite measures. The City will work with CDFW to develop an appropriate mitigation strategy to reduce impacts to kit fox, which could potentially include a combination of onsite enhancements, mitigation fees for loss of habitat that is not offset onsite, and/or habitat enhancements offsite.

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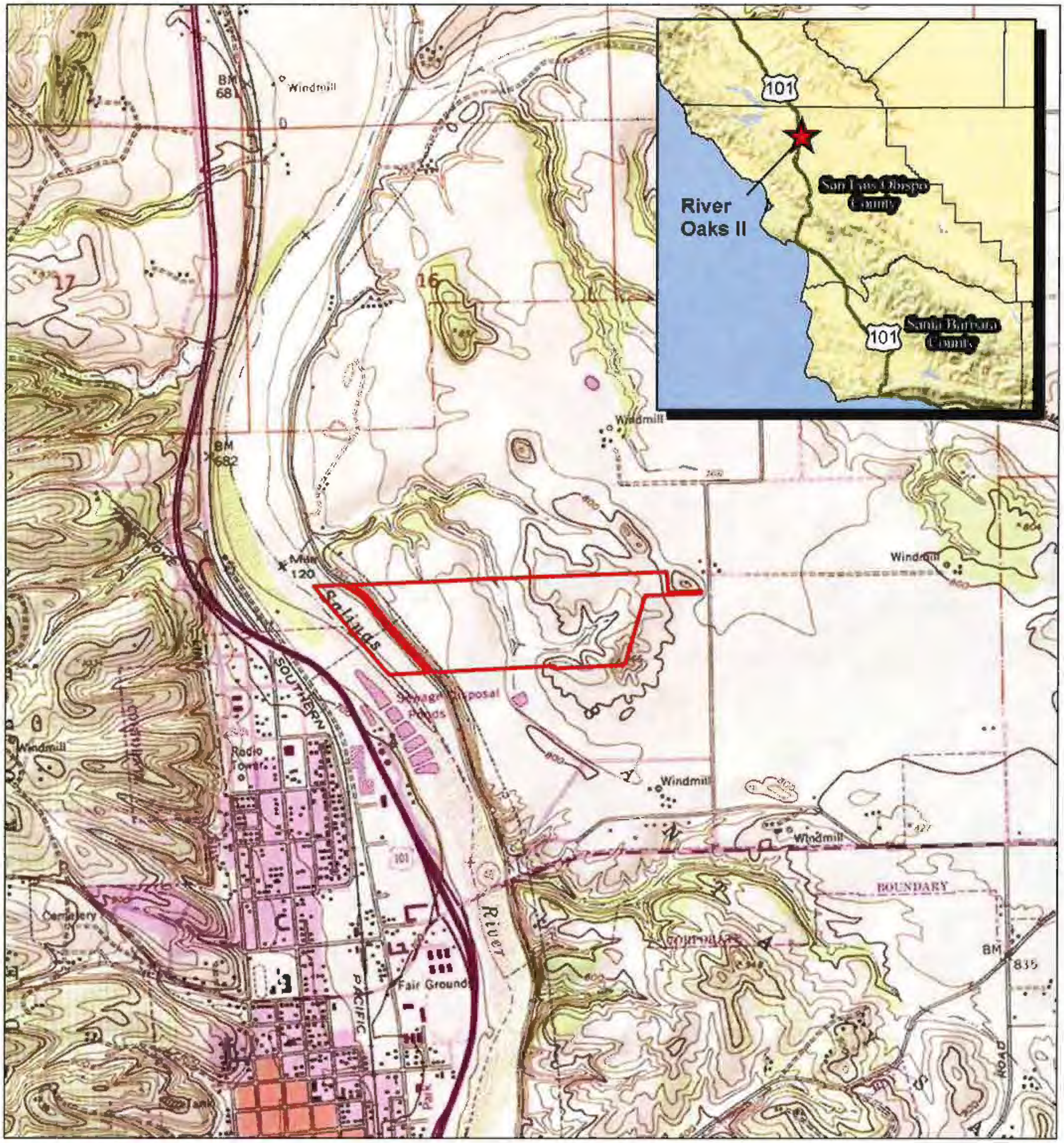
8.0 APPENDIX A – Conceptual Plan

- **River Oaks II Concept Plan – RRM Design Group, February 2013**


City Limits
North River Road
River Oaks Hot Springs Spa
(Fitness and Wellness Center)
Active Adult Neighborhood (N-1)
144 Homes
Neighborhoods (N-2 - N-7)
127 Homes
N-7
Future Soccer
Field Practice
Facility Area
N-2
N-3
N-4
N-6
N-1
Pedestrian
Trails
Future
Cuesta College
Expansion Area
Buena Vista Drive
Salinas River
Bluff-top Trail
N-5
Union Pacific Railroad
101
City Limits
Pavilion
(Community Center)
Waterford Court
North River Road
Clubhouse Drive
Lenox Court
RIVER OAKS
Concept Plan
rrmdesigngroup

9.0 APPENDIX B – Figures

Figure 1. USGS Topographic Map



Legend

River Oaks II Study Area

0 0.5 1 2 Mile

N W E S

River Oaks II
Paso Robles

USGS Topographic Map
Map Updated: July 22, 2013, 10:22 AM

Althouse and Meade, Inc.
1602 Spring Street
Paso Robles, CA 93446

Figure 2. Aerial Photograph

River Oaks II
Paso Robles

2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated: July 22, 2013, 10:28 AM

Althouse and Meade, Inc.
1602 Spring Street
Paso Robles, CA 93446

Figure 3. USDA Soils Map

River Oaks II Study Area

100: Arbuckle Fine Sandy Loam, 0-2 percent slope
104: Arbuckle-Positas Complez, 30-50 percent slope
106: Arbucle-San Ysidro Complex, 2-9 percent slope
173: Mocho Clay Loam, 0-2 percent slope
177: Nacimiento-Ayar Complex, 9-30 percent slope
212: Xerofluvents-Riverwash Association

N
W E
S

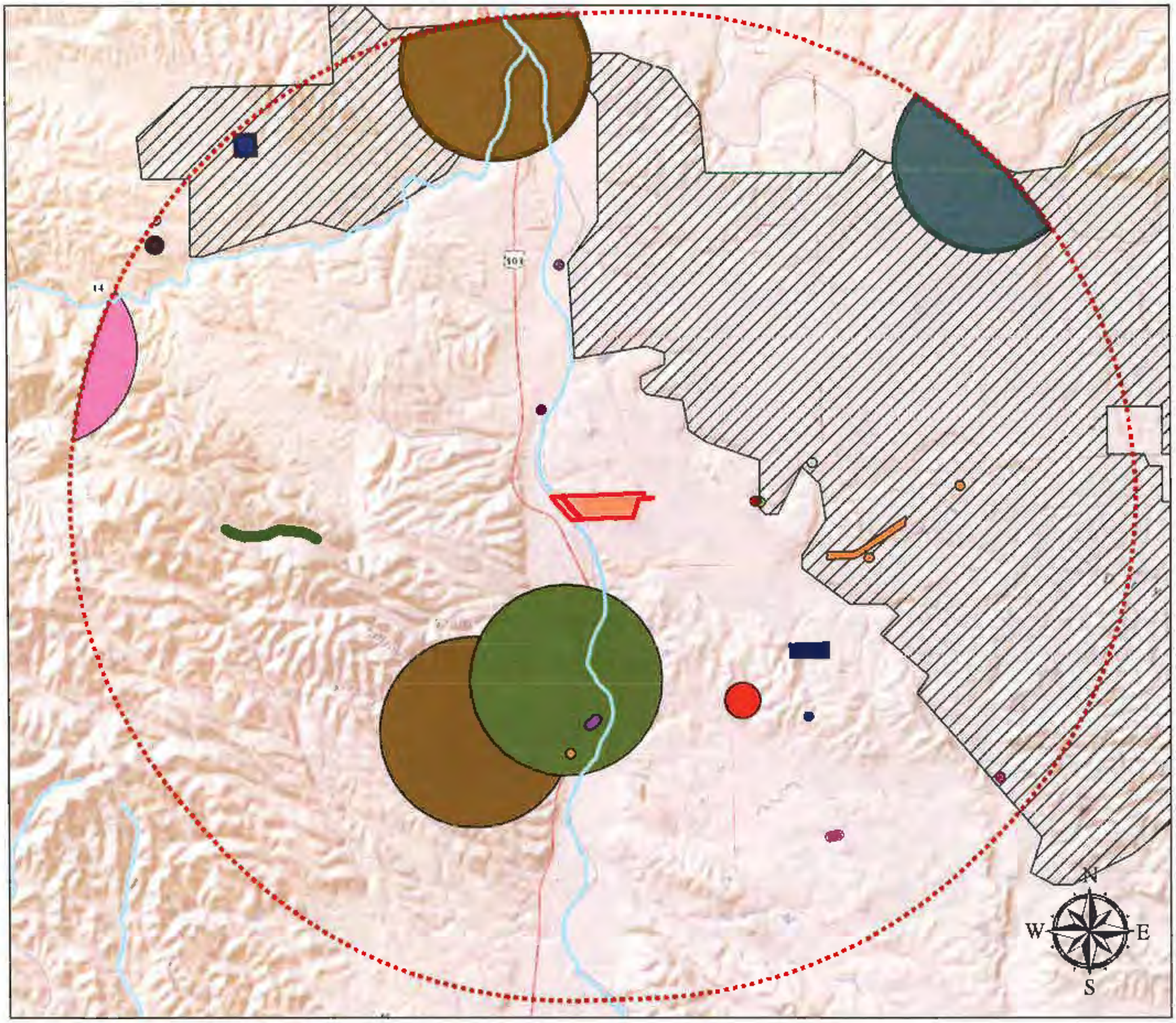
0 0.25 0.5 1 Mile

River Oaks II
Paso Robles

Soil Survey of San Luis Obispo County
Inland Paso Robles
2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated: July 22, 2013, 10:44 AM

Althouse and Meade, Inc.
1602 Spring Street
Paso Robles, CA 93446

Figure 4. CNDDB & FWS Critical Habitat Map



Legend

- River Oaks 2013 Study Area
- Five Mile Radius
- Steelhead Critical Habitat
- Vernal pool fairy shrimp Critical Habitat
- Atascadero June beetle
- Jared's pepper-grass
- Lemmon's jewel-flower
- Lompoc grasshopper
- San Joaquin kit fox
- San Joaquin pocket mouse
- San Luis Obispo owl's-clover
- Santa Cruz Mountains pussypaws
- dwarf calycadenia
- golden eagle
- least Bell's vireo
- oval-leaved snapdragon
- round-leaved filaree
- shining navarretia
- silvery legless lizard
- vernal pool fairy shrimp
- western pond turtle
- western spadefoot
- woodland woollythreads

0 1.25 2.5 5 Miles

River Oaks II
Paso Robles

CNDDB Data from June 30, 2013
Shaded Relief Basemap
Map Updated: July 22, 2013, 11:19 AM

Althouse and Meade, Inc.
1602 Spring Street
Paso Robles, CA 93446

Habitat Map
River Oaks II
Legend
River Oaks II, 2013 Study Area
Agrestal
Anthropogenic
Blue Oak Woodland
California Annual Grassland
Riparian
Ruderal
Wetland
Jurisdictional Waters (2009)
101
Study Area
101
2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated. August 22, 2013, 12:29 PM
0 250 500 1,000
Feet
Althouse and Meade, Inc
1602 Spring Street
Paso Robles, CA 93446

10.0 APPENDIX C – Photographs

Photo 1. View north of annual grassland habitat (foreground), an ephemeral drainage with blue oak canopy, and agrestal habitat (background) in 2007.

Photo 2. Agrestal habitat condition during surveys in 2013.

Attachment 14
Cultural Resources Study

PARKER & ASSOCIATES
PO Box 462
Cayucos, CA 93430
Phone: (805) 772-0117
Fax: (805) 772-8178
Email: crm@tcsn.net

CULTURAL RESOURCE INVESTIGATION OF THE PROPOSED RIVER OAKS II DEVELOPMENT NORTH RIVER ROAD, PASO ROBLES

Prepared at the request of:

Richard Willhoit
2727 Buena Vista Dr.
Paso Robles, CA 93446

Prepared by:
John Parker, Ph.D., RPA

USGS Quads:
Paso Robles 7.5'

February 20, 2007

FIELD AND RESEARCH ARCHAEOLOGICAL STUDIES

RPA *Registered Professional Archaeologist*

www.tcsn.net/sloarchaeology

SUMMARY

On July 19th 1999, Steve Gregory requested that the author conduct a cultural resource investigation of a 242-acre parcel on North River Road. The purpose of the investigation was to locate, describe, and evaluate any archaeological or historical resources, which may be present on the parcel (Parker 1999).

On January 8th 2007, Richard Willhoit requested that the author review the results of the 1999 field inspection and apply them to a newly planned development at the same location. In addition, the author was to assess the impact that might occur as a result of the proposed construction of a mixed residential/open space development.

The results of this analysis indicated that no significant historic or prehistoric cultural resources exist within the newly proposed project area. It is recommended that the proposed project be approved as planned.

INTRODUCTION AND BACKGROUND

The fieldwork carried out as part of this study was conducted by John and Cheyanne Parker. Dr. Parker holds a Ph.D. in Archaeology, and is a Registered Professional Archaeologist. Cheyanne has 8 years of archaeological field and lab experience. The fieldwork took place August 10th, 12th, 17th, 18th, and 25th, 1999.

The proposed project will require a local discretionary permit indicating that the California Environmental Quality Act (CEQA) applies to the project. Therefore this cultural resource evaluation was designed to comply with the requirements set forth in CEQA (sec. 21083.2). This report follows the outline for identification of cultural resources as presented in the "Archaeological Resource Management Reports (ARMR): Recommended Contents and Format" (State of California 1990).

The parcel covered 242 acres of level, gently rolling, to steep terrain making up a portion of the Salinas River Drainage. Soils throughout the area were very similar and consisted of a medium to light gray or graybrown clay soil over a white siltstone bedrock. In upland areas this soil contained small to fist-size river gravels and cobbles, including natural chalcedony, basalt, and Monterey chert. Low-lying areas contained less rock and more clay in the soil. Although most of the area had been planted in barley, soils would have originally supported an oak grassland environment. A small portion of the project area included a stretch of the Salinas River bed, containing a riparian environment.

The property is depicted on the Paso Robles 7.5' USGS topographic map as existing in an unsectioned portion of the Santa Ysabel Land Grant, T26S, R12E (see attached map for area inspected). The project area was situated north of HWY 46 on both sides of North River Road and extended eastward to Buena Vista Drive.

The proposed project will involve major trenching and grading to accommodate the construction of a mixed residential/open space development.

Cultural Background

Archaeological research has indicated that the Paso Robles area has been home to prehistoric people for at least 9,800 years (Parker 2004). Studies of prehistoric sites have demonstrated continuous cultural use of the area until the time of European contact. The changing culture and technology of these people allowed them to successfully adapt to changes in their environment brought about by the end of the ice age and population growth (Parker 1997).

Ethnographic and historical research has indicated that the Paso Robles area was the home of the Northern Chumash at the time of European contact (Gibson 1983). The various Chumash languages belong to the Hokan language family, considered the oldest language family in California and possibly in the New World (Shipley, 1978). It is likely that Hokan speaking people have inhabited California for at least 12,000 to 14,000 years (Parker, 1994).

The earliest European contact in San Luis Obispo County came in 1595, when Sebastian Rodriguez Cermeño put in at Port San Luis. He was met by a large contingent of Indians who lived on the top of the bluff. Soon following were the explorations of Sebastian Vizcaiño in 1602 and Gaspar de Portola' in 1769.

The Portola' expedition reported seeing native people coming and going from 10 different villages between San Luis Obispo and Monterey. Many of these villages were Chumash towns.

As the Portola' expedition traveled through the Paso Robles area, some of the villages encountered by him were likely in this vicinity.

Very little is known about the inland Chumash people in San Luis Obispo County. This is mostly due to their demise by diseases brought by Europeans and their later incarceration as slave labor in the missions and on ranchos (Heizer, et. al. 1971).

It seems that none of the explorers or missionaries did any studies of the Chumash people while their culture still existed. By the time Anthropologists took an interest in their lifestyle and culture, there were no people left who could remember the traditional lifeways.

From 1797 to 1844, the project area was part of the Mission San Miguel land holdings. In 1844, the land was granted to Francisco Arce by the Mexican Governor as the Santa Ysabel Land Grant. A mile south and west of the project area, the town of Paso Robles had its beginnings with the purchase and development of the Paso de Robles Rancho in the late 1850's. A hot springs pool on the ranch became the centerpiece of a major stagecoach era resort and health center. This center later grew into the town of Paso Robles (Nicholson 1980).

FIELD METHODS

Prior to the field inspection, a record search was conducted at the Regional Archaeological Information Center (Dept. of Anthropology, U.C. Santa Barbara). This record review revealed that the parcel had not been the subject of an archaeological inspection in the past. The record search also indicated that no historic or prehistoric cultural resources had been recorded within 1 mile of the project area.

The fieldwork consisted of an intensive surface examination of all walkable portions of the property. This inspection was conducted by walking transects across the property at 10 meter intervals and inspecting the ground surface for evidence of historic or prehistoric cultural use.

To organize the inspection, the property was divided into 7 physiographic zones (A through G). Each zone was inspected as a unit. Although very similar overall, each zone had unique characteristics (see map on page 10 for zone boundaries).

Zone A

This zone was located at the southeastern corner of the property and consisted of a level to gently sloping recently harvested barley field. The ground surface was easily inspected with excellent soil visibility due to the recent plowing and harvesting. Two morning dove nests with eggs and young were encountered during the field inspection.

Zone B

This zone was situated immediately east of and on top of the bluff overlooking the Salinas River. Portions of this level area were under cultivation in corn and squash. The eastern edge of this zone contained a seasonal drainage, which had been converted into a small reservoir. This zone was also easy to inspect due to recent agricultural activities.

Zone C

This zone was located in the northeastern corner of the property and was very similar to

Zone A. It was mostly level and consisted of a recently harvested barley field. A small single family residence and associated out buildings was located in this zone. The structure was likely built in the 1930's. Excellent soil visibility throughout.

Zone D

This zone consisted of a gently rolling landscape surrounding a shallow drainage in the south-central part of the parcel midway between River Road and Buena Vista Drive. It included four small peaks, one of which contained a recent single-family residence. As with Zones A and C, this zone had been planted in barley and recently harvested. Excellent soil visibility throughout.

Zone E

This zone was located in the northwest part of the parcel and contained two deeply carved drainages. The immediate drainage areas were too steep to plant in barley and retained their original oak grassland character. Due to the lack of agricultural activity within the drainage areas, heavy grass cover obscured the ground surface in some areas. Rodent mounds were carefully examined and a trowel was used to clear to the mineral soil. Whenever possible, erosion banks and the root balls of downed trees were examined to see subsoils. Four horned owls were rousted from their roosts in the oak trees during the inspection.

Zone F

This zone was located in the north-central part of the parcel and was very similar to Zone D. This zone consisted of steep sided uplands surrounding a shallow seasonal drainage. This zone had also been planted in barley and recently harvested. Excellent soil visibility throughout.

Zone G

This zone included the Salinas River channel and immediate bank area. The narrow east bank of the river floodplain had been planted in barley and harvested providing excellent visibility. The rest of the zone consisted of the actual river channel, which was a hodge-podge of gravel bars riparian vegetation, and drainage channels. Although excellent ground visibility existed throughout the zone, the recent and continual scouring of the channel area would have obliterated traces of prehistoric and early historic cultural uses. One deer was encountered during the inspection of this area.


Zone G

STUDY RESULTS

Prehistoric Materials

Six isolated pieces of chipped Monterey chert were discovered during the field inspection. Although some may have been cultural in origin, none of the pieces could be positively identified as the result of prehistoric stone tool manufacturing. The amount of natural chert cobbles throughout the project area, coupled with years of plowing and disking could easily have created these chipped pieces.

These isolated materials are not considered significant cultural resources as defined by Title 14 of the Public Resources Code (Sec. 4852 b and c).

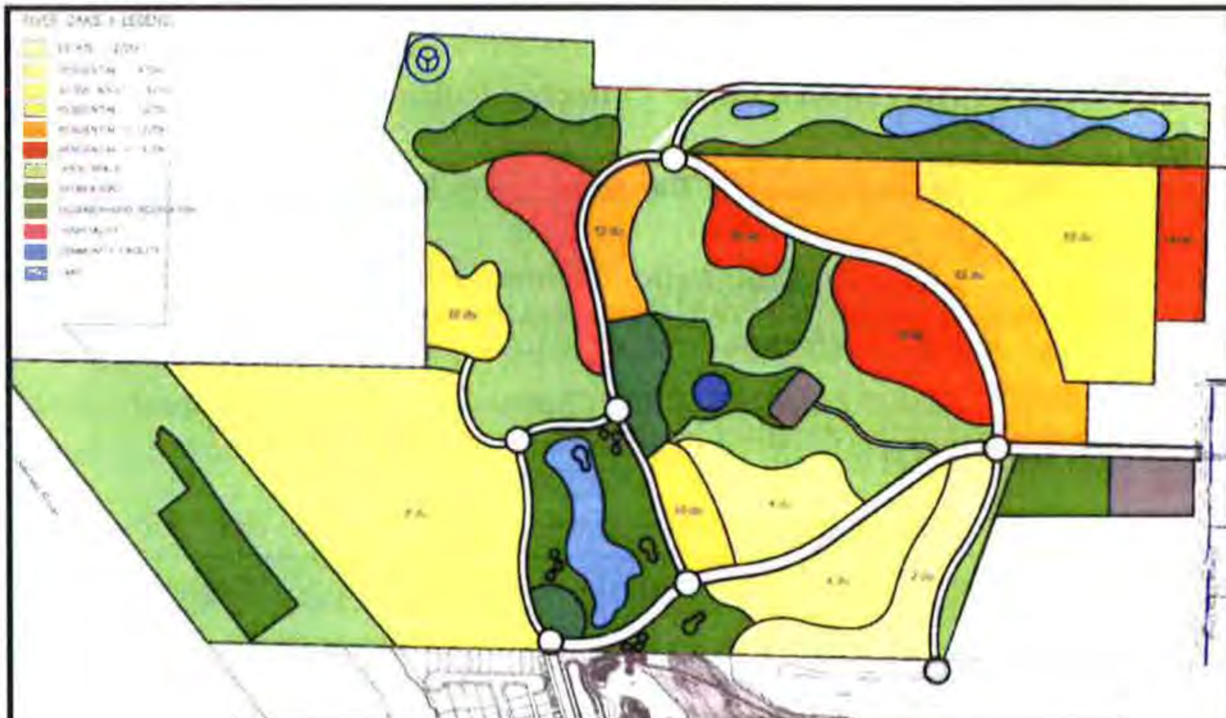
Historic Materials

Two cow skulls, a sheep skull and three pieces of historic glass indicate historic uses of the area. These isolated materials were randomly dispersed across the parcel. All broken glass pieces were


CANNING JAR FRAGMENTS

sun-altered purple indicating manufacture between 1880 and 1925 (Kendrick 1966). Two of the glass pieces represent the remains of canning jars and one was the base of a grape juice bottle.

These isolated historic materials are not considered significant cultural resources as defined by Title 14 of the Public Resources Code (Sec. 4852 b and c). However, they do indicate the general historic ranching use of the property.



Proposed Land Use within the Inspected Area

CONCLUSIONS AND RECOMMENDATIONS

No significant cultural resources were discovered during the field inspection or records search for this project.

It is therefore recommended that the proposed project be approved as planned. No further cultural resource work will be necessary.

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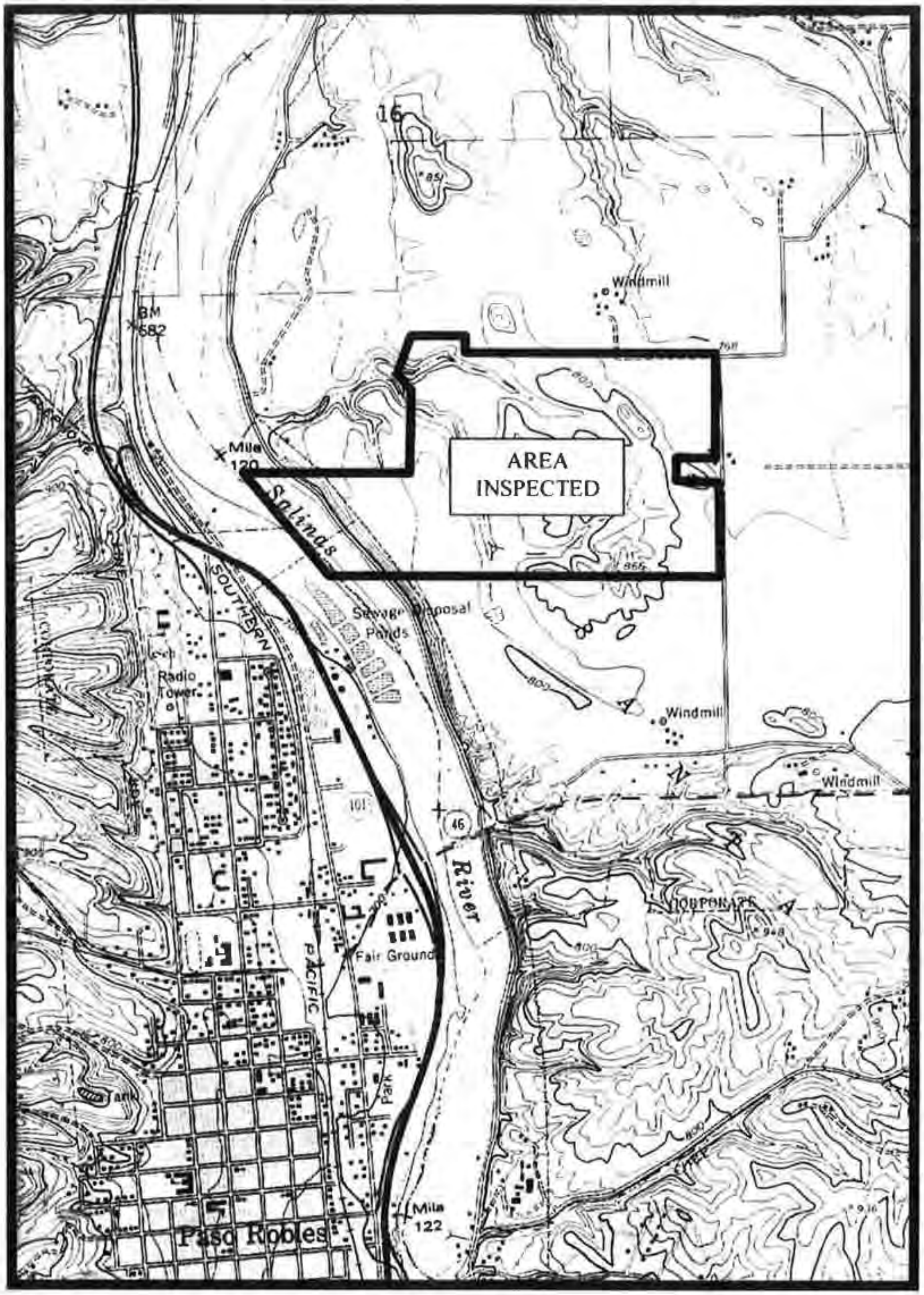
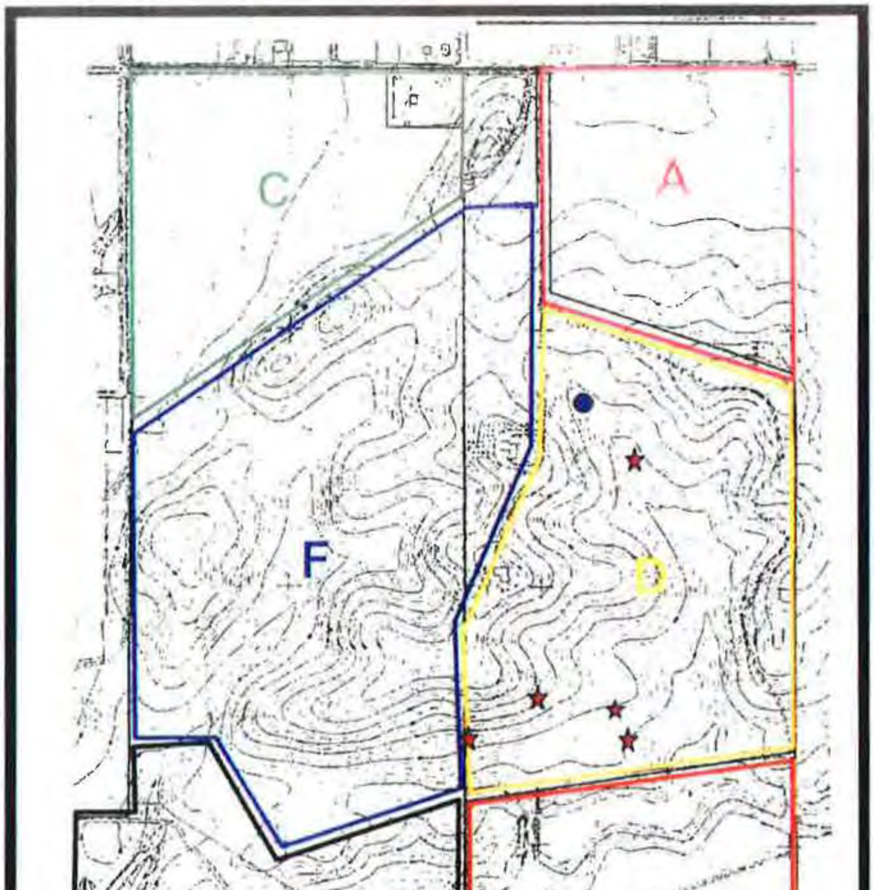
State of California
1990 *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format*, ***Preservation Planning Bulletin*** No. 4 (a), Office of Historic Preservation, Sacramento, CA.

GENERAL PROJECT LOCATION
PASO ROBLES 7.5' USGS QUAD



9

PARCEL INSPECTED AND MATERIALS FOUND



10

Attachment C

Letter from Northern Chumash Tribal Council

Northern Chumash Tribal Council

1177 Marsh Street, Suite 110
San Luis Obispo, California 93401
805-773-0806

City of Paso Robles City Council
City of El Paso De Robles
1000 Spring Street
Paso Robles, CA 93446

July 23, 2007

Re: Dick Willhoit - River Oaks II – Paso Robles- General Plan Amendment

Paso Robles City Council:

The Northern Chumash Tribal Council was contacted by Mr. Dick Willhoit for the purpose of reviewing a General Plan Amendment to the project and properties known as River Oaks II, located in the City of Paso Robles.

The Northern Chumash Tribal Council (NCTC) is a non-profit corporation organized under Senate Bill 18. NCTC is on the Native American Heritage Commission's list as the only State recognized Chumash Sovereign Nation located in San Luis Obispo County.

In following the guideline mandated under SB 18 Mr. Dick Willhoit asked the NCTC to review the archaeological survey done by archaeologist John Parker PhD. John Parker PhD. is in continuous contact with the NCTC on many projects and issues in San Luis Obispo County and is in good standing following all the archaeological guidelines mandated by the State of California.

Upon review of the archaeological report and after discussions with Dr. Parker we find that the River Oaks II project General Plan Amendment will have no Native American Cultural Resources impacts. NCTC additionally toured the project with Mr. Dick Willhoit and walk and talk about all aspect of the project, it is our finding that Mr. Dick Willhoit and the River Oaks II project planners have done a very good job in their design and planning.

The Chumash and Salinan people have live along the Salinas River for over 9,000 years, we walk and hunted over all the land near the Salinas River. The Salinas River was a vital resource for the Native American Community. Mr. Dick Willhoit has assured NCTC that if during construction any cultural resources are uncovered he will contact Dr. Parker and NCTC.

NCTC has no objection to a General Plan Amendment for the River Oaks II Project.

Thank you,
Fred Collins
NCTC Tribal Administrator

Please send donations made payable to: Northern Chumash Tribal Council, Inc., A Non-Profit Corporation
Visit our Website at: http://northernchumash.org/

CAP Consistency Worksheet

The City of Paso Robles CAP was developed to comprehensively analyze and mitigate the significant effects of GHG emissions consistent with CEQA Guidelines Section 15183.5(b) and to support the State's efforts to reduce GHG emissions under Executive Order S-3-05 and AB 32 (see CAP Chapter 1, Sections 1.1 and 1.4). Pursuant to CEQA Guidelines Sections 15064(h)(3) and 15130(d), if a project is consistent and complies with the requirements of an adopted plan, such as a CAP, that includes the attributes specified in CEQA Guidelines Section 15183.5(h), the lead agency may determine that the project's GHG impacts are less than significant with no further analysis required. This appendix sets forth a CAP consistency worksheet that an applicant may use to demonstrate project compliance with the CAP. This checklist should be filled out for each new project, subject to discretionary review of the City of Paso Robles.

To determine project consistency and compliance with the CAP, the applicant should complete Sections A and B below, providing project-level details in the space provided. Generally, only projects that are consistent with the General Plan land use designations, and SLOCOG population and employment projections, upon which the GHG emissions modeling and CAP is based, can apply for a determination of consistency with the CAP. In addition, all mandatory actions identified in Section B must be incorporated as binding and enforceable components of the project for it to be found consistent with the CAP. If an action is not applicable to the proposed project, please identify and explain.

At this time, the voluntary actions are not required for project consistency with the CAP; however, if a project does include voluntary actions identified in Section B, project-level details should be described to help the City track implementation of voluntary CAP actions that would contribute to Paso Robles's achievement of its GHG emissions reduction target.

If the project cannot meet one or more of the mandatory actions, substitutions (preferably starting with the voluntary actions) may be allowed if the applicant can demonstrate how substituted actions would achieve equivalent reductions to the City's satisfaction. The applicant would also be required to demonstrate that the project would not substantially interfere with implementation of the mandatory CAP actions.

If it is determined that a proposed project is not consistent with the CAP, further analysis would be required and the applicant would be required to demonstrate that the proposed project's GHG emissions fall below the APCD's adopted GHG significance thresholds (see CAP Chapter 1, Section 1.8.3, and **Table 1-2**). The project would also be required to demonstrate that it would not substantially interfere with implementation of the CAP.

A. PROJECT INFORMATION

Date:	
Project Name:	
Project Address:	
Project Type:	
Project Size:	
Land Use Designation(s):	
Zoning Designation(s):	
Project Service Population (Residents + Employees):	
Brief Project Description:	
Compliance Checklist Prepared By:	

B. CAP Compliance Worksheet

Measure	Project Actions	Mandatory or Voluntary	Project Compliance (Yes/No/NA)	Details of Compliance*
Energy				
Measure E-4: Incentives for Exceeding Title 24 Energy Efficiency Building Standards	Does the project exceed 2013 Title 24 Building Energy Efficiency Standards?	Voluntary		
Measure E-5: Energy Efficient Public Realm Lighting Requirements	Does the project utilize high efficiency lights in parking lots, streets, and other public areas?	Mandatory		
Measure E-6: Small-Scale On-Site Solar PV Incentive Program	Does the project include installation of small-scale on-site solar PV systems and/or solar hot water heaters? If so, what type and how much renewable energy would be generated?	Voluntary		
Measure E-7: Income-Qualified Solar PV Program	Does the project include installation of small-scale on-site solar PV systems and/or solar hot water heaters on income-qualified housing units? If so, what type and how much renewable energy would be generated?	Voluntary		
Transportation and Land Use				
Measure TL-1: Bicycle Network	For subdivisions and large developments, does the project incorporate bicycle lanes, routes, and/or shared-use paths into street systems to provide a continuous network of routes, facilitated with	Mandatory		

Measure	Project Actions	Mandatory or Voluntary	Project Compliance (Yes/No/NA)	Details of Compliance*
Measure TL-3: Expand Transit Network	Does the project provide safe and convenient access to public transit within and/or contiguous to the project area?	Mandatory		
Measure TL-6: Parking Supply Management	Does the project include a reduced number of parking spaces or utilize shared parking?	Voluntary		
Measure TL-7: Electric Vehicle Network and Alternative Fueling Stations	Does the project include the installation of electric or other alternative fueling stations?	Voluntary		
Measure TL-8: Infill Development	Is the project consistent with the City's land use and zoning code?	Mandatory		
	Does the project include any "smart growth" techniques, such as mixed-use, higher density, and/or infill development near existing or planned transit routes, in existing community centers/downtowns, and/or in other designated areas?	Voluntary		
Off-Road				
Measure O-1: Equipment Upgrades, Retrofits, and Replacements	If the project involves construction or demolition, does equipment utilize low- or zero-emissions vehicles or equipment?	Voluntary		
Water				
Measure W-1: Exceed SB X7-7 (Water Conservation Act of 2009), Water Conservation Target	Does the project meet CALGreen Tier 1 or Tier 2 standards for water efficiency and conservation?	Mandatory		
	Does the project incorporate grey	Voluntary		

Attachment 16
Phase I - ESA

Refer to City Website - www.prcity.com
for complete report

PRELIMINARY SOILS ENGINEERING REPORT
HOT SPRINGS MASTER PLAN
A PLANNED COMMUNITY DEVELOPMENT
APNS: 025-390-002, -003, -006, -007, AND -008
EAST OF BUENA VISTA DRIVE
CITY OF EL PASO DE ROBLES, CALIFORNIA

PROJECT SL05322-2

Prepared for

Estrella Associates, Inc.
Attn: Dick Willhoit
2727 Buena Vista Drive
Paso Robles, California 93446

Prepared by

GEOSOLUTIONS, INC.
220 HIGH STREET
SAN LUIS OBISPO, CALIFORNIA 93401
(805) 543-8539

June 2, 2006

Attachment 17

WATER SUPPLY EVALUATION

PASO ROBLES RIVER OAKS II EXPANSION

FINAL PUBLIC REVIEW DRAFT

March 9, 2016

TODD GROUNDWATER

2490 Mariner Square Loop, Suite 215
Alameda, CA 94501
510.747.6920
www.toddgroundwater.com

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1. INTRODUCTION

This Water Supply Evaluation (WSE) was prepared for the Paso Robles River Oaks II Expansion Project (Project) located in Paso Robles north of Highway 46 and east of Highway 101 and the Salinas River in the southern portion of Subarea A of the Borkey Area Specific Plan area (**Figure 1**). The Project is proposed by Estrella Associates, Inc., developers of the existing River Oaks residential neighborhoods that lie to the south (River Oaks I). The Project will require a General Plan Amendment and a Borkey Area Specific Plan Amendment to re-designate the land use category and rezone the property from Agriculture to planned single-family residential.

Currently, the Project site consists of a spa facility, outdoor pavilion, amphitheater, a 3.9-acre reservoir/lake that discharges to the Salinas River, and vacant land. The proposed Project encompasses nearly 130 acres and will consist of 271 homes, of which 127 will be single family homes and 144 will be deed restricted single family homes on smaller lots for adults at least 55 years old. In addition, the existing River Oaks Hot Springs Spa (Spa) is proposed to be expanded to include a fitness and wellness center, tennis courts, swimming pools, and an improved community center.

Potable water supplied by the City to the site now is approximately 18 acre-feet per year (AFY), and is expected to increase to 132 AFY when fully developed.

Residential land lies to the south and agricultural land lies to the north. Highway 101 and the Salinas River are to the west. To the east lie rural residential and agricultural lands. Currently, the existing River Oaks Hot Springs Spa and surrounding facilities receive City-supplied potable water and water from a well located along the Salinas River. Additionally, two deeper geothermal wells on the Project site supply water to the Spa's hot tubs. The proposed Project water supply will include City-supplied potable water, City-supplied recycled water (when it becomes available), and water from River Oaks' private wells (two onsite geothermal wells). A River Oaks well along the Salinas River will supply irrigation water until recycled water becomes available. The City will provide wastewater collection.

The City of Paso Robles has adopted an Urban Water Management Plan (UWMP) that details City water supplies and demands to the year 2035 (Todd, 2011). This version of the Paso Robles River Oaks II Expansion Project was not specifically included in the UWMP but prior development planning for the site was included; the annual water use set aside for the previous version (a resort) was 64 AFY (Alakel, 2010).

This WSE was prepared in accordance with the City's Rules and Regulations for implementing projects subject to the California Environmental Quality Act (CEQA). The primary purpose of this WSE is to provide an independent evaluation of the Project's water needs and impacts on City water supplies. It documents Project water demand and available water supply, and determines if there is sufficient water supply to meet future water demands within the Project area and within the City's water supply service area under normal and dry hydrologic conditions to 2040.

1.1. PROPOSED PROJECT

The proposed Project includes single family homes; a spa expansion that includes a fitness and wellness center, tennis courts, two swimming pools, and an improved community center; and open space. **Figure 2** is a conceptual plan for the Project.

The proposed residential portion of the development consists of the following:

- 127 single family homes on 15,000 to 20,000 square foot (sf) lots
- 144 residential senior homes on 8,000 to 10,000 sf lots.

The Spa expansion will include:

- a fitness and wellness center
- tennis courts
- warm mineral pool
- fresh water swimming pool
- community center (existing open air pavilion will be enclosed)
- community garden, and
- walking trails.

Acreages and water supply sources for Project components are listed in **Table 1**.

1.2. BACKGROUND

The City of Paso Robles requires that certain CEQA documents (e.g., Mitigated Negative Declaration) be informed by an independent evaluation of the project's water supply needs and impacts on the City's water supply as set forth in the current UWMP. This requirement applies to all general plan amendments that propose an increase in residential, commercial, and/or industrial intensity and all annexations that have not been approved by the City Council as of January 1, 2014. Each independent evaluation is to be prepared by a consultant of the City's choice based on demonstrated competence in water supply evaluation and familiarity with the UWMP. The City will determine the scope of work for said evaluation, which may include elements specified in California Water Code Sections 10910 et seq.

The California Water Code Section 10910 (also termed Senate Bill 610 or SB610) requires that a Water Supply Assessment be prepared for a project that is subject to CEQA and is considered a project subject to SB610 as defined in Water Code Section 10912. The River Oaks II Project is subject to CEQA, but is not subject to SB610 according to Water Code Section 10912. Therefore, this Paso Robles River Oaks II Project water supply analysis (required under the City's CEQA rules and regulations) is a water supply *evaluation* (WSE) rather than a water supply *assessment*. While a WSE may not be subject to all the requirements of SB610, the City has requested that this WSE provide information consistent with requirements of SB610.

Under SB610, documentation of water supply sources, quantification of water demands, evaluation of drought impacts, and provision of a comparison of water supply and demand are required to form the basis for an assessment of water supply sufficiency. This WSE follows the guidelines set out in the Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 and subsequent clarification posted on the California Department of Water Resources website (CDWR, 2013).

A foundational document for preparation of a Water Supply Assessment or a WSE is an UWMP; the City has prepared and adopted a 2010 UWMP (Todd, 2011) in compliance with the Water Code. This includes compliance with the Water Conservation Act of 2009, also known as Senate Bill 7, which provides the regulatory framework for a statewide 20 percent reduction in urban per capita water demand by 2020. The 2010 UWMP included projected increases in water demand of both residential and non-residential land uses located within the City limits; this report discusses these projections and the cumulative water demand increases to date. This Project is inside City limits and included in the 2010 UWMP. The City requires that any project subject to CEQA and requiring a General Plan Amendment for increased residential, commercial, or industrial intensity complete a Water Supply Assessment (if required under Water Codes Sections 10910 and 10912) or a WSE to analyze potential impacts of any new water use on a case-by-case cumulative basis.

The City's adopted 2010 UWMP included an estimated potable water demand for this Project site totaling 64 AFY[1]. That means that City water planning to date accounts for that level of water demand.

In order to enhance overall water supply reliability, new development—per City policy—is required to be served with surface and recycled water through the City's blended municipal water resources. Consequently, recycled water use is incorporated into the Project when appropriate.

1.3. WSE Purpose and Organization

The purpose of this WSE is to document the City's existing and future water supplies for its service area and to compare them to the area's future water demand, including that of the proposed Project. This comparison, conducted for both normal and drought conditions in five-year increments to 2040, is the basis for an assessment of water supply sufficiency in accordance with California Water Code Section 10910 (SB610).

The WSE incorporates current and future water supply and demand information from the City's 2010 UWMP, available City and County documents regarding water supplies

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[1] In this evaluation, water demand values may be shown to the tenth or hundredth place. As a result, numbers may appear to be accurate to four or five digits, which is not the case. Estimated values (e.g., water demand) are probably accurate to one or two significant digits. In the text and tables, digits are retained to minimize rounding errors, preserve correct totals in tables, and to maintain as much accuracy as possible in subsequent computations.

(groundwater, Nacimiento supply, recycled water), current water use, and estimated water use of the Project and other approved and proposed projects. The analysis extends to 2040, addresses water demands in five-year increments, and provides information consistent with SB610 WSA requirements.

2. PROJECT WATER DEMAND

This section addresses water demands for the existing property and presents water demand estimates for the proposed development.

2.1. CURRENT PROJECT WATER USE

Currently, the Project site consists of a spa facility, outdoor pavilion, amphitheater, a 3.9-acre reservoir/lake that discharges to the Salinas River, and vacant land. River Oaks Well #4 and two deeper geothermal wells (Wells #2 and #3) provide water to the spa facility and surrounding area. Well #4 is south of the Project site along the Salinas River on land Estrella deeded to the City but Estrella has access to the wells through easements (Fugro, 2009). River Oaks Well #7 is adjacent to Well #4 and supplies water to the River Oaks Golf Course. The geothermal wells are located on the Project site (**Figure 2**). Current water use is summarized in **Table 2**. Existing potable water demand at the Project site is approximately 18 AFY.

2.2. PROPOSED PROJECT WATER DEMAND

The Project is planned to be built in phases over a six to eight year time period (Estrella, 2013). Full buildout water use conditions are documented in this WSE. The Project will use City-supplied water, water from private wells and recycled water, when it becomes available between 2020 and 2025. **Table 3** presents the buildout water use for the various Project components. Also included in the table are water sources for each of the Project components and the water use rates used to develop these estimates.

Residential Water Demands. The residential units will be supplied with City water at an estimated rate of 0.5 AFY for the single family homes on larger lots and 0.29 AFY for homes on smaller lots (Rickenbach, 2013). The total buildout residential water use is estimated at 105 AFY plus 8 AFY of non-revenue water (also called unaccounted-for losses) (add values in rows 1 and 2 in **Table 3**).

These residential demand estimates are reasonable. The 0.5 AFY and 0.29 AFY water use rates are based on single family and multifamily use projections in the City's 2010 UWMP[2]. Furthermore, these rates are similar to average water use in a similar development to the south where large lots use 0.49 AFY and small lots use 0.25 AFY[3].

[2] These rates can be compared to actual average single family home usage in the City for select years: 0.47 AFY (2005), 0.40 AFY (2010, 2012 and 2013), and 0.36 AFY (2014). Water use restrictions in the City have reduced average usage since 2009.

[3] 0.49 AFY is 2010-2015 average of select Experimental Station and Vineyard Circle Lots which are representative of large lots (0.35 acre/lot). 0.25 AFY is 2010-2015 average of Traditions Residential demand including irrigation of front yards and common turf areas. The number has been prorated for small lot size 0.20 acre/lot (from 0.29 acre/lot @ 0.37 AFY).

Recycled Water Demands. Landscape irrigation demand will be supplied by recycled water when is becomes available between 2020 and 2025 (rows 3 through 5, 7 and 8 in **Table 3**). Prior to that, water from River Oaks Well #4 will supply this irrigation water.

Spa Expansion and Surrounding Area Water Demands. City-supplied potable water will provide indoor water use and other Spa expansion and community facilities components (rows 6 and 7 in **Table 3**). Estrella estimates that City-supplied water use for the expanded Spa and community facilities will remain similar to existing amounts. Geothermal water from two onsite wells will supply the hot tubs and geothermal swimming pool (row 6 in **Table 3**). Geothermal water use will increase from 11 AFY to 30 to 40 AFY. Until recycled water becomes available, private well water would continue to be used for turf irrigation and the Lake (row 7 in **Table 3**) reportedly at the same rate as current conditions.

Once completed, the Project will need about 132 AFY of City-supplied potable water; 32.30 AFY of City-supplied recycled water; 334 AFY will be from River Oaks Well #4, and 30-40 AFY will be from the two geothermal wells (River Oaks Wells #2 and #3).

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3. CITY OF PASO ROBLES WATER DEMAND

This section summarizes the current and projected water demands for the City of Paso Robles. The subsections below describe the factors affecting total water demand, including climate and population, normal climatic conditions and droughts.

3.1. CLIMATE

Climate has a significant influence on water demand on a seasonal and annual basis. This influence increases with the portion of water demand for outside uses, specifically landscape irrigation.

Table 4 summarizes representative climate data for the Paso Robles area, including average monthly and annual rainfall, temperature, and evapotranspiration (ETo). The area has a Mediterranean climate, with moderate temperatures year-round, dry summers and wetter winters. Most of the rainfall occurs between November and April. **Figure 3** shows annual rainfall for the 1931 to 2014 period with average annual rainfall at 14.01 inches.

Climate change affects global and local climate patterns. Potential climate changes in Paso Robles by the end of this century include:

- Increased temperatures
- Changed precipitation rates
- Increased frequency and severity of storm events
- Increased burn area from wildfires (Rincon, 2013).

Climate change may affect future water supply availability by increasing temperature resulting in more demand for irrigation and greater evaporation of Lake Nacimiento water. Effects on the water system of increased irrigation demand can be minimized through water conservation measures and provision of recycled water. Full subscription is underway for Nacimiento Water Project water, resulting in a diversified water supply portfolio that increases overall City water supply reliability.

3.2. POPULATION

Paso Robles' current and projected population is shown in **Table 5**. The City's population in 2025, based upon the City's 2003 General Plan Amendment 2005-001–Resolution 05-249, is consistent with the City's 2010 UWMP (Todd, 2011) and the General Plan population threshold of 44,000 residents. However, it is recognized that with current growth rates it is likely that the build out population of 44,000 will not be reached by 2025 and may extend past 2040.

3.3. CURRENT WATER USE SECTORS AND WATER DEMAND

Tables 6 and **7** depict past and current water connections and water demand for the Paso Robles service area by water use sectors for the calendar years 2005, 2010, and 2012 to 2014. Since the summer of 2009, in response to drought and summer water production shortfalls, City-mandated outdoor water use restrictions and other conservation programs have resulted in reduced water use. These restrictions have been successful in reducing peak demand and have enabled the City to maintain adequate reservoir storage levels for emergency and reserve uses. In 2014, the City supplied 6,269 AF of potable water citywide. This is well below prior years and is within the water conservation target threshold identified in Senate Bill 7.

City water use restrictions will likely remain in effect until current State mandated water use reductions are lifted and rainfall returns to normal or above levels and/or when deliveries of additional supply (Nacimiento Water) increase.

3.4. PROJECTED WATER DEMAND

The projected number of water service connections for water use sectors are shown in **Table 6** in five-year intervals between 2015 and 2040. These projections are based on the City's current General Plan and 2010 UWMP and assume a population threshold of 44,000 by 2025. **Table 7** provides projections for customer deliveries for the same time intervals. For City planning purposes, the top portion of **Table 7** presents projected deliveries based on baseline water usage rates prior to potential conservation and recycling savings.

The *Potential Conservation and Recycling* row in **Table 7** represents the potential conservation and recycled water required to comply with the Senate Bill 7 goal of 20 percent reduction of per capita baseline water use by 2020. Baseline per capita water use is 241 gallons per capita per day (gpcd) (Todd, 2011). Target water use in 2020 is required to be 80 percent of baseline gpcd, which equates to 193 gpcd. In 2014, actual per capita water use was 182 gpcd.

These water use projections were based on the 2010 UWMP (Todd, 2011) where the sector-specific water demands projected for 2025 are based on potential use of all land use categories. By 2025, the Paso Robles service area is projected to have a build out water use of 13,400 AFY if historic use patterns were to prevail. To achieve the State-mandated target of a 20 percent reduction by 2020, water use will need to be reduced to 9,515 AFY, or 193 gpcd.

The timing of future water demand is dependent on customer usage, success in sustained water conservation, approval and construction of prospective projects, market forces and other factors. **Table 8** lists major projects that are under construction, possess active permits, or have applied for permits. Water use for the projects has been estimated in the table and summed at the bottom for a total of 577 AFY. Many factors may influence the timing of construction and operation of the noted projects. Nonetheless, addition of the **Table 8** projected water use of 577 AFY to the City's 2014 water use of 6,269 AFY results in 6,846 AFY. This is below the estimated 2015 water use of 8,550 AFY (baseline) and 7,570 AFY (20 percent reduction target), indicating that the City is within the 2010 UWMP water planning horizon for the near future.

4. WATER SUPPLY

The City of Paso Robles has historically relied on the Paso Robles Groundwater Basin and the Salinas River underflow for its municipal water supply. This has been supplemented in recent years with imported water from Lake Nacimiento[5] and recycled water is planned for the future. **Table 9** lists the City's current and planned water supply sources. This section describes the water supplies available to the City.

4.1. PASO ROBLES GROUNDWATER BASIN

Figure 1 shows the boundaries of the Paso Robles Groundwater Basin, which encompasses about 790 square miles in San Luis Obispo County and southern Monterey County. The Paso Robles Groundwater Basin (DWR Basin No. 3-4.06) is the water-bearing portion of the upper Salinas River drainage area. The Salinas River system drains the basin area and surrounding uplands, and flows north along the western edge of the drainage area.

4.1.1. Geology

The major aquifers (or water-bearing units) in the basin include alluvial deposits and the Paso Robles Formation. The alluvial deposits are up to 100 feet in depth and include recent stream-laid sands and gravels along the floodplains of the Salinas River and its tributaries, and older finer-grained terrace deposits along the Salinas River and Estrella River. Wells in alluvium typically produce in excess of 1,000 gallons per minute (gpm) (Fugro, 2002).

The Paso Robles Formation is the most extensive aquifer and consists of sedimentary layers extending from the surface to depths of more than 2,000 feet. It is typically unconsolidated and generally poorly sorted. The water bearing sediments in the basin are 700 to 1,200 feet thick and typically extend to sea level. Paso Robles Formation sediments are relatively thin, often discontinuous sand and gravel layers interbedded with thick layers of silt and clay. Wells generally produce several hundred gpm (Fugro, 2002).

4.1.2. Groundwater Quality

A general measure of groundwater quality is total dissolved solids (TDS). For drinking water purposes, water with a TDS concentration of 500 milligrams per liter (mg/L) or less is recommended, but can be usable up to 1,000 mg/L. In Paso Robles Groundwater Basin wells, TDS concentrations generally range from 300 to 1,000 mg/L (Fugro, 2002 and 2005). Wells screened along the Salinas River in the recent alluvium generally have TDS concentrations between 300 and 800 mg/L, reflecting the quality of stream recharge water.

A survey of local groundwater quality was conducted by the United States Geological Survey (USGS) as part of its Groundwater Ambient Monitoring and Assessment (GAMA) Program

[5] Since the summer of 2013, the City has been using some Lake Nacimiento water to recharge its Salinas River well field in response to drought. In late 2015, the City's NWP water treatment plant came online to supply treated NWP water to the City.

(USGS, 2007). The USGS sampled eleven randomly-selected wells located along the major river valleys, including four in or near the City. While trace amounts of pesticides, arsenic, and boron were reported, no constituents of concern were detected above regulatory thresholds.

In general, City water quality is good, but has relatively high TDS and hardness. In response to the hardness, many residents use home water softeners. However, use of water softeners results in addition of salts to the City's wastewater, which is treated and discharged to the groundwater basin. This situation should be improved in the future with the introduction of Lake Nacimiento water. Lake Nacimiento water is lower in hardness and TDS than groundwater, and obviates the need for water softeners. If citizens reduce or eliminate the use of water softeners, they will not only enjoy cost savings, but will also help preserve the quality of local groundwater and advance the use of recycled water for irrigation.

4.1.3. Groundwater Levels and Flow

Groundwater levels in the Paso Robles Groundwater Basin range between above 1,500 feet above mean sea level (msl) around the basin margins to below 600 feet msl in the Estrella subarea and along the Salinas River north of the City (Todd, 2007 and GEI, 2011). Groundwater depths range from less than 20 feet below ground surface near the Salinas River to over 300 feet below ground surface. Groundwater flows generally from the margins toward the center of the basin and to the northwest, where the outlet to the lower Salinas Valley is located. Review of regional maps indicates that groundwater flow beneath the Project site is generally to the northwest (GEI, 2011 and Fugro, 2005).

4.1.4. City Wells

The City has 7 river wells, 12 basin wells, and 1 Nacimiento water recovery well (**Figure 4**). With regard to river wells, the City's Thunderbird well field is located near the Salinas River. The wells range in depth from 140 to 215 feet, are screened mostly in the alluvium, and yield underflow from the Salinas River. Water levels have remained generally constant, at about 20 to 40 feet below ground surface. The City's Ronconi Wells 1 and 4 are also located near the Salinas River. These wells are 76 and 70 feet deep, respectively, and yield underflow from the Salinas River. Water levels typically are about 15 feet below ground surface. The Borcherdt well, also classified as a river well but more distant from the main stem, typically has water levels about 50 to 65 feet below ground surface. This well has not been pumped in the last few years.

The 12 City basin wells are dispersed across the City east of the Salinas River. All are screened in the Paso Robles Formation as are the many nearby rural residential and agricultural wells surrounding the City. A groundwater depression is centered in the Estrella subarea, reflecting agricultural, golf course, municipal, rural and other pumping. This pumping depression is characterized by declining groundwater levels, which are also apparent in City wells which in some cases have declined more than 100 feet since 1997, with recent annual rates of decline generally between 5 to 9 feet per year. Water level declines are expected to continue into the near future unless overall pumping in the Estrella subarea across water use sectors is reduced or supplemental recharge is achieved.

The Nacimiento recovery well was recently installed in the Thunderbird well field to recover percolated Nacimiento water (not native river underflow) in both dry and normal years. This additional well allows for increased use of Nacimiento water that is discharged and infiltrated into the Salinas River channel adjacent to the well field.

Annual pumping totals for basin and river wells between 2005 and 2014 are shown in **Table 11**. Because of the mandatory water use restrictions and successful conservation, water use since 2009 has been reduced. Future pumping in five-year increments is shown in **Table 12**. The City does not plan to increase basin pumping from historical highs of around 4,000 AFY to support additional growth. New development will be served with Lake Nacimiento water and recycled water.

4.1.5. Local Wells

Fugro (April, 2009) conducted a wellfield assessment for Estrella, the Project applicant, for wells associated with the River Oaks properties. Ten wells within the Project vicinity were identified (see **Figure 2**). Two of these wells pump shallow groundwater (Wells #4 and #7) and lie south of the River Oaks II property near River Road on the eastern bank of the Salinas River. Well #4 currently supplies the River Oaks II property, is 76 feet deep and is screened between depths of 15 and 55 feet. Well #4 pumped 334 AFY in 2012 (Rickenback, 2015). Well #7 is 25 feet south of Well #4 and supplies water to the River Oaks Golf Course which is south of the Project site. It is 57 feet deep and screened between depths of 17 and 57 feet.

Two basin wells (Wells #1 and #5) exist on the northern portion of the River Oaks II site (Well #1) or to the north (Well #5). Both wells were installed in 1989 to depths of 500 feet. As of 2009, Well #1 had likely been used little and Well #5 had no pump and likely never used (Fugro, 2009). Three College Station wells to the east of the Project are also screened in the Paso Robles Formation. Limited data indicate that two of these wells are 6 inches in diameter and one is 362 feet deep (Fugro, 2009). None of these basin wells are intended to provide water supply to the Project.

For the purposes of the WSE, it is understood that Well #4 is most likely to be pumped to provide nonpotable irrigation water supply for the Project until recycled water becomes available. Accordingly, its average annual pumping would increase from 334 AFY in 2012 to 366 AFY and then back 334 AFY when recycled water becomes available between 2020 and 2025 (see **Table 3**). It is reasonable to presume that Well #4 (or a replacement) can accommodate this temporary increase.

Two geothermal wells (Wells #2 and #3) are on the River Oaks II site and supply the Spa hot tubs. Both wells are 960 feet deep. Well #6 to the north also is most likely a geothermal well. It is 831 feet deep and has been historically used to supply a nearby hot springs with water temperatures above 90° F. These geothermal wells probably produce water from the Pancho Rico Formation below the Paso Robles Formation (Fugro, April 2009). These two geothermal wells (Wells #2 and #3) currently supply and are expected to continue to supply the Spa. Current pumping is estimated at 11.2 AFY and future planned pumping is estimated between 30 and 40 AFY. The capability of these two wells to produce at the future rates has not been documented. If the two wells cannot provide adequate supply, additional deep geothermal wells would be needed.

Use of these private wells is subject to the recently passed City's Private Water Well Ordinance (Ordinance No. 1021 N.S.) which has permit requirements for the development and use of private wells, policies for switching over to recycled water use, and requirements to follow the City's Water Conservation and Water Shortage Contingency Plan program. Section 4.1.11 provides further detail on the Private Well Ordinance.

4.1.6. Groundwater Balance and Perennial Yield

Local water users have recognized the seriousness of local groundwater declines and have sponsored investigations to understand the groundwater basin and lay the groundwork for improved management. Specifically, a series of recent studies have addressed the water balance of the Paso Robles Basin and its perennial yield. The *Paso Robles Groundwater Basin Study* (Fugro, 2002) included basic data compilation and review, definition of the basin and subareas, aquifer characterization, assessment of water quality conditions, and a water balance study as of 1997. The *Phase II Numerical Model Development* report (Fugro, 2005) involved development of a groundwater flow model of the basin and summarized its development, calibration, and application to specific issues. Objectives included refining the basin's water balance and perennial yield, and simulating impacts to groundwater levels resulting from projected build out conditions in the basin. Important conclusions included estimation of the perennial yield for the Paso Robles Groundwater Basin at 97,700 AFY with basin pumping in 2000 estimated at 82,600 AF. By comparison, City deep well pumping in 2014 was approximately 3,500 AFY.

The *Paso Robles Groundwater Basin Study* documented groundwater level conditions up to 1997. Subsequently, the City and County sponsored a series of studies to provide updates on groundwater level conditions and the water balance (e.g., Todd, 2007; Todd, 2009; Fugro, 2010; and Yates, 2010). The County and basin stakeholders subsequently cooperated in the development of the 2011 Groundwater Management Plan, which presents basin management objectives and actions to fulfill those objectives, foremost of which is stabilization of groundwater levels. The Groundwater Basin Model and perennial yield estimate were updated with the current perennial yield estimated at 90,215 AFY (Geoscience, 2015).

The City of Paso Robles' planned recycled water program and additional entitlement for the Nacimiento Water Project (i.e., "full subscription") are positive steps that the City is taking to deliver in lieu supplies to areas of concern.

4.1.7. Groundwater Basin Monitoring and Management

The City recognizes that groundwater level declines are continuing locally, most notably in the Estrella subarea, which provides a portion of the City's groundwater supply as well as supply for farmers, domestic users, and other communities. Accordingly, the City participates actively in groundwater basin monitoring and management planning and activities, in cooperation with San Luis Obispo County and other water users. A Groundwater Management Plan (GWMP) was completed in March 2011 (GEI, 2011).

The City also has taken direct supplemental water actions. Those actions include construction of a water treatment plant enabling direct delivery of treated Nacimiento Water to customers, joining in full subscription of the Nacimiento Project thereby securing more entitlement for the City, and embarking on the recycled water program. The City's policy is to support additional growth with Nacimiento Project water and recycled water.

4.1.8. County Resource Management System (RMS) and Resource Conservation Study (RCS)

The San Luis Obispo County Planning and Building Department is responsible for the County Resource Management System, which provides information to the County Board of Supervisors to guide decisions about balancing land development with needed resources (e.g., water, schools, and roads). Under the Resource Management System, County staff collects available information, identifies resource problems, and recommends solutions to 1) expand the resource, 2) conserve the resource, or restrict/redirect development.

Findings under the County's Resource Management System led to the Paso Robles Groundwater Basin Urgency Ordinance, which was effective August 27, 2013 through August 27, 2015. The ordinance, with some exceptions, applied to unincorporated portions of the Paso Robles Groundwater Basin and prohibited new or expanded irrigated crop production and new development dependent on a well in the Basin. It provided some exemptions, specified some activities that were not subject to the ordinance, and allowed 1:1 offsets.

On October 27, 2015 the County Board of Supervisors adopted the Countywide Water Conservation Program. The amendments became effective November 26, 2015 and include:

- Water waste prevention measures apply to all unincorporated areas where a similar program is not already operated by a water purveyor
- Agricultural best management practices are encouraged in all unincorporated areas
- New buildings and new irrigated agriculture must offset new water use in the Paso Robles Groundwater Basin
- New buildings must offset new water use in the Nipomo Mesa Water Conservation Area.

These amendments focus on halting the increase in groundwater pumping throughout the Paso Robles Groundwater Basin and other critical areas in the County; they allow new development and new or altered irrigated agriculture only when demonstrated to fully offset water use.

4.1.9. Sustainable Groundwater Management Act

In September 2014, Governor Brown signed three legislative bills (AB 1739, SB 1168, and SB1319) that together are known as the Sustainable Groundwater Management Act. The legislation provides a framework for sustainable management of groundwater resources by local agencies, defined as a local public agency with water supply, water management, or land use responsibilities within a groundwater basin.

The legislation lays out a process and timeline for local agencies to achieve sustainability, including:

- Local agencies must form local Groundwater Sustainability Agencies (GSAs) within two years (i.e., 2017);
- Local agencies in basins deemed medium- and high-priority must prepare groundwater sustainability plans (GSPs) within five to seven years (2020 or 2022 depending on the overdraft status of the basin); and
- When plans are in place, local agencies must implement the GSPs and achieve sustainability within 20 years.

The Sustainable Groundwater Management Act is directed at groundwater basins or subbasins that have been designated by the State Department of Water Resources as medium- or high-priority through the California Statewide Groundwater Elevation Monitoring program. The Paso Robles Groundwater Basin was assigned a high priority; moreover, it has been designated as critically overdrafted, and thus is subject to the accelerated timeline.

The legislation also provides local agencies with the tools to achieve sustainability, including specific authorities and procedures. Among other powers, local agencies may:

- Conduct investigations to carry out the requirements of the Act;
- Require registration of wells and measurement of extractions;
- Require annual extraction reports;
- Impose well spacing requirements and limits on extractions from individual groundwater wells; and
- Assess fees to implement local groundwater management plans.

The County, City of Paso Robles and other agencies in the Paso Robles Groundwater Basin are moving forward with planning the formation of a Groundwater Sustainability Agency for the Paso Robles Groundwater Basin. In November 2015 the County Board of Supervisors called for an election by landowners to approve the formation of a proposed water district, water district Board of Directors, and a special tax assessment. The election will be held on March 8, 2016.

The City is committed to being actively involved in managing local water resources sustainably as the City's water supply is dependent upon the sustainability of the Paso Robles Groundwater Basin. More information about SGMA and the Paso Robles Groundwater Basin district formation process can be found at pasobasin.org.

4.1.10. Water Rights

The City's well supply is categorized into two sources according to water rights. These are Salinas River underflow and percolating water of the Paso Robles Groundwater Basin.

- Salinas River Underflow – River underflow is subject to appropriative water rights and permitting by the State Water Resources Control Board and the City's Permit number 5956 issued November 6, 1981, allows the City to extract up to eight cubic feet per second (3,590 gpm) with a maximum extraction of 4,600 AFY (January 1 to December 31). The permit includes moveable points of diversion. The City is currently in the process of converting this permit to a license from the State Water Resources Control Board.

- Percolated Basin Water – The City operates deep wells that pump from DWR Basin No. 3-4.06 (Paso Robles Groundwater Basin) and like other pumpers in the basin, no court ordered pumping restrictions apply.

4.1.11. City's Private Well Policy

On January 6, 2016, the City passed and adopted the Private Well Policy Ordinance (Ordinance No. 1021 N.S. Relating to Recycled Water Service and Private Wells within the City). The City is committed to prudent City-wide use of water and water conservation and is developing a City recycled water system to offset potable water demand, consistent with statewide water recycling goals and the City's water planning documents.

The Ordinance has permit requirements for use of private wells, policies for switching over to recycled water use, and requirements to follow the City's Water Conservation and Water Shortage Contingency Plan. It allows for operation of private wells under the following circumstances:

- Domestic use in an Agricultural zone where City water is not available.
- Agricultural use in an Agricultural zone where recycled water is not available.
- Irrigation use on golf courses or athletic fields in Agricultural or Parks and Open Space zones where recycled water is not available.

Use of the private River Oaks' wells to supply water to this Project would be subject to requirements of this ordinance. The City intends to extend the recycled water infrastructure close to the River Oaks II property and is in the process of developing an agreement with the River Oaks II applicant regarding use of recycled water and temporary use of private wells for the River Oaks II property.

The ordinance requires installation of a meter (at the City's expense) on any private well that has been operating in the three-year period immediately before its effective date and requires the City to be allowed to enter the property for periodic meter inspection. Furthermore, use of recycled water could be required in lieu of potable water or private well use at the discretion of the public works department if it can feasibly be provided to the area for particular uses and in compliance with all applicable federal, states, and local laws.

This WSE is based on the assumption that recycled water will be used to supply Project irrigation needs (other than historical) until recycled water becomes available (rows 3, 4, 5, 7 and 8 in **Table 3**).

4.2. LAKE NACIMIENTO WATER

In 1959, San Luis Obispo County Flood Control and Water Conservation District (District) signed an agreement with what is now Monterey County Water Resources Agency entitling the District to no less than 17,500 acre-feet annually from Lake Nacimiento for uses in San Luis Obispo County; of this amount, 1,750 AFY is set aside for lakeside uses. The Nacimiento Water

Project (NWP), completed in 2010, consists of approximately 45 miles of pipeline to deliver raw water from Lake Nacimiento to communities in San Luis Obispo County. Participants in the Nacimiento Water Project are the City of El Paso de Robles, Templeton Community Services District (TCSD), Atascadero Mutual Water Company (AMWC), the City of San Luis Obispo, and County Service Area 10A in Cayucos. Combined delivery entitlements to these participants total 9,655 AFY as listed in the table below.

The City of Paso Robles' Nacimiento delivery entitlement is now 4,000 AFY and an additional 1,400 AFY was identified as a future supplemental water need in the 2010 Urban Water Management Plan (Todd, 2011).

The Nacimiento Water Project has capacity to deliver the full 17,500 AFY entitlement (less the lakeside set-aside) even though initial participants did not initially seek entitlement to that full amount. The difference is referred to as "Reserve Water" (6,095 AFY). In October 2015, Paso Robles joined other participants in calling for their proportionate share of Reserve Water. This step is referred to as "fully subscribing" the Nacimiento Water Project and as of January 2016, likely distribution of entitlement resulting from fully subscribing is as follows:

Participant	Current Delivery Entitlement, AFY	Proposed Additional Entitlement, AFY	Totals at Full Subscription, AFY
City of Paso Robles	4,000	2,488	6,488
City of San Luis Obispo	3,380	2,102	5,482
Atascadero MWC	2,000	1,244	3,244
Templeton CSD	250	156	406
CSA 10A Cayucos	25	15	40
Bella Vista MHP (Cayucos)	0	10	10
Santa Margarita Ranch MWC	0	80	80
Subtotal	**9,655**	**6,095**	**15,750**
Reserve Capacity	**6,095**	**-**	**-**
Lakeside Setaside	**1,750**	**-**	**1,750**
Total	**17,500**	**-**	**17,500**

Once formalized, Paso Robles' entitlement to Lake Nacimiento water will increase to 6,488 AFY. Lake water requires treatment before introduction into the City's drinking water system and a 2.4 million gallons per day treatment plant came into operation in late 2015. Capital planning calls for expanding that treatment capacity by an additional 4 million gallons per day in the coming years.

Use of Lake Nacimiento water confers water quality benefits to the City. Lake Nacimiento water has lower hardness as compared to groundwater, with TDS concentrations in the range of 150 to 300 mg/L, while TDS concentrations in City wells average over 300 mg/L.

In addition, Lake Nacimiento supply is independent of local groundwater supplies, resulting in a diversified water supply portfolio that increases overall City water supply reliability. Use of Lake Nacimiento water by the City and others in the North County supplements supply such that less water is pumped from the groundwater basin. The Paso Robles Groundwater Basin Management Plan (GEI, 2011) has identified use of Nacimiento water in the Estrella and Atascadero subareas as a key objective to stabilizing groundwater levels. Importation of Nacimiento water may also provide some return flows from irrigation landscaping that would otherwise not occur. Now that the City's water treatment plant is operational, the City will ramp up its initial use of Nacimiento Water to 1,120 AFY (**Table 10**).

Since the summer of 2013, the City began using Nacimiento water to recharge its Salinas River. Nacimiento releases proved to sustain pumping water levels in the City's river wells, which was particularly important in response to drought. Initially, an additional 1.5 million gallons per day (mgd) of water was recharged (Paso Robles, November 13, 2013) increasing to approximately 4.5 mgd (~3,200 gpm) in 2015. The operation of the water treatment plant will allow more direct delivery of Nacimiento water and is expected to be the primary means of benefitting from Nacimiento supplies over time.

4.3. RECYCLED WATER

The City's wastewater treatment plant (WWTP) uses a trickling filter treatment process to treat about 3 mgd. Approximately 3,300 AFY of treated effluent is discharged to a series of ponds before entering the Salinas River channel, recycling it to the groundwater basin. Recognizing wastewater as an important resource, the City is taking steps to improve its quality. These steps include upgrading of the wastewater treatment plant, use of Nacimiento water, and implementation of programs to reduce salt loading (e.g., from water softeners and industrial uses.) The City also is planning a recycled water program including recycled water irrigation, possible groundwater recharge, and discharge to the river. The Recycled Water Master Plan (AECOM, 2014) identified potential recycled water customers, estimated recycled water quality and blending needs, identified recycled water distribution system options, and developed preliminary cost options. The City recently approved a contract to prepare the final plans and specifications for a wastewater tertiary treatment plant allowing treated recycled water to be used on golf courses and potentially vineyards, lessening the impact on the groundwater basin. The next steps include developing a financial plan and meeting with potential larger customers to discuss delivery and water quality.

4.4. WATER SUPPLY IN NORMAL AND DROUGHT PERIODS

Table 10 summarizes current and planned water supply for the City of Paso Robles. As shown in the top portion of the table, potable water supply is projected to come from three sources: groundwater through the basin wells, Salinas River water through the river wells, and Lake Nacimiento water. The table does not reflect the total groundwater supply (basin wells) available to the City, but the water that the City anticipates pumping to meet demands. Recycled water is considered a demand reduction measure rather than a supply source in the table. The projected build out demand is 13,400 AFY if historical usage patterns persist.

This demand may be reduced by potential water conservation efforts as shown in **Table 10**. Future recycled water is grouped with water conservation as a means of reducing water use on a per capita basis to comply with Senate Bill 7, which requires total daily per capita water use to be reduced 10 percent by 2015 and 20 percent by 2020 as compared to historical high usage. Note that 2014 actual usage complies with Senate Bill 7 targets.

Table 10 shows total potential conservation savings from conservation programs (BMP=best management practices and DMM=demand management measures). These are discussed in the 2010 UWMP (Todd, 2011). Conservation savings are estimated to increase from 364 AFY in 2015 to 1,617 AFY in 2025.

Potential conservation savings from price elasticity impacts of planned water rate increases are also shown on **Table 10,** reflecting the additional conservation that may occur due to increased consumer costs for water. By 2025, the City's UWMP (Todd, 2011) had anticipated that 650 AFY of recycled water will be used to offset potable supply. More recently, the Recycled Water Master Plan (AECOM, 2014) estimated that recycled water could provide a potential potable water use offset of 475 AFY and an additional potential use of 1,048 AFY within City limits. The 475 AFY recycled water use value is used in the tables in this WSE. Additional recycled water (3,970 AFY) would also be available for uses outside City boundaries. These additional recycled water deliveries could include irrigation of golf courses, medians, vineyards, and other agricultural uses, offsetting groundwater pumping.

If these conservation and recycled water savings are achieved and full utilization of Nacimiento water is possible, basin well pumping will most likely be reduced. In recent years, basin wells have provided as much as 4,103 AF (in 2007, see **Table 11**). **Table 12** shows projected groundwater production without additional conservation program savings and recycled water use. **Table 13** shows future water supply projects. Starting in late 2015, Nacimiento water use started to ramp up with the treatment plant's operational capacity at 2,400 to 2,600 AFY. Between 2025 and 2035, the plant will be upgraded to up to 6,488 AFY; timing will depend on demands.

Year-round, the amount of groundwater available in times of drought is considered to be the same as a normal year (and within historical pumping volumes). However, there is potential for peak summer water production shortfalls. The availability of Lake Nacimiento water will lessen future summer peaking problems and provide resilience to droughts. Lake Nacimiento water is a reliable and stable source of water as San Luis Obispo County has a contractual first priority to 17,500 AFY of the reservoir yield which is over 200,000 AFY. Modeling of Nacimiento Lake levels and Nacimiento Water Project deliveries indicates that NWP deliveries are not a significant contributor to lake level changes as compared to historical records (1958-2001) and, that even during historical drought periods, the total annual San Luis Obispo County entitlement could have been delivered (Boyle, 2002 and Paso Robles, 2014). In addition, future use of recycled water—a nearly constant source—will also increase supply reliability. Drought water supplies of future water supply projects are summarized in **Table 13**.

5. COMPARISON OF SUPPLY AND DEMAND

Table 14 compares water supply to water demand in five year increments between 2015 and 2040 for a normal year for the City with and without the Paso River Oaks II. The demands listed in **Tables 14** through **16** can be reduced with the additional conservation program and recycled water use savings listed in the middle portion of **Table 10**.

As specified in the 2010 UWMP (Todd, 2011), future demand totals are to incorporate the projected water reduction targets of 10 percent per capita reduction by 2015 and 20 percent reduction by 2020. The City is meeting its 2015 reduction goal but mandatory conservation is in effect. However, it is difficult to guarantee that these target reductions can be met considering uncertainties related to future customer water uses, program funding limitations, and competing fiscal responsibilities that cities are facing today.

The demands projected in **Tables 14** through **16** can be reduced with the potential conservation program and recycled water use savings listed in the middle portion of **Table 10** and any future potential savings will provide a necessary supply cushion to handle uncertainties related to both supplies and future demands.

Table 15 presents the same estimates for a single dry year. The supply will be the same as that available during normal years (**Table 10**); groundwater can be pumped at similar rates on an annual basis during dry years and Lake Nacimiento water and recycled water will still be available. Any future potential conservation and recycled water use savings will provide a necessary supply cushion.

A table was generated to compare annual supply and demand during multiple-dry year periods for five year periods between 2015 and 2040. This information is presented in **Table 16**. In this table, supply and demand values were kept the same as those for normal years (**Tables 10** and **14**) and for a single dry year (**Table 15**). Any future potential conservation and recycled water use savings will provide a necessary supply cushion. The City can also initiate various levels of its Water Shortage Contingency Plan to reduce water demands, as discussed in the 2010 UWMP (Todd, 2011).

6. CONCLUSIONS

The findings of this WSE are summarized below.

- The proposed Paso River Oaks II Project is on 128.9 acres in the northeastern part of the City.
- The Project is planned to be built in phases and include 271 new single family homes with 127 of these single family residences on larger lots and 144 single family homes on smaller lots deed restricted for adults over 55. The Spa and community facilities will be expanded.
- Water supply for the project will include City-supplied potable water, City-supplied recycled water, and applicant's private wells. Recycled water will be available between 2020 and 2025.
- Existing potable water demand at the Project site is 18 AFY.
- The City-supplied potable water supply for this Project is included in the existing UWMP (Todd, 2011) and the City's adopted General Plan forecasted development water needs at 64 AFY.
- The buildout water use of the Project is estimated at 132 AFY of City-supplied potable water, 32 AFY of recycled water, 334 AFY continued use from the River well and 30 to 40 AFY of water from onsite geothermal wells.
- The additional 68 AFY (132 – 64 AFY) of potable supply is accounted for in General Plan Amendment 2012-002 which takes vacancy rates into account and identifies water supply associated with 594 dwelling units citywide as available to assign to development.

In conclusion:

- The City has adequate potable supply to provide a reliable long-term water supply for the Project under normal and drought conditions. This supply is accounted for in the 2010 UWMP and General Plan (64 AFY) and from General Plan Amendment 2012-002 which takes vacancy rates into account (68 AFY).
- The Project may use private wells (Well #4 and the geothermal wells) provided use complies with the City's Ordinance No. 1021 N.S. (Relating to Recycled Water Service and Private Wells within City Limits) as well as future legal and City policy decisions.
- The Project will need to use recycled water when it becomes available.

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TABLES

Table 1
Project Description
Paso Robles River Oaks II Project

Project Component	Area[1] (Acres)	Existing or Proposed Component	Water Source[2]
Residential Areas			
Single Family Larger Lots - 127 units (2.86 units/acre)	44.38	Proposed	City Water
Single Family Small Lots (Senior) - 144 units (5 units/acre)	28.79	Proposed	City Water
Residential Streetscape	2.55	Proposed	Recycled Water[3]
Irrigated and Non-Irrigated Open Space Areas			
Area North of Small Lot (Senior) Residential Units	1.33	Proposed	Recycled Water[3]
Area North of Large Lot Residential Units	2.42	Proposed	Recycled Water[3]
Bluff Area West of Senior Residential	8.25	Existing	Not Irrigated
Open Space on Western Side of Property	17.26	Existing	Not Irrigated
Resort and Community Areas			
Health and Wellness Center	5.58	Existing (and proposed expansion)	City Water and Private Geothermal Wells
Turf Area/Amphitheater/Pavilion	5.26	Existing (and proposed expansion)	City Water and Recycled Water[3]
Lake	5.93	Existing	Recycled Water[3]
Community Farm	7.15	Proposed	Recycled Water[3]
Total Project Area (acres)	**128.90**	-	-

1. Acreages from RMM (2015)
2. Water source from City of Paso Robles staff
   City Water is potable water provided by the City
   Recycled water is tertiary treated effluent from the City's treatment plant. Anticipated to be available between 2020 and 2025.
   Geothermal water from applicant's River Oaks Wells 2 and 3.
3. Private well water will supply these areas until Recycled water becomes available between 2020 and 2025. Private well water is from the applicant's River Oaks Well 4.

Table 2
Current Water Use
Paso Robles River Oaks II Project

Current Water Use on Project Site	Current Total Water Use, AFY	Current Water Use Sources, AFY					Water Use Rate and Notes
		Direct City Supplied Water	Non-Revenue City Water[2]	Recycled Water Use	PrivateWell[3]	Private Geothermal Wells[4]	
Health and Wellness Center[1]	17.95	16.69	1.26	-	-	-	Average 2012-2014 use
Spa - Geothermal use	11.20	-	-	-	-	11.20	10 tubs at 10,000 gallons/day
Turf Area/Amphitheater/Pavilion and Lake	334.00	-	-	-	334.00	-	2012 water diversion
Total Current Water Use	**363.15**	**16.69**	**1.26**	**0.00**	**334.00**	**11.20**	**-**
Current City Water Use=		**17.95**					

AFY=acre-feet/year

1. City water use is 2012-2014 annual average (Rickenbach, 2015)
2. Assumes that non-revenue (unaccounted-for) water is 7% of total water use: (e.g., 16.7 AFY x 0.07/0.93 = 1.26 losses). Non-revenue water typically includes unmetered use (e.g. main flushing or firefighting), meter error, and leaks.
3. River Oaks Well #4. 2012 water use.
4. River Oaks Geothermal Wells #2 and #3. Assumes 10 hot tubs in full operation at 10,000 gallons/day (11.2 AFY) (Fugro, 2009).

Table 3
Future Water Use
Paso Robles River Oaks II Project

	Project Component	Buildout Total Water Use, AFY	Buildout Water Use Sources,[1] AFY				Private Well	Water Use Rate and Notes
			Direct City Supplied Water	Non-Revenue City Water[2]	Recycled Water Use[3]	Private Geothermal Wells[4]		
1	Single Family-Larger Lots - 127 units	68.28	63.50	4.78	-	-		0.5 AFY/unit[5]
2	Single Family/Senior- Small Lots - 144 units	44.90	41.76	3.14	-	-		0.29 AFY/unit[5]
3	Residential Streetscape - 2.55 acres	7.01	-	-	7.01	-		2.75 AFY/acre[6]
4	Area North of Small Lot (Senior) Residential Units - 1.33 acres	2.00	-	-	2.00	-		1.50 AFY/acre[6]
5	Area North of Large Lot Residential Units - 2.42 acres	3.63	-	-	3.63	-		1.50 AFY/acre[6]
6	Health and Wellness Center, Spa	16.45	15.30	1.15	-	30-40		From Rickenbach
7	Pavilion, Lake, neighborhood pool, park and turf areas, community facilities	335.88	1.75	0.13	-	-	334.00	Assume river well use same as past use
8	Community Farm - 7.15 acres	19.66	-	-	19.66	-		2.75 AFY/acre[6]
Buildout Water Use[8]		**497.82**	**122.31**	**9.21**	**32.30**	**30-40**	334.00	
City Water Use =			**131.52**					

AFY=acre-feet/year

1. Preliminary water use estimates may be refined during the Project planning process. Does not include construction water demands.
2. Assumes that non-revenue (unaccounted-for) water is 7% of total water use: (e.g., 63.5 AFY x 0.07/0.93 = 4.78 losses). Non-revenue water typically includes unmetered use (e.g. main flushing or firefighting), meter error, and leaks.
3. Recycled water will be available between 2020 and 2025. Private well water will be used for irrigation in these areas in the interim. Private well water will be from the applicant's River Oaks Well 4.
4. River Oaks Geothermal Wells 2 and 3
5. Typical usage from 2010 UWMP and similar developments to the south.
6. From AECOM (2014)

Table 4
Climate Data

	Average Rainfall[1] (inches)	Average ETo[2] (inches)	Average Temperature[3] (°F)
January	3.18	1.73	46.78
February	2.89	2.23	49.98
March	2.36	3.68	52.93
April	0.94	4.74	56.53
May	0.32	6.15	61.68
June	0.05	6.56	67.34
July	0.04	6.63	71.45
August	0.05	6.39	71.20
September	0.16	4.98	68.04
October	0.58	3.48	61.12
November	1.24	2.01	52.59
December	2.45	1.48	46.75
Average Calendar Year Total	**14.01**	**50.06**	**-**
Monthly Average	**1.17**	**4.17**	**58.87**

1. Precipitation data from Paso Robles Station 046730 (Jan 1894-Aug 2015) (WRCC, 2015). Note that Average Calendar Year Total is not the sum of numbers above but rather historical (1894-2014) annual average.
2. ETo=Average Evapotranspiration data from CIMIS Station 163 Atascadero (CIMIS, 2015).
3. Temperature data from Paso Robles Station 046730 (Jan 1894-Aug 2015) (WRCC, 2015).

Table 5
Population Projections

	2010	2015	2020	2025	2030	2035	2040
Service Area Population[1]	30,072	30,770	37,385	44,000	44,000	44,000	44,000

Population estimates from 2010 UWMP (Todd, 2011). Assumes linear growth between 2015 and 2025. City population in 2025 consistent with General Plan population planning threshold of 44,000 residents as per City's 2003 General Plan Amendment 2005-001 (City Council Resolution 05-249). The City is in the process of reviewing future population growth projections and it is likely that the build out population of 44,000 will not be reached before 2040..

1. Service area population is the population served by the distribution system and is approximately the same as the City population.

Table 6
Past, Current and Projected Water Connections as per 2010 UWMP

Water Use Sectors	Past				Current	Projected			
	2005	2010	2012	2013	2014	2015	2020	2025	2030-2040
Single Family	8,273	8,661	8,781	8,995	8,785	8,882	10,653	12,425	12,425
Multi-family	386	401	408	426	406	502	600	696	696
Commercial	682	676	776	799	824	703	1,383	2,063	2,063
Industrial	64	71	72	75	74	74	81	89	89
Institutional/ Governmental	Included in Other sector	76	Included in Commercial & Other sectors	Included in Commercial & Other sectors	Included in Commercial & Other sectors	76	76	76	76
Parks, Landscape	331	391	404	442	537	392	393	393	393
Total Connections	**9,736**	**10,276**	**10,441**	**10,737**	**10,626**	**10,629**	**13,186**	**15,742**	**15,742**

Data from 2010 UWMP (Todd, 2011) and 2012 to 2014 DWR Public Water System Statistics provided by City of Paso Robles.
Note that the City is in the process of reviewing future population growth predictions.

Table 7
Past, Current and Projected Water Demand as per 2010 UWMP (AFY)

Water Use Sectors	Past				Current	Projected			
	2005	2010[1]	2012[1]	2013[1]	2014[1]	2015	2020	2025	2030-2040
Single Family	3,865	3,435	3,537	3,635	3,158	4,441	5,326	6,180	6,180
Multi-family	794	573	658	708	632	847	1,020	1,195	1,195
Commercial	1,197	656	795	840	799	1,234	2,427	3,620	3,620
Industrial	69	154	179	186	209	161	176	194	194
Institutional/ Governmental	Included in Other sector	91	Included in Commercial & Other sectors	Included in Commercial & Other sectors	Included in Commercial & Other sectors	91	91	91	91
Parks, Landscape	1,238	840	984	1,138	1,031	1,176	1,180	1,180	1,180
Total Deliveries (no further conservation)	**7,163**	**5,749**	**6,153**	**6,507**	**5,829**	**7,950**	**10,220**	**12,460**	**12,460**
Non-Revenue Water	250	577	541	493	440	600	770	940	940
Potential Conservation and Recycling	-	-	-	-	-	980	2,865	3,885	3,885
Total Demands[3]	**7,413**	**6,326**	**6,694**	**7,000**	**6,269**	**7,570**	**8,125**	**9,515**	**9,515**

Data from 2010 UWMP (Todd, 2011) and 2012 to 2014 DWR Public Water System Statistics provided by City of Paso Robles.
1. Water use was reduced by approximately 20 percent due to City-wide mandatory water use restrictions.
2. Other category on DWR Public Water System Statistic forms includes hydrant meters. In 2005 and 2010, "Landscape Irrigation" category included some accounts that provided water to commercial/industrial and Institutional/Govt water use.
3. Total Demands to Comply with Senate Bill 7 20% Demand Reduction by 2020. SB-7 target water use calculated to be 193 gpcd [2010 UWMP (Todd, 2011)]

Note that the City is in the process of reviewing future population growth predictions.

Table 8
Major Planned Residential and Commercial/Industrial Projects
City of Paso Robles

Project / Property	Number of Units or Area	Estimated Water Demand (AFY)	Notes
Single Family			
59 single family - Approved	59	23.6	0.40 AFY/unit. Various locations
271 single family - Applied	271	108.4	0.40 AFY/unit (2012: 3,537 AF/8,781 conn.=0.4 AF/conn.) River Oaks II
72 single family - Applied	72	28.8	0.40 AFY/unit. Experimental Station Rd
Multifamily			
79 multifamily - Approved	79	22.9	0.29 AFY/unit. Various locations
23 townhouses - Approved	23	9.2	0.40 AFY/unit. Arbor Ridge, Oak Hill Rd
23 multifamily - Applied	23	6.7	0.29 AFY/unit. Various locations
Commercial/Industrial			
Building Permit Approved			
Office Bldg.	12,835 sf	0.45	1 emp/288 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping. 810 4th Street
Commercial Shell Bldgs.	18,516 sf	0.44	1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping. 5151 Jardine Rd
Warehouse/Office	26,602 sf	0.58	1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping. 3115 Propeller Dr
Commercial Shell	3,200 sf	0.19	1 emp/288 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping. 3328 Spring St
Commercial Shell	10,000 sf	0.38	1 emp/288 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping. 3348 Spring St
Athletic Club Addition	14,597 sf	1.02	0.00007 AF/sf from MPWMD (date unknown). 2975 Union Rd
Building Permit Applied			
Brewery expansion	25,800 sf	0.57	1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping
Service Station/minimart	5,000 sf	0.88	Based on 12 months of data for Chevron on Riverside
La Quinta Inn expansion	37 rooms,15,700 sf	7.4	0.2 AF/room. Currently under construction
Commercial Center	20,500 sf	0.67	1 emp/288 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping
Office Storage	4,982 sf	0.05	0.00001 AF/sf from MPWMD (date unknown)
New Scouts Meeting Facility	2,732 sf	1.45	0.00053 AF/sf from MPWMD (date unknown)
Pine Street Promenade Hotel	121 rooms, 200,000 sf	26.20	0.2 AF/room
PR Oak Tree Inn Addition	66 rooms	13.2	0.2 AF/room
Manufacturing Bldg.	15,600 sf	0.38	1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping.
Self Storage Bldg.	66,490 sf	0.66	0.00001 AF/sf from MPWMD (date unknown)
San Antonio Winery	85,951 sf	1.66	1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping
Zoning Permit Approved			
RV Park	322 spaces	41.9	0.13 AF/space based on Wine Country RV Resort
Equestrian Show Facility	67 acres	2.1	Staff estimate of annual potable uses. 28.4 AF of self-supplied irrigation
Wine Storage Bldg	66,000 sf	0.75	1 emp/814 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping
Office on 4th St	13,000 sf	0.46	1 emp/288 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping
Planning Permit Applied			
Resort, conference center, gardens, golf, wine tasting	280 rooms, 439,000 sf	155.9	La Entrada/Discovery Gardens; 155.9 AFY of City-supplied water plus 90.9 AFY of private well water
Hotel	127 rooms 99,800 sf	13.6	Developer's estimate (about 0.11 AF/room)
Auto Parts Store	7,800 sf	0.24	1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping
Residential Care Facility	14 rooms, 10,100 sf	2.80	0.2 AF/bed
Marriott Residence Hotel	128 rooms	25.6	0.2 AF/room, S Vine St
Chrysler/Jeep Dealership	29,800 sf	2.09	assume 0.00007 AF/sf
Used Car Dealership	2,100 sf garage	1.47	assume 0.00007 AF/sf
Brewery expansion	109,000 sf	2.18	1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.2 AF landscaping
San Antonio Mixed Use	12,000 sf	0.43	1 emp/288 sf, 10 gal/emp/day*260/365, plus 0.1 AF landscaping
Erskine/Wisteria Industrial Park	620,000 sf Com + Ind	11.7	Areas from preliminary planning documents. 1 emp/439 sf, 10 gal/emp/day*260/365, plus 0.5 AF landscaping
Assisted Living	100 rooms	20.0	0.2 AF/ bed
San Antonio Winery Mixed Use	126,000 sf	11.3	Provided by applicant
Alder Creek Apartments	16 Units	4.64	0.29 AFY/unit
Cabernet Links & RV Resort	18 hole golf course, 370 RV spaces, restaurant, banquet room, pool, tennis courts, proshop	unknown water use	18 hole existing golf course on 5151 Jardine Rd.
Marriot Residence Inn	124 rooms	24.8	0.2 AF/room. Union Road
PR 15-0058	4 lots Planned Development, 4 Units	1.60	0.40 AFY/unit
PR 15-0081	2 Lots	0.80	0.40 AFY/unit
Subtotal		**536.5**	-
Non-Revenue Water		**40.4**	Assumes that unaccounted-for water is 7% of total water use.
Total Potential Additional Demand		**576.9**	

Project list update from City staff emails October 16 and 19, 2015.

Water demand values provided by City staff or from similar water use documents. 260 work days per year applied to employee gallons/day demand factors.

Table 9
Water Supply Sources

Supply	AFY	Right	Contract	Ever Used
Basin Wells[1]	No Limit	-	-	Yes
River Wells[2]	4,600	Appropriative Water Rights	-	Yes
Nacimiento Water[3]	4,000 / 5,400 / 6,488 (potential)	-	Yes	Yes
Recycled Water[4]	5,493	-	-	No

1. While there is currently no basin pumping limit, the City does not plan to increase basin pumping from historical highs of about 4,000 AFY to support additional growth. New development will be served with Nacimiento water and recycled water.

2. Maximum permitted rate of 8 cfs with an annual limit of 4,600 AFY. The City is in the process of finalizing this license and requested a maximum of that historically pumped (4,558 AFY). For consistency with 2010 UWMP, the 4,600 AFY value will be used in planning tables in this WSE.

3. Delivered, potable Nacimiento water will be less because of operational downtimes for cleaning, repairs, etc. The treatment plant has an operational capacity of 2.4 mgd [2.4×10^6 gal/day x 365 day/yr x AF/325,851 gallons = 2,688 AFY]. The treatment plant will be upgraded up to 6,488 AFY between 2025 and 2035, depending upon demand needs.

4.The Recycled Water Master Plan Update (AECOM, 2014) estimated potential potable use offset at 475 AFY and additional potential uses within City at 1,048 AFY (see Table 3-7). Additional recycled water (3,970 AFY) would be available for uses outside of City boundaries with 475+1,048+3,970=5,493 AFY. The 2010 UWMP had an estimated value of 650 AFY for potable offset. The 650 AFY estimate has been updated to 475 AFY in this WSE.

Table 10

Water Supplies Needed to Meet Demands (AFY)

Water Supply Sources	Past	Current	2010 UWMP Projected			
	2010	2014	2015	2020	2025	2030 to 2040
Basin Wells	2,338	3,497	2,980	4,000	3,400	3,400
River Wells	3,988	2,772	4,450	4,600	4,600	4,600
Nacimiento Water[1]	0	0	1,120	2,390	5,400	5,400
Supply/Demand Without Future Conservation	6,326	6,269	8,550	10,990	13,400	13,400
Potential Conservation and Recycled Water Savings						
BMP/DMM Conservation[2]	Not Applicable		364	1,038	1,617	1,617
Price Elasticity of Water Rates Conservation			616	1,827	1,793	1,793
Recycled Water (updated value)			0	0	475	475
SB-7 Target Water Demands to Comply with 20% Demand Reductions by 2020[3]	Not Applicable		**7,570**	**8,125**	**9,515**	**9,515**

Data from 2010 UWMP (Todd, 2011), 2012 to 2014 Groundwater Pumping datasheet (Paso Robles, 2015), and AECOM (2014).

1. The treatment plant has an operational capacity of 2.4 mgd [2.4×10^6 gal/day x 365 day/yr x AF/325,851 gallons = 2,688 AFY]. Delivered, potable water will be less because of operational downtimes for cleaning, repairs, etc. The treatment plant will initially be operated five months out of the year (high demand summer months) [2,688 AFY x 5/12 = 1,120 AFY]. It will be upgraded to up to 6,488 AFY sometime between 2025 and 2035, depending upon demand needs.

2. BMP=Best Management Practices and DMM=Demand Management Measures

3. Senate Bill 7 target water use calculated to be 193 gpcd in 2020 [2010 UWMP (Todd, 2011)]. At a 44,000 build out population target water demand = 9,515 AFY.

Table 11
Groundwater - Historical Volume Produced (AFY)

	2005	2006	2007	2008	2009[2]	2010[2]	2011[2]	2012[2]	2013[2]	2014[2]
Paso Robles Basin	2,856	3,366	4,103	3,819	2,794	2,338	2,327	2,880	3,257	3,497
Shallow Groundwater near River	4,558	4,065	4,023	4,072	3,868	3,988	4,069	3,814	3,743	2,772
Total Pumping	**7,414**	**7,431**	**8,126**	**7,891**	**6,662**	**6,326**	**6,396**	**6,694**	**7,000**	**6,269**
% of Total Supply[1]	**8.2%**	**8.2%**	**9.0%**	**8.7%**	**7.4%**	**7.0%**	**7.1%**	**7.4%**	**7.8%**	**6.9%**

1. Total Supply is defined as the updated perennial yield of the Paso Robles Basin (90,215 AFY) based on the Paso Robles Groundwater Basin Model Update (Geoscience, 2015). The perennial yield value does not differentiate shallow groundwater near the Salinas River from basin groundwater.

2. Water use since 2009 is reduced because of City-wide mandatory water use restrictions.

Table 12
Groundwater - Future Production Estimates (AFY)

	2015	2020	2025	2030	2035	2040
Paso Robles Basin	2,980	4,000	3,400	3,400	3,400	3,400
Shallow Groundwater near River	4,450	4,600	4,600	4,600	4,600	4,600
Total Pumping	**7,430**	**8,600**	**8,000**	**8,000**	**8,000**	**8,000**
% of Total Supply[1]	**8.2%**	**9.5%**	**8.9%**	**8.9%**	**8.9%**	**8.9%**

1. Total Supply is defined as the updated perennial yield of the Paso Robles Basin (90,215 AFY) based on the Paso Robles Groundwater Basin Model Update (Geoscience, 2015). The perennial yield value does not differentiate shallow groundwater near the Salinas River from basin groundwater.

See Table 10 for more detail on other water sources. Projected groundwater pumping may be less since values above do not include additional conservation program savings or recycled water use (see Table 10).

Table 13
Future Water Supply Projects

Project Name	Projected Completion Date	Normal-Year (AF)	Single-Dry Year (AF)	First Multiple-Dry Year (AF)	Second Multiple-Dry Year (AF)	Third Multiple-Dry Year (AF)
Nacimiento Water[1]	2015	2,400	2,400	2,400	2,400	2,400
Future Nacimiento Water for 2010 General Plan Buildout[1,2]	2025-2035	3,000	3,000	3,000	3,000	3,000
Recycled[3]	2025	475	475	475	475	475

1. City has committed to purchase 4,000 AFY with an additional potential purchase of 2,488 AFY. Initial plant operational capacity of 2.4 mgd (2,688 AFY). Delivered, potable water will be less because of operational downtimes for cleaning, repairs, etc. (0.9*2,688=~2,400 AFY).

2. Lake Nacimiento water is a reliable and stable source of water as San Luis Obispo County has a contractual first priority to 17,500 AFY of the reservoir yield which is over 200,000 AFY. Modeling of Nacimiento Lake levels and Nacimiento Water Project (NWP) deliveries indicates that NWP deliveries are not a significant contributor to lake level changes as compared to historical records and, that even during drought periods, the total annual San Luis Obispo County entitlement could have been delivered (Boyle, 2002) and Paso Robles (2014).

3. The Recycled Water Master Plan Update (AECOM, 2014) estimated potential potable use offset at 475 AFY and additional potential uses within City at 1,048 AFY (see Table 3-7). Additional recycled water (3,970 AFY) would be available for uses outside of City boundaries. The 2010 UWMP had an estimated value of 650 AFY for potable offset. The 650 AFY estimate has been updated to 475 AFY in this WSE. Recycled water will be a nearly constant source. Refinements of recycled water options, use estimates, and customers is ongoing.

Table 14
Supply and Demand Comparison - Normal Year (AFY)

	2015	2020	2025	2030-2040
Without River Oaks II Project[1]				
Supply Totals	8,550	10,990	13,400	13,400
Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
Difference (Supply-Demand)	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%
With River Oaks II Project				
Supply Totals	8,550	10,990	13,400	13,400
Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
Difference (Supply-Demand)	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%

Demand totals do not include additional potential conservation and recycling savings to meet SB 7 target demands (Table 10)
1. Water for the River Oaks II Project is already included in 2010 UWMP (64 AFY for Project and 68 AFY from General Plan Amendment 2012-002.

Table 15
Supply and Demand Comparison - Single Dry Year (AFY)

	2015	2020	2025	2030-2040
Without River Oaks II Project[1]				
Supply Totals	8,550	10,990	13,400	13,400
Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
Difference (Supply-Demand)	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%
With River Oaks II Project				
Supply Totals	8,550	10,990	13,400	13,400
Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
Difference (Supply-Demand)	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%

Demand totals do not include additional potential conservation and recycling savings to meet SB 7 target demands (Table 10)
1. Water for the River Oaks II Project is already included in 2010 UWMP (64 AFY for Project and 68 AFY from General Plan Amendment 2012-002.

Table 16

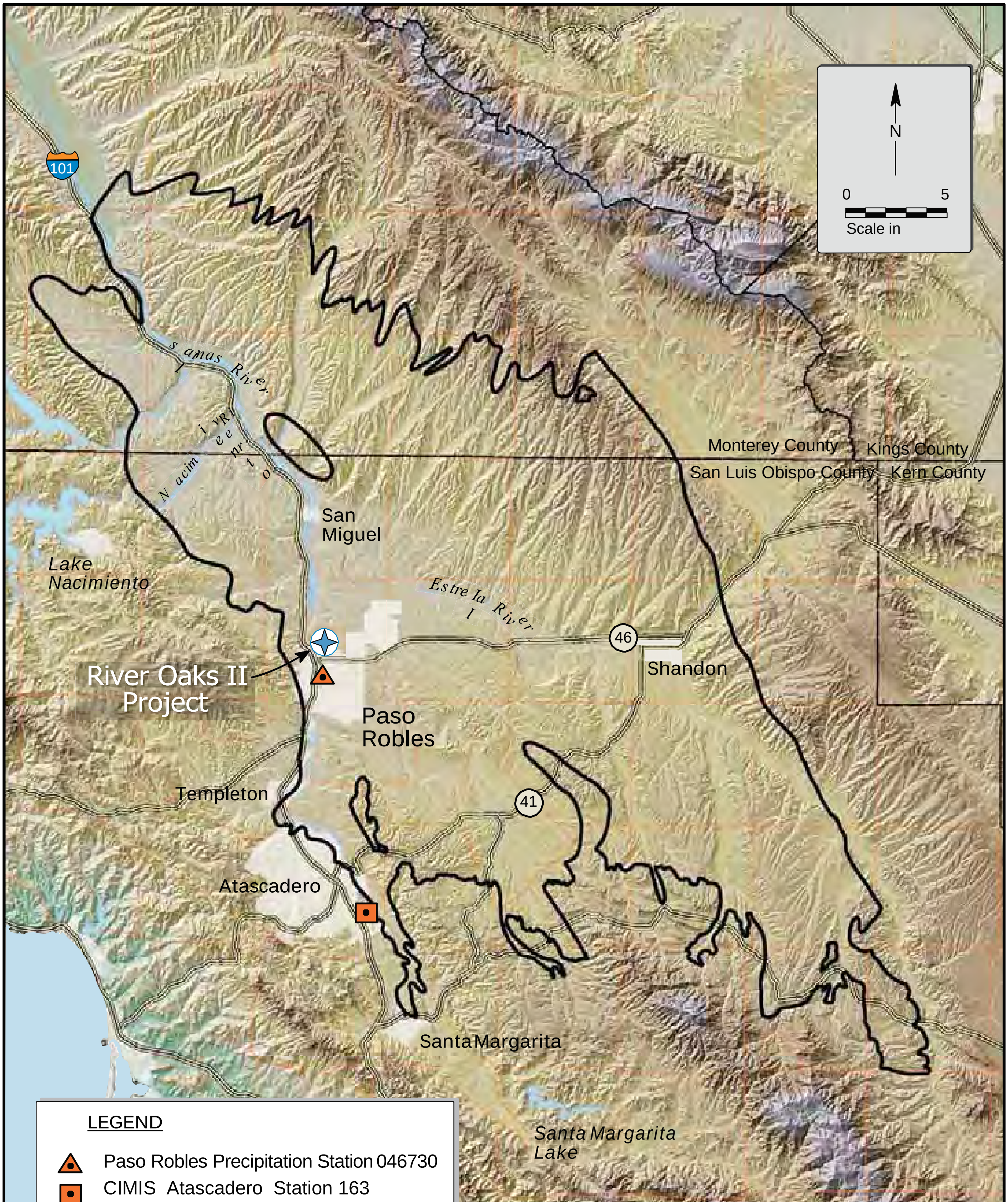
Supply and Demand Comparison — Multiple Dry-Year Events (AFY)

		2015	2020	2025	2030-2040
Without River Oaks II Project[1]					
Multiple-Dry Year First Year Supply	Supply Totals	8,550	10,990	13,400	13,400
	Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%
Multiple-Dry Year Second Year Supply	Supply Totals	8,550	10,990	13,400	13,400
	Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%
Multiple-Dry Year Third Year Supply	Supply Totals	8,550	10,990	13,400	13,400
	Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%
With River Oaks II Project					
Multiple-Dry Year First Year Supply	Supply Totals	8,550	10,990	13,400	13,400
	Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%
Multiple-Dry Year Second Year Supply	Supply Totals	8,550	10,990	13,400	13,400
	Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%
Multiple-Dry Year Third Year Supply	Supply Totals	8,550	10,990	13,400	13,400
	Demand Totals (without potential conservation)	8,550	10,990	13,400	13,400
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%

Demand totals do not include additional potential conservation and recycling savings to meet SB 7 target demands (Table 10)

1. Water for the River Oaks II Project is already included in 2010 UWMP (64 AFY for Project and 68 AFY from General Plan Amendment 2012-002.

FIGURES



LEGEND

- Paso Robles Precipitation Station 046730
- CIMIS Atascadero Station 163
- Streams
- State Highways
- Basin Boundary
- Cities/Communities
- County Line

December 2015

TODD GROUNDWATER

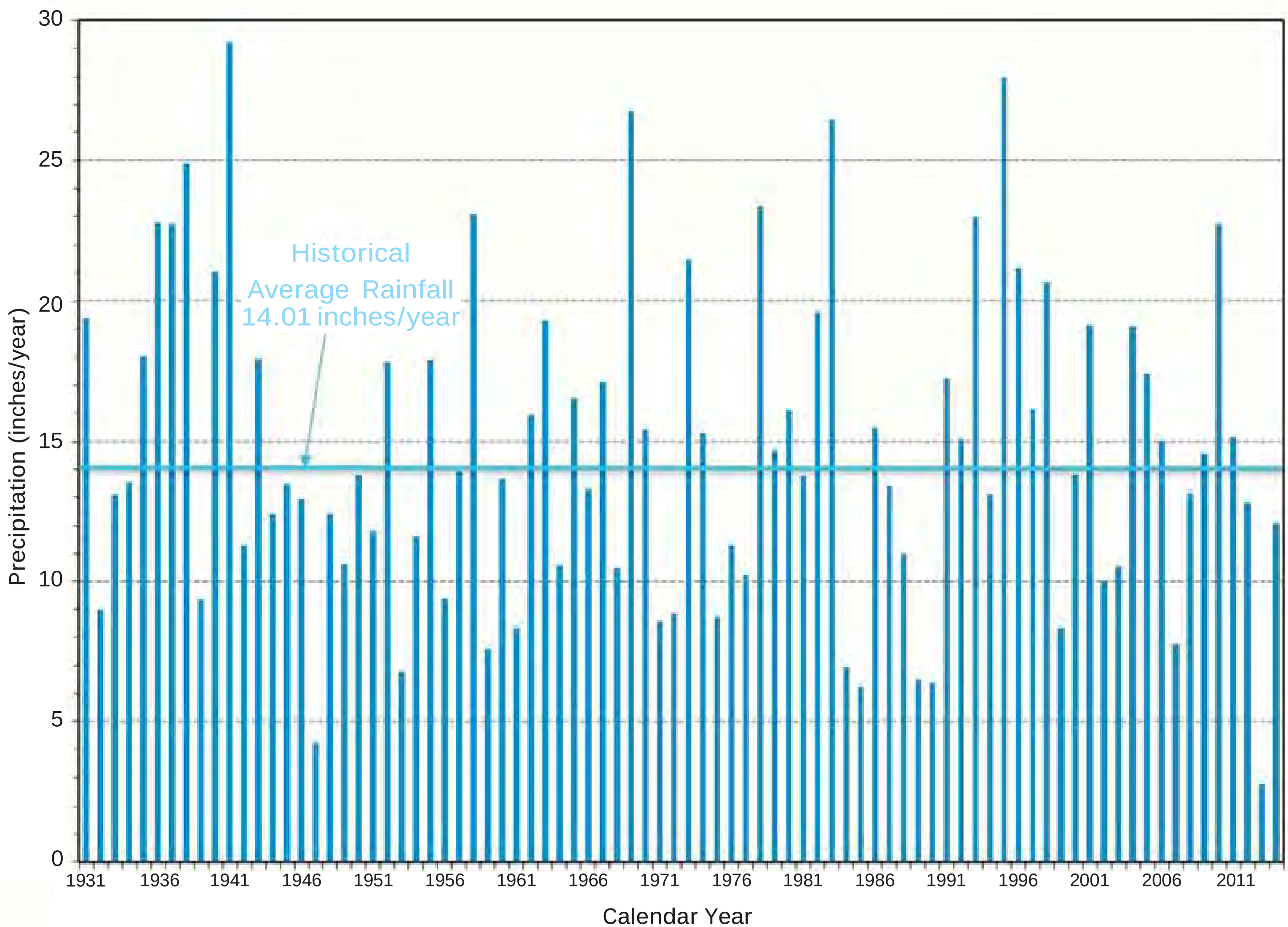
Figure 1
Paso Robles
River Oaks II
Project Location

Source: Estrella, Inc. (2013) and Frugo (2009).

January 2016

TODD GROUNDWATER

Figure 2
River Oaks II
Conceptual Project

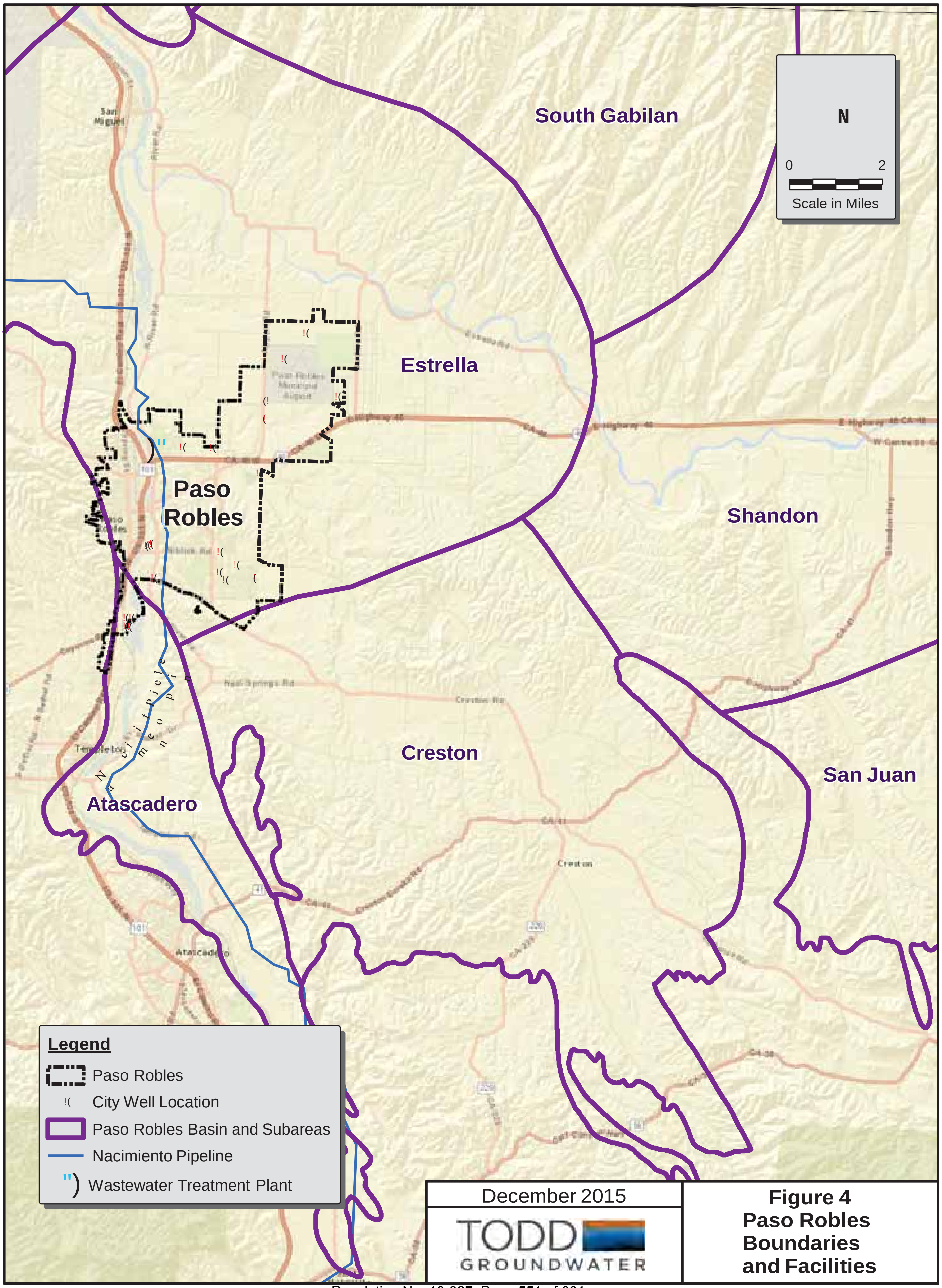


Precipitation data from Paso Robles Station 046730. See Table 4.

December 2015

TODD GROUNDWATER

Figure 3
Paso Robles
Annual Rainfall

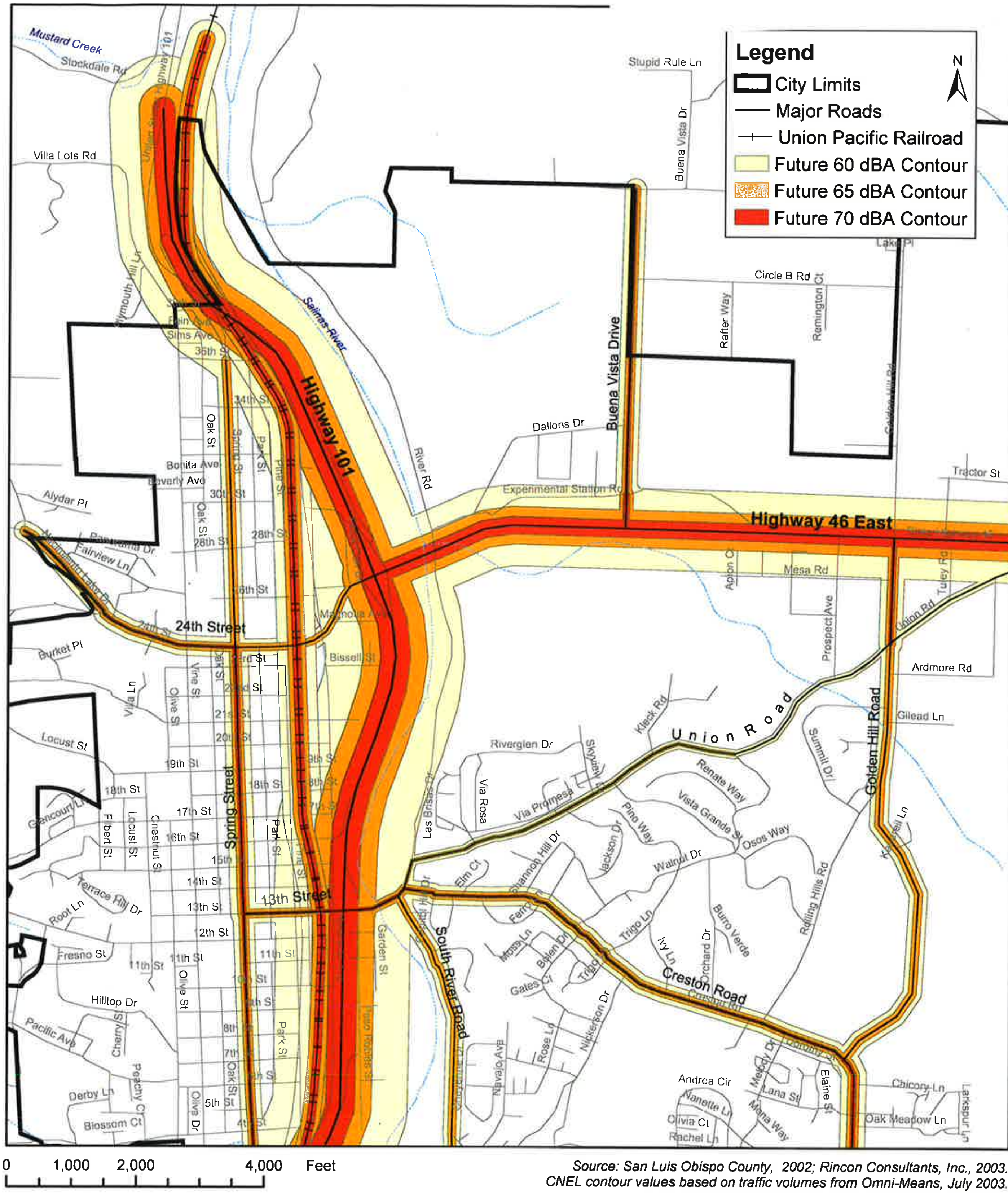


December 2015

TODD GROUNDWATER

Figure 4
Paso Robles Boundaries and Facilities

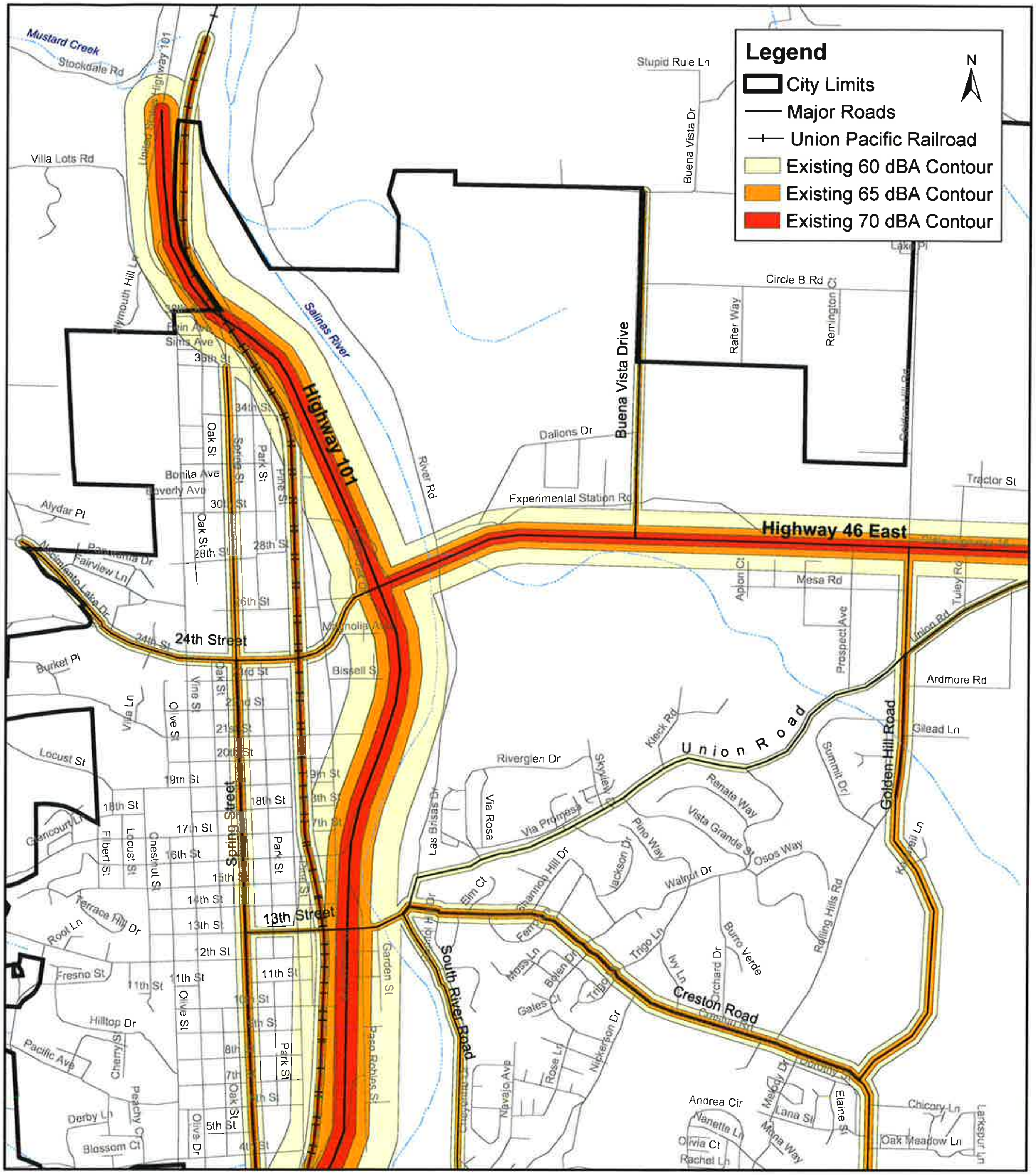
Attachment 18
GP Noise Element Figures



Source: San Luis Obispo County, 2002; Rincon Consultants, Inc., 2003.
CNEL contour values based on traffic volumes from Omni-Means, July 2003.

Future Roadway and Railroad Noise Contours (2025) - Northwest Figure N-3a

City of El Paso de Robles



0 1,000 2,000 4,000 Feet

Source: San Luis Obispo County, 2002; Rincon Consultants, Inc., 2003.
CNEL contour values based on traffic volumes from Omni-Means, July 2003.

Existing Roadway and Railroad Noise Contours (2003) - Northwest Figure N-2a

City of El Paso de Robles

Attachment 19

River Oaks: The Next Generation

Transportation Impact Analysis

Central Coast Transportation Consulting

895 Napa Avenue Suite A-6

Morro Bay, CA 93442

(805) 316-0101

November 2015

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

Executive Summary

This study evaluates the potential transportation impacts of the proposed River Oaks: The Next Generation project, which reflects an update to the Borkey Area Specific Plan. The project location and study intersections are shown on Figure 1. The project includes the development of 144 active adult homes, 127 single family homes, and a community center and fitness/wellness center for residents of the River Oaks community.

The study intersections were evaluated during the weekday morning (7-9 AM) and evening (4-6 PM) time periods under Existing, Near-term, and Cumulative conditions with and without the project.

The project is expected to generate 2,128 daily trips, 160 AM peak hour trips, and 207 PM peak hour trips. The City's Transportation Impact Analysis Guidelines and Caltrans criteria were applied to identify transportation deficiencies, summarized below.

Traffic Operations Deficiencies: No deficiencies are expected under Existing Plus Project and Near Term Plus Project conditions. Two deficiencies are identified under Cumulative Plus Project conditions to Caltrans-controlled intersections:

- SR 46/Buena Vista Drive: This intersection would experience eastbound left-turn and southbound left-turn queue spillback. This deficiency would be eliminated by the installation of a second eastbound left-turn lane and southbound left-turn lane.
- SR 46/Golden Hill Road: This intersection would operate unacceptably at LOS D/E conditions during the AM/PM peak hours both with and without the project. Per the Caltrans Corridor Study, this remains a low priority location for future improvements and improvements should focus on local parallel routes funded by the City's traffic impact fee.

Bicycle Deficiencies: The project should make the following changes to maintain consistency with the City's Bike Master Plan:

- Re-stripe the existing segment of Clubhouse Drive to meet the Bike Master Plan standards.
- Include Class II bike lanes on the segment of Buena Vista Drive between the Cuesta College Driveway and the project entrance when this segment is improved. This will require coordination with the County of San Luis Obispo.

Pedestrian Deficiencies: Pedestrian facilities are adequate as proposed. The project's plans showing detailed designs should be reviewed when they are available to ensure that new facilities connect to existing facilities to the maximum extent possible.

Transit Deficiencies: The project would not overburden area transit service. The project proposes two new transit stop locations, making all of the site within a third mile radius to a transit stop. The project should coordinate with City staff to determine the appropriate locations and amenities for new transit stops on the site to accommodate future service expansion.

Site Access and Circulation: The geometric designs should be reviewed when available to ensure they meet City engineering design standards and conform to the City's Bike Master Plan.

Other Issues: This section discusses additional circulation issues requested by City staff. The planned Dry Creek Road Extension between Buena Vista Drive and North River Road is not expected to carry high traffic volumes in the future, and eliminating this segment as proposed by the project would not impact nearby facilities. The intersection of Buena Vista Drive/River Oaks Drive/Dallons Drive is forecast to operate acceptably in the future as an all-way-stop controlled intersection, but drivers would experience less delay if the intersection were converted to roundabout control.

Contents

Introduction

This study evaluates the potential transportation impacts of the proposed River Oaks: The Next Generation project, which reflects an update to the Borkey Area Specific Plan. The project is located in Paso Robles, roughly bounded by River Oaks Drive to the south, River Road to the west, and Buena Vista Drive to the east. The project includes the development of 144 active adult homes, 127 single family homes, a community center and fitness/wellness center for residents of the River Oaks community.

The project's location and study intersections are shown on Figure 1, and Figure 2 shows the project's site plan.

The following intersections were evaluated during the weekday morning (7-9 AM) and evening (4-6 PM) time periods:

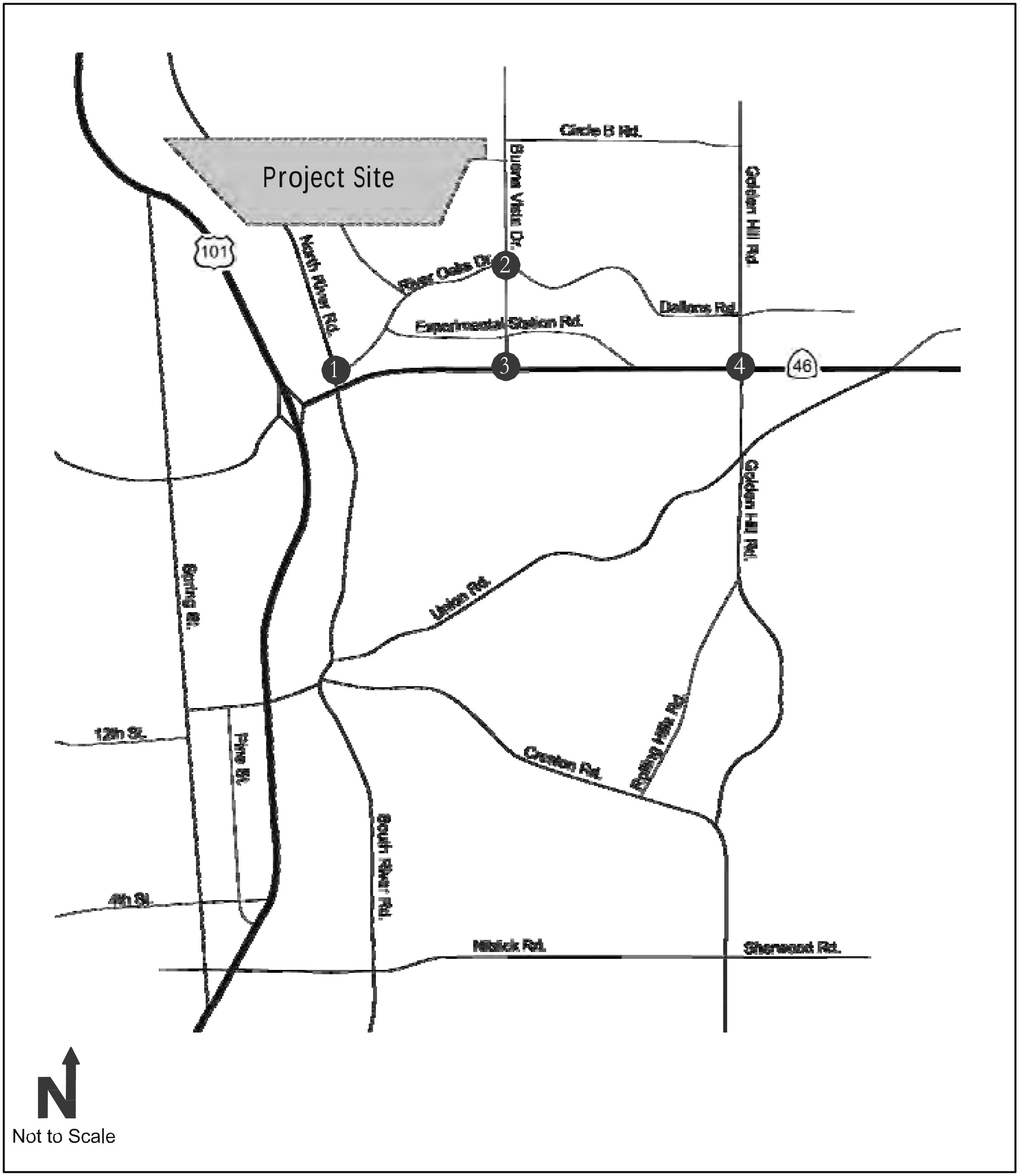
1. North River Road/River Oaks Drive
2. Buena Vista Drive/River Oaks Drive
3. State Route 46 E/Buena Vista Drive (Caltrans intersection)
4. State Route 46 E/Golden Hill Road (Caltrans intersection)

The study intersections were evaluated under these analysis scenarios:

1. **Existing Conditions** reflect recently collected traffic counts and the existing transportation network.
2. **Existing Plus Project Conditions** add project generated traffic to Existing Conditions volumes.
3. **Near Term Conditions** add approved and pending projects in the study area to Existing Conditions volumes.
4. **Near Term Plus Project Conditions** add project traffic to Near Term Conditions volumes.
5. **Cumulative Conditions** reflect future traffic conditions developed using the City's Travel Demand Model.
6. **Cumulative Plus Project Conditions** add project traffic to Cumulative Conditions volumes.

A description of the analysis approach follows Figures 1 and 2.

Figure 1 : Project and Study Locations



Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

Legend:

7 - Study Intersection

Figure 2: Site Plan

(Source: RRM Design Group)

N

Not to Scale

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

ANALYSIS METHODS

The analysis approach was developed based on the City of Paso Robles' recent *Transportation Impact Analysis Guidelines* and Caltrans standards for intersections on State Route 46.

City Facilities

The City's TIA Guidelines provide criteria for identifying mobility deficiencies reflecting the City's Circulation Element Goals. While vehicular level of service (LOS) is not identified as a mobility deficiency criteria for City controlled intersections, vehicular queues that exceed existing or planned lengths of turn pockets are a deficiency criteria. LOS calculations are also a component of the evaluation criteria for stop-controlled intersections.

In order to evaluate queuing and stop-controlled intersection LOS, the study intersections have been analyzed with the Synchro 9 software package applying the 2010 Highway Capacity Manual (HCM) methods. The 95th percentile queues are reported, which reflect the queue length that will not be exceeded 95% of the time.

Caltrans Facilities

Caltrans controls the intersections along State Route 46 and relies on LOS to determine deficiencies. Accordingly, Caltrans intersections have been evaluated using LOS criteria as contained in the 2010 HCM. Vehicular level of service is based on control delay, which is the total of time spent decelerating when approaching an intersection, time spent stopped or moving in a queue at an intersection, and time spent accelerating after an intersection.

The level of service thresholds relevant to the Caltrans controlled intersections in this study are presented in Table 1. Unsignalized intersections have lower delay thresholds because users experience more uncertainty than at signals, where drivers typically expect higher levels of congestion and more predictable levels of delay.

Table 1: Vehicular Level of Service Thresholds

Signalized Intersections[1]		Stop Sign Controlled Intersections[2]	
Control Delay (seconds/vehicle)	**Level of Service**	**Control Delay (seconds/vehicle)**	**Level of Service**
≤ 10	A	≤ 10	A
> 10 - 20	B	> 10 - 15	B
> 20 - 35	C	> 15 - 25	C
> 35 - 55	D	> 25 - 35	D
> 55 - 80	E	> 35 - 50	E
> 80	F	> 50	F

1. Per Exhibit 18-4 of the 2010 *Highway Capacity Manual.*
2. Per Exhibits 19-1 and 20-2 of the 2010 *Highway Capacity Manual.*

MOBILITY DEFICIENCY STANDARDS

City of Paso Robles Facilities: The City's TIA Guidelines specify mobility deficiency criteria for a variety of study elements. Table 2 summarizes these criteria, which are used to identify deficiencies.

Table 2: City of Paso Robles Mobility Deficiency Criteria[1]

Study Element	Deficiency Determination
On-site Circulation and Parking	Project designs fail to meet City or industry standard guidelines, fail to provide adequate truck access, will result in unsafe condition, or will create parking demand or supply above code requirement.
Pedestrian, Bicycle, Transit Facilities	Project fails to provide safe and accessible connections, conflicts with adopted plans, or adds trips to facility that doesn't meet current design standards.
Traffic Operations	Project causes vehicle queues that exceed turn pocket lengths, increases safety hazards, or causes stop-controlled intersection to operate below LOS D and meet signal warrant.

1. Summary based on Table 5 of City's Transportation Impact Guidelines.

Caltrans Facilities: Operations degrade from LOS C or better to LOS D, E, or F; or project traffic worsens the service level of an intersection or segment operating at LOS D, E, or F. Caltrans does not provide a threshold related to queuing.

Existing Conditions

This section describes the existing transportation system and current operating conditions in the study area.

EXISTING ROADWAY NETWORK

US Highway 101 is a north-south facility connecting Los Angeles to San Francisco. In the vicinity of the project it is a four-lane freeway with a full access interchange at State Route 46E.

State Route 46 is an east-west facility connecting the Central Valley with the Central Coast. In the vicinity of the project it consists of four lanes with at-grade intersections at side streets.

Buena Vista Drive is primarily a north-south arterial roadway that runs from the Paso Robles Municipal Airport to State Route 46. It provides four travel lanes near State Route 46 and two travel lanes north of the Cuesta College campus.

Golden Hill Road is a north-south arterial with two travel lanes north of Dallons Drive and four travel lanes between State Route 46 and Dallons Drive.

River Oaks Drive is an east-west two-lane arterial connecting N River Road to Buena Vista Drive. It serves primarily residential uses. East of Buena Vista Drive it becomes Dallons Drive.

Clubhouse Drive is a short local collector road with two travel lanes connecting River Oaks Drive to the River Oaks Spa.

Dallons Drive is a two-lane east-west arterial connecting Buena Vista Drive to Golden Hill Road. West of Buena Vista Drive it becomes River Oaks Drive.

River Road is a north-south two-lane arterial running parallel to the Salinas River within the City limits. It crosses under State Route 46 and parallels Highway 101 on the east bank of the river.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian facilities include sidewalks, crosswalks, multi-use paths, and pedestrian signals at signalized intersections. Sidewalks are provided along portions of Buena Vista Drive and along most of River Oaks Drive, Clubhouse Drive, and Dallons Drive. Marked crosswalks are provided at the intersections of River Oaks Drive/Clubhouse Drive, River Oaks Drive/Buena Vista Drive, across the north leg of Buena Vista Drive/State Route 46, and across three legs of the Golden Hill Road/State Route 46 intersection.

Bicycle facilities consist of multi-use paths separate from the roadway (Class I), on-street striped bike lanes (Class II), and signed bike routes (Class III). Class II bike lanes are provided on Dallons Drive.

EXISTING TRANSIT SERVICE

The Paso Express provides fixed route and dial-a-ride transit service throughout the City of Paso Robles. The dial-a-ride service provides curb-to-curb service on weekdays from 7:00 AM to 1:00 PM.

The San Luis Obispo Regional Transit Authority (RTA) provides regional fixed-route and dial-a-ride services to San Luis Obispo County. Route 9 connects the North County and the City of San Luis Obispo, with a stop at Cuesta College North campus on weekdays. RTA also operates a summer beach shuttle connecting the North County to Cayucos.

EXISTING TRAFFIC CONDITIONS

Traffic counts for weekday AM and PM peak hour conditions were collected at the study intersections in May 2014 and October 2015 when schools were in session. The traffic count sheets are included in Appendix A.

Figure 3 shows the existing peak hour traffic volumes and lane configurations. Table 3 presents the LOS and Table 4 presents the queues for the study intersections, and the detailed calculation sheets are included in Appendix B.

Table 3: Existing Intersection Levels of Service

Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]
1. North River Road/	AM	4.7 (11.0)	A (B)
River Oaks Drive	PM	5.0 (10.3)	A (B)
2. Buena Vista Drive/	AM	11.8	B
River Oaks Drive	PM	8.6	A
3. State Route 46 E/	AM	14.8	B
Buena Vista Drive	PM	7.2	A
4. State Route 46 E/	AM	20.0	B
Golden Hill Road	PM	21.3	C

1. HCM 2010 average control delay in seconds per vehicle.
2. For side-street-stop controlled intersections (i.e. N River Road/ River Oaks Drive) the worst approach's delay is reported in parenthesis.

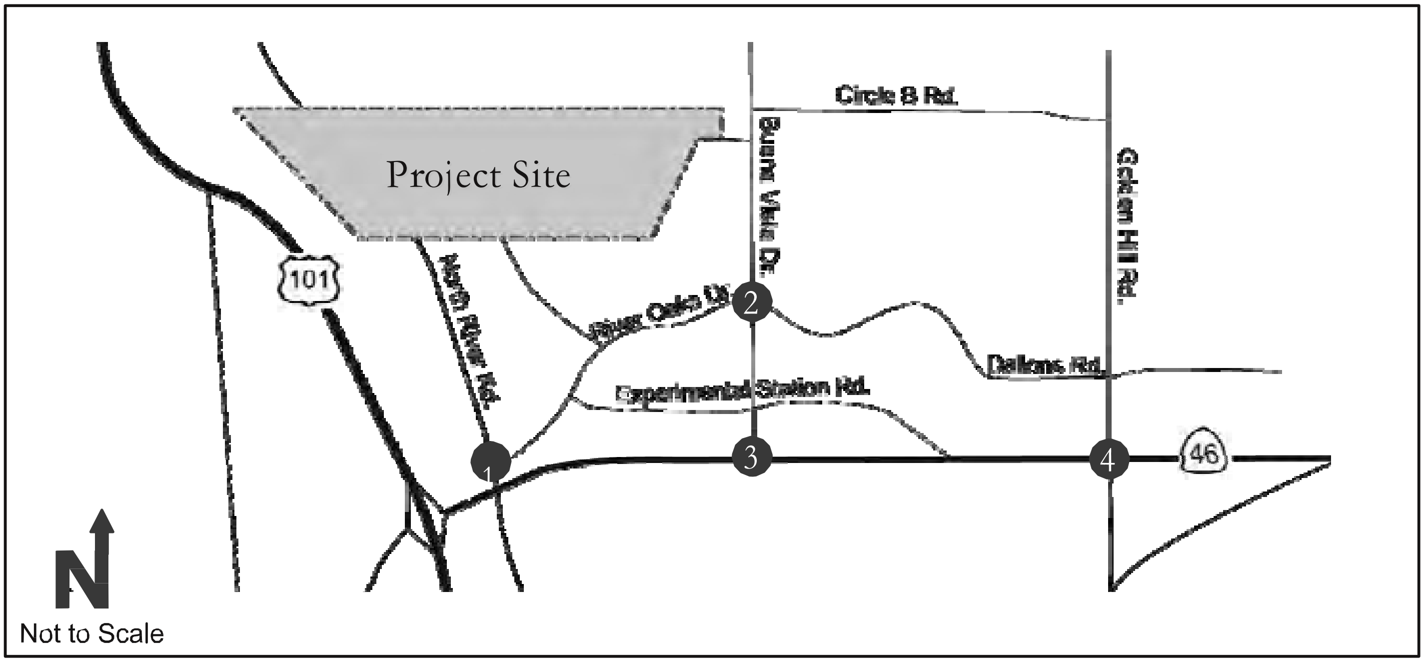
All of the study intersections operate at LOS C or better during the weekday peak hours.

Table 4: Existing Queues

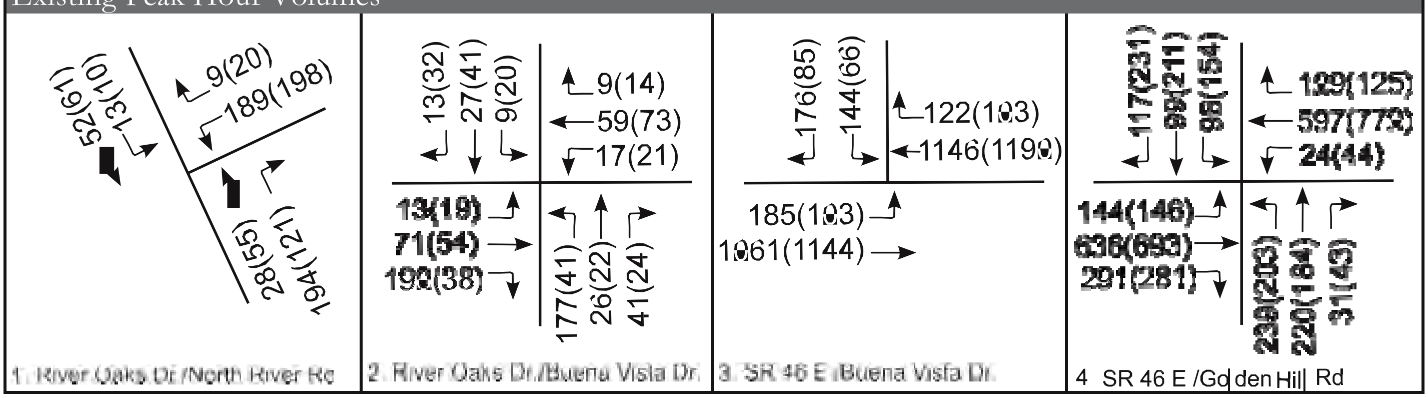
Intersection	Peak Hour	Movement	Storage (ft)	95% Queue (ft)
1. North River Road/ River Oaks	AM	NBR	200	30
	PM			25
2. Buena Vista Drive/ River Oaks	AM	NBL	90	58
	PM			8
3. State Route 46 E/ Buena Vista	AM	EBL	720	194
	PM			86
4. State Route 46 E/ Golden Hill Road	AM	EBL	550	72
	PM			76
	AM	SBL	130	54
	PM			79

All of the study intersections operate acceptably in terms of queue lengths.

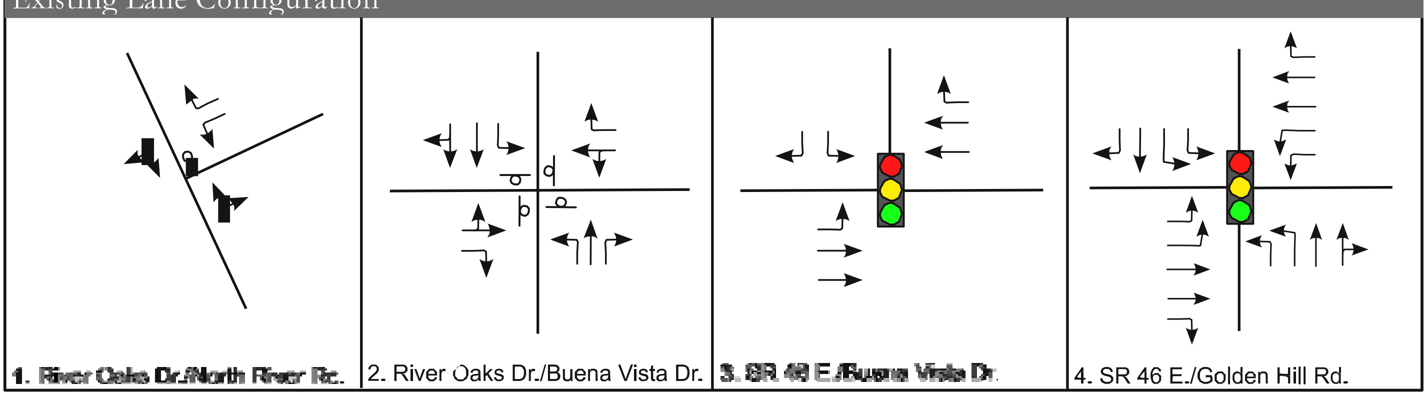
Figure 3: Existing Peak Hour Volumes and Lane Configurations



Existing Peak Hour Volumes



Existing Lane Configuration



Legend:

7 - Study Area Intersection
xx(yy) - AM(PM) Peak Hour Traffic Volumes
- Traffic Signal
- Stop Sign

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

Exhibit B – Response to Comments Received

Exhibit B - Comment Letters Received

Comment Letter 1

City of El Paso De Robles
Community Development Department
1000 Spring Street
Paso Robles, Ca 93446
Attn: Susan DeCarli

Ms. DeCarli,

My name is Robert McGuire I live at 682 Ingalls Ct. Paso Robles in Traditions. I was noticed by city in regards to the proposed River Oaks II – Wxpansion.

I have concerns over the current and increased traffic the project will create on Clubhouse Drive with the additional 144 homes planned just North of Traditions.

Currently there is a accident waiting to happen where Traditions Loop and Clubhouse Drive meet. When a resident of Traditions has to make a left turn on to Traditions Loop when heading North on Clubhouse the tall trees on the East side of Clubhouse on the golf course property, combined with the bend in the road just North of Traditions Loop presents an obstruction to one's vision of vehicles heading South on Clubhouse.

It is not a matter of "if" but more when there will be an accident. The addition of the 144 homes, if each household makes just one trip a day heading South on Clubhouse that will roughly be 1000 additional trips per week not counting visitor's, delivery trucks which does not exit today.

The Planning Commission as well as the City of El Paso DeRobles should be concerned for the safety of it's Senior citizens as both communities are for folks over age 55 and as we age our reflexes and vision deteriorate. Hopefully something can be done before the project actually starts if approved rather than at the end of the build out of the additional homes.

When I moved into Traditions those tall trees on the East side of Clubhouse did not exist and you could see clearly traffic heading South on Clubhouse. Not only do the trees create an obstruction to one's vision but the original owners of the homes on the West side of Clubhouse paid a premium for the open view which some of the owners lost due to the trees.

I certainly hope the Planning Commission and the City of Paso Robles reviews this situation and finds a solution to the obstruction and avoids the accident waiting to happen and keep our Senior citizens living in the area safe.

Thank you in advance for your consideration,

Robert McGuire
682 Ingalls Ct.
Paso Robles, Ca 93446
805-712-3589

Comment Letter 2

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Coast Regional Water Quality Control Board

May 6, 2016

Susan DeCarli
City of Paso Robles
1000 Spring Street
Paso Robles, CA 93446
Email: sdecarli@prcity.com

Dear Ms. DeCarli:

CENTRAL COAST WATER BOARD STAFF COMMENTS ON THE CITY OF PASO ROBLES – INITIAL STUDY FOR A GENERAL PLAN AMENDMENT FOR THE RIVER OAKS EXPANSION PROJECT, SAN LUIS OBISPO COUNTY, SCH NO. 2016041031

Central Coast Water Board staff has conducted a review of components of the Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed River Oaks II Expansion Project (Project). Central Coast Water Board staff review focused on stormwater management and impacts to waters of the State. Central Coast Water Board staff may have additional comments during future permitting of the Project, as more Project details become available.

Central Coast Water Board staff understands that the proposed Project involves a Zoning Amendment to allow for the development on a 113-acre bluff-top site off of River Road and north of Highway 46 in the City of Paso Robles, as follows:

- 144 age-restricted single family units
- 127 single-family residential units
- 18 acres of open space
- 85 acres of agricultural land use for neighborhood-serving crop production and a farm stand
- Soccer Field Practice Facility Area

<u>Post-Construction Stormwater Management</u>

The IS/MND does not adequately demonstrate that stormwater runoff from the proposed Project will be managed to protect water quality and beneficial uses of waters of the State. Section IX (Hydrology and Water Quality) states in subsection (a) that the design of stormwater basins will incorporate stormwater control measures to meet the Regional Water Quality Control Board requirements. The section further states that the primary stormwater basin (Basin #1) is the existing perennial lake/pond on the east side of the project. Central Coast Water Board staff finds that the perennial lake/pond is waters of the State. Waters of the State are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The lake/pond was formed through the placement of a berm or dam in the channel of an unnamed tributary to the Salinas River.

As noted in the Biological Report (Attachment 12) at Section 5.1.5 (Wetland), waters of the State (such as the perennial lake/pond) should not be used to achieve compliance with post-construction stormwater requirements. Attainment of post-construction stormwater requirements for the treatment and control of stormwater volumes and flows needs to occur prior to discharge to waters of the State.

Dredge and/or Fill in Waters of the State

The Biological Report (Attachment 12) states that the project has the potential to impact wetlands, ephemeral pools, and riparian habitat. Any such impacts will require a Clean Water Act Section 401 Water Quality Certification and/or Waste Discharge Requirements from the Central Coast Water Board. During review of applications for these permits, staff requires project proponents to demonstrate impacts have been avoided and minimized to the maximum extent practicable. In addition, any permanent impacts to waters of the State will require compensatory mitigation. The currently proposed 2:1 mitigation ratio may not be sufficient, depending on the quality of the impacted water bodies and the proposed mitigation characteristics.

Water Body Setbacks

Mitigation Measure BR-13 in Section IV of the IS/MND states that a minimum 50-foot setback will be observed from ephemeral drainages, as measured from the outer edge of riparian vegetation. The setback should be measured from the outer drip-edge of riparian vegetation.

Soccer Field Practice Facility Area

The Concept Plan (Appendix A to the Biological Report) appears to show plans to develop a Soccer Field Practice Facility Area in riparian and wetland habitat adjacent to and even within the Salinas River. The project proponent must first avoid, and then minimize, impacts to waters of the State. The current location and size of the soccer field do not demonstrate avoidance and/or minimization.

We encourage the Project proponent to contact Central Coast Water Board staff as early as possible for a pre-application review to avoid permitting delays and the potential need for alteration of Project plans. If we may clarify any of our comments or be of further assistance, please contact **Paula Richter** at (805) 549-3865, or via email at Paula.Richter@waterboards.ca.gov, or Phil Hammer at (805) 549-3882.

Sincerely,

for
John M. Robertson
Executive Officer

RB3\Shared\CEQA\Comment Letters\San Luis Obispo\2016\River Oaks II Expansion\R3_401_RWQCB CEQA Comment Letter_River Oaks II Expansion_2016_05-10_final

Comment Letter 3

COUNTY OF SAN LUIS OBISPO
Department of Agriculture/Weights and Measures
2156 SIERRA WAY, SUITE A • SAN LUIS OBISPO, CALIFORNIA 93401 - 4556
MARTIN SETTEVENDEMIE (805) 781-5910
AGRICULTURAL COMMISSIONER/SEALER FAX: (805) 781-1035
www.slocounty.ca.gov/agcomm AgCommSLO@co.slo.ca.us

DATE: **May 17, 2016**

TO: **Susan DeCarli, Project Manager City of Paso Robles**

FROM: **Lynda L. Auchinachie, San Luis County Agriculture Department**

SUBJECT: **River Oaks II Expansion, General Plan GPA 13-002, Rezoning Amendment RZ 13-001, and Specific Plan Amendment SPA 13-001 (1875)**

The Agriculture Department has reviewed the River Oaks II Expansion Initial Study relative to mitigating impacts associated with land use incompatibilities between proposed residential uses and agricultural operations located along the northern property line. The project site is located directly south and adjacent to commercial agricultural operations including a wine grape vineyard and an area of irrigated vegetable production. To mitigate potential land use incompatibles between agricultural operations and the proposed residential land uses, a 100 foot buffer (linear separation) between the northern property line and the proposed residences has been identified. The buffer is to include fencing and landscaping features to further reduce impacts.

The San Luis Obispo County General Plan's Agriculture Element includes Agricultural Buffer policies (AGP 17 and Appendix C) aimed at protecting land designated Agriculture, lands supporting commercial crop production, and the public's health and safety. Commercial crop production requires intensive management to be economically feasible. Such management requires activities that may need to occur throughout the day and night depending on the type of pest pressures, weather conditions, and requirements of the crop. These management practices can generate land use incompatibilities/nuisance issues in terms of noise, dust, and odor generation that degrade the quality of life for residents. Nuisance complaints can force operational changes and restrict practices to the detriment of the agricultural operations. The County's Right to Farm Ordinance does not preclude nuisance complaints or lawsuits. While nuisance issues are important, so too are public health and safety concerns associated with locating residences in close proximity to crop production areas that require agricultural pesticide applications. The County's Agriculture Element identifies a buffer range of 200-600 feet between habitable structures and irrigated wine grape vineyards and vegetables. It is critical that agricultural operations maintain their ability to be flexible and respond to changing conditions rather than be limited in terms of practices and ultimately crop choices due to introduced land use incompatibilities. Agricultural buffers play an important role in maintaining such flexibility.

The comments in our memo are based on the county's relevant agricultural policies, current departmental goals to conserve agriculture resources and to provide for public health, safety and welfare while mitigating negative impacts of development to agriculture, and the requirements of the California Environmental Quality Act (CEQA).

Comment Letter 4

From: Wilbanks, John B. [mailto:JBWilbanks@rrmdesign.com]
Sent: Monday, May 16, 2016 10:15 AM
To: Warren Frace <WFrace@prcity.com>
Subject: Ag Buffer

Hi Warren,

I wanted to touch base on the ag buffer discussions. I see that Dick sent you the images from the projects in Brentwood and South Livermore Valley. I think they are very informative of the distinction between a typical residential subdivision pushing out against agriculture at a community's boundary and the intentional effort to create an "agri-hood" that incorporates the very character and operation of agriculture into the neighborhood fabric.

The "buffer" we have proposed is not so much a buffer as a space the connects the two uses. To increase the width of that space will diminish the effort to accomplish that integration. The treatment of that edge, if treated as a point of connectivity, will actually do more to deter conflict than if that edge is treated as a hard line that seems to create separation. It is similar to the "eyes on the street" concept of opening homes to the street space as a social space that connects neighborhoods.

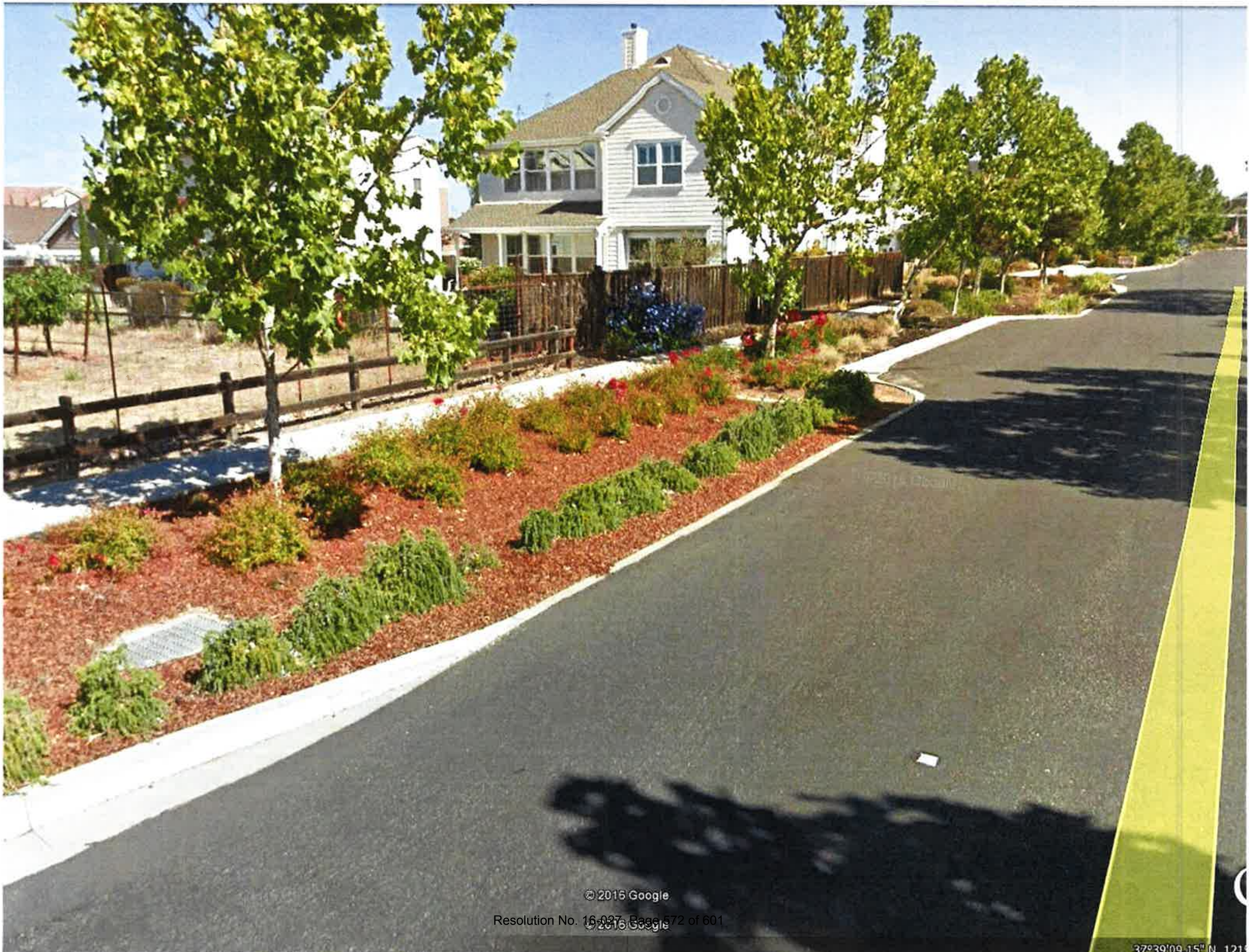
As you can see in the photos Dick forwarded to you, there is really no "buffer" between the ag and the neighborhoods as they are intended to function as an integrated unit, and as in the case of the South Livermore Valley, with agriculture being the priority. That is our intention with River Oaks.

So I would encourage you to reconsider the City's position on a minimum 100' buffer – there is no environmental basis for it and it is contrary to the project's proposed intent as well as the City's stated economic development priorities. Further, in my opinion, it works against one of the core concepts of the proposal.

I am happy to discuss this with you if you like.

rrm design group

John
John B Wilbanks, AICP, CNU-A
Principal
3765 S. Higuera St., Suite 102
San Luis Obispo, CA 93401
(805) 543-1794 I D: 805 903-1251
rrmdesign.com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37°39'09.15" N 121


St-Emilion-Ln
St-Julien-St
Vineyards-Pkwy
California-Trail
Shiraz-Ct
Pinot-Pl
Chardonnay-Ln
Trilogy-Pkwy
Sacred-Mountain-Ln
© 2015 Google
37°54'08.79" N 121°


Gregory Way
Decker Ln
Elston St
Elston Way
Charlotte Way
S Vasco Rd
Oakville Ln
St Helena Ct
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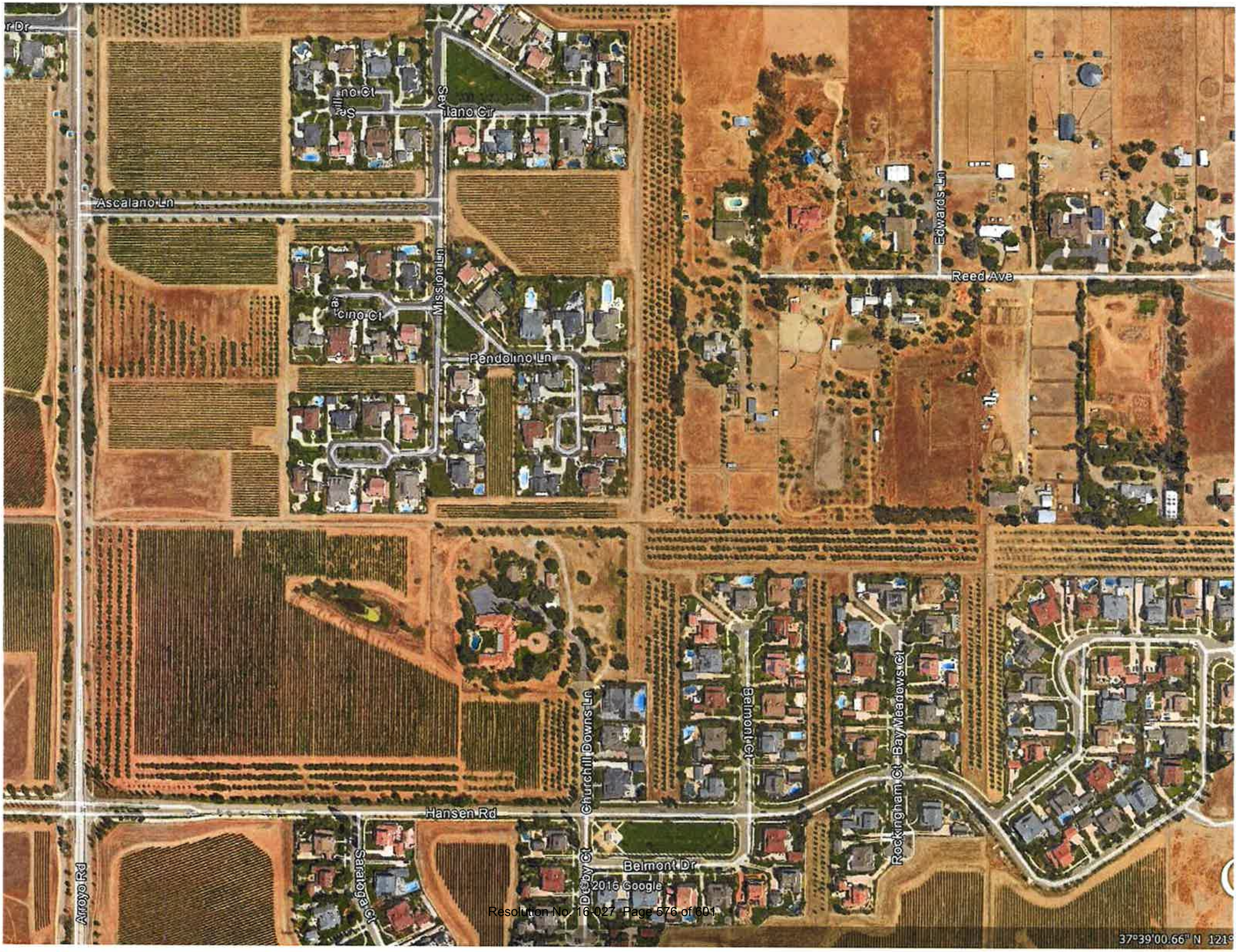
© 2016 Google
© 2016 Google
37°54'25.67" N


Ascalano Ln
Mission Ln
Pendolino Ln
Edwards Ln
Reed Ave
Churchill Downs Ln
Belmont Ct
Bay Meadows Ct
Rockingham Ct
Hansen Rd
Saratoga Ct
Belmont Dr
Arroyo Rd
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Maybeck Ln
Hopps Ln
Keeler Ct
Keeler St
Marin Ln
Hall Ct
Carnegie Loop
Staghorn Way
Carlyle St
Carnegie Way
Hearst St
Lawson Ct
Charlotte Way
Beck Ln
Lawson Cir
© 2016 Google
37°40'34.98" N 121°4

Exhibit B –
Responses to Comments Received

Traffic - response to comments:

Comment Letter 1 – 5/5/16 Bob McGuire email

From: Bob McGuire [mailto:rpmcguire@charter.net]
Sent: Friday, May 06, 2016 5:51 AM
To: Susan DeCarli <SDeCarli@prcity.com>
Subject: Re: River Oaks II - Expansion

thank you for getting back to me. Will we be read noticed about the meeting on May 24?

On May 5, 2016, at 1:23 PM, Susan DeCarli <SDeCarli@prcity.com> wrote:

Dear Mr. McGuire,

Thank you for sending your letter and expressing your concerns. The site-distance visibility issue with regard to the trees was brought to our attention at the project open house held last November. The project transportation engineer has made recommendations to address this issue, and the owner is aware of it. Your letter will be forwarded to the Planning Commission to review when they consider this project.

The project was scheduled and noticed to be considered by the Planning Commission next Tuesday, on 5/10/16, however, review of the project is not ready and city staff is requesting this item be continued to the next meeting on 5/24/16.

Regards,
Susan DeCarli
City Planner

----Original Message-----
From: Bob McGuire [mailto:rpmcguire@charter.net]
Sent: Thursday, May 05, 2016 12:48 PM
To: Susan DeCarli <SDeCarli@prcity.com>
Subject: River Oaks II - Expansion

Attached is my letter outlingin (sic) my concers (sic) regarding River Oaks II - Expansion.

682 Ingalls Ct. / Paso Robles, CA 93446 / 805-712-3589

Hydrology - response to comments:

Comment Letter 2 – 5/6/16 Central Coast Regional Water Quality Control Board letter

The City of Paso Robles understands the applicable regulations and requirements for future development of this proposed project in regard to post-construction storm water management, and alterations to and/or setback requirements to Waters of the State. The City intends to fully cooperate with meeting the various requirements to protect these natural resources, and work through the permitting and certification processes with the CCRWQCB and other affected State and Federal agencies, as necessary.

At this stage, the proposed project includes legislative amendments, including amendments to the General Plan Land Use and Circulation Elements, Zoning Code, and Borkey Area Specific Plan, and a conceptual Master Development Plan intended to guide future development. The project mitigation measures are stated in broad terms to cover all future requirements necessary that may occur at the tentative map and grading permit phase of entitlements. Specific development details and determination of precise features and methods to control storm water and address water resource permits will be determined when development plan applications are proposed.

Agricultural Buffers - response to comments:

Comment Letter 3 – 5/17/16 SLO County Department of Agriculture letter

The City received two communications regarding the proposed 100-foot agricultural buffer mitigation measure for this project. The SLO County Department of Agriculture recommends agricultural buffers to be between 200 and 600 feet between habitable structures and irrigated grape vineyards and row crops. However, given the topography of the site and adjacent agricultural land the City determined that a 100-foot setback buffer with trees, hedgerows and fencing included along the project boundary would be sufficient to reduce potential nuisance and/or health impacts by filtering windblown dust and other airborne constituents, and reducing the potential light and glare that may occur from tractor lights, from future residents in the proposed project. Noise from agricultural operations can be significantly reduced through architectural solutions as well as being separated from the source through setback buffers, such as what is proposed. In this situation, it does not appear that there is a demonstrable benefit by increasing the buffer to between 200 and 600 feet.

Comment Letter 4 – 5/516 John Wilbanks email, RRM Design Group, applicants' representative

The applicant has requested the proposed 100-foot agricultural buffer mitigation measure be reduced to 75 feet. The applicant suggests that there is no environmental basis for a 100-foot buffer and that it is contrary to the applicants' project design. As noted in the correspondence received from the Department of Agriculture there is a basis to provide buffers between residences and agricultural activities, as it serves to protect the health and safety of future residents from dust, noise, and odors. However, in light this site-specific circumstance, there is a 25-foot wide service road along the vineyards and row crops, adjacent to the project site. This adds an additional 25-foot setback buffer which when combined with the 75-foot setback on the applicant's property, provides an effective setback of 100 feet. Therefore, a 75-foot setback on the applicants' property would provide an adequate buffer to reduce potential land use conflicts and protect future residents from potential health and safety risks associated with nearby agricultural operations. A substitution of the 75-foot mitigation measure will be recommended to Planning Commission and City Council.

Exhibit C - Mitigation Monitoring and Reporting Program

Exhibit C - Mitigation Monitoring and Reporting Plan

Mitigation Monitoring and Reporting Plan

Project File No./Name: River Oaks II Expansion – GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001
Approving Resolution No.:___________by: ☐ Planning Commission ☒City Council Date: 6/21/16

The following environmental mitigation measures were either incorporated into the approved plans or were incorporated into the conditions of approval. Each and every mitigation measure listed below has been found by the approving body indicated above to lessen the level of environmental impact of the project to a level of non-significance. A completed and signed checklist for each mitigation measure indicates that it has been completed.

Explanation of Headings:

Type: ....Project, ongoing, cumulative
Monitoring Department or Agency: ....Department or Agency responsible for monitoring a particular mitigation measure
Shown on Plans: ....When a mitigation measure is shown on the plans, this column will be initialed and dated.
Verified Implementation: ....When a mitigation measure has been implemented, this column will be initialed and dated.
Remarks: ....Area for describing status of ongoing mitigation measure, or for other information.

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
Aesthetics					
AES-1. Grading. Future site development of the site shall utilize landform, contour grading techniques to reduce the appearance of unnatural, angled slopes to help graded slopes blend in with the surrounding landscape. All exposed graded slopes shall be landscaped to soften the appearance of and camouflage graded slopes to be compatible with the surrounding development pattern and landscape.	Project	CDD	Apply	To be shown on grading plans	Prior to issuance of grading permits.
AG-1. Agricultural Buffer. An agricultural buffer setback from the northern property line of ~~100~~ 75 feet and a requirement to plant a dense row of trees and a hedgerow to reduce dust along the northern property line, shall be recorded on the property title with recordation of all subdivision maps.	Project, ongoing	CDD	Apply	Notes to be shown tract maps, site plans, grading plans and construction documents	Recorded on the property title with recordation of all subdivision maps. The setback was modified from 100 ft to 75 ft based on the response to comment letter #4.
AG-2. "Right-to-Farm" Notice. A "right-to-farm" notice	Project	CDD		Tract map	A "right-to-farm" notice

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
shall be recorded on the deed of each property within this project area.					shall be recorded on the deed of each property within this project area.
Air Quality					
AQ-1. Short-Term Construction-Related Emissions. • Interior and exterior paints used during project construction shall have a maximum allowable VOC content of 150 grams per liter; • Maintain all construction equipment in proper tune according to manufacturer's specifications; • Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road); • Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation; • Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; • Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_x exempt area fleets) may be eligible by proving alternative compliance; • Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators, discouraging them from idling for more than 5 minutes; • Diesel idling within 1,000 feet of sensitive receptors shall be discouraged to the extent feasible;	Project	CDD		Submit with site grading and building plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
• Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors; • Electrify equipment when feasible; Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and, • Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel. Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines; • Repowering equipment with the cleanest engines available; and • Installing California Verified Diesel Emission Control Strategies. These strategies are listed at: http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm					
AQ-2. Dust Control Construction Emissions • Reduce the amount of the disturbed area where possible; • Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Water could be applied as soon as possible whenever wind speeds exceed 15 miles per hour; • All dirt-stock-pile areas could be sprayed daily as needed; • Permanent dust control measures could be identified in the approved project revegetation and landscape plans and implemented as soon as possible following completion of any soil disturbing activities; • Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading could be sown with a fast-germinating native grass seed and watered until vegetation is established;	Project; ongoingt	CDD		Submit with site grading and building plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
• All disturbed soil areas not subject to revegetation could be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD; • All roadways, driveways, sidewalks, etc., to be paved could be completed as soon as possible. In addition, building pads could be laid as soon as possible after grading unless seeding or soil binders are used; • Vehicle speed for all construction vehicles could not exceed 15 mph on any unpaved surface at the construction site; • All trucks hauling dirt, sand, soil or other loose materials could be covered or could maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114; • Install wheel washers where vehicles enter and exit unpaved roads onto streets, and/or rumble strips for trucks and equipment leaving the site; • Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water could be used where feasible;and • Construction personnel should wear protective face masks while grading and excavating soils that contain serpentine soil; • All PM10 mitigation measures required shall be shown on grading and building plans; and, • The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce shall include holidays and					

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.					
AQ-3. Mobile Emissions. Mitigation Measure AQ-3, provides measures to reduce mobile emissions to a less than significant level. These include implementing at least 18 of the 24 measures identified by the local air district, provided below: 1. Provide a pedestrian-friendly and interconnected streetscape to make walking more convenient, comfortable and safe (including appropriate signalization and signage). 2. Provide good access to/from the development for pedestrians, bicyclists, and transit users. 3. Incorporate outdoor electrical outlets to encourage the use of electric appliances and tools. 4. Provide shade tree planting in parking lots to reduceevaporative emissions from parked vehicles. Design should provide 50% tree coverage within 10 years of construction using low ROG emitting, low maintenance native droughtresistant trees. 5. Pave and maintain the roads and parking areas 6. No residential wood burning appliances.	Project; on-going	CDD		Submit with site grading and building plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
7. Incorporate traffic calming modifications to project roads, such as narrower streets, speed platforms, bulb---outs and intersection designs that reduce vehicles speeds and encourage pedestrian and bicycle travel. 8. Increase number of connected bicycle routes/lanes in the vicinity of the project. 9. Provide easements or land dedications and construct bikeways and pedestrian walkways. 10. Link cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel to adjacent land uses. 11. Plant drought tolerant, native shade trees along southern exposures of buildings to reduce energy used to cool buildings in summer. 12. Utilize green building materials (materials which are resource efficient, recycled, and sustainable) available locally if possible. 13. Install high efficiency heating and cooling systems. 14. Utilize high efficiency gas or solar water heaters. 15. Utilize built---in energy efficient appliances (i.e. Energy Star®). 16. Utilize double---paned windows. 17. Utilize low energy street lights (i.e. sodium). 18. Utilize energy efficient interior lighting. 19. Install door sweeps and weather stripping (if more efficient doors and windows are not available).					

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
20. Install energy---reducing programmable thermostats. 21. Develop recreational facility (e.g., parks, gym, pool, etc.) within one---quarter of a mile from site. 22. If the project is located on an established transit route, provide improved public transit amenities (i.e., covered transit turnouts, direct pedestrian access, covered bench, smart signage, route information displays, lighting etc.). 23. Project provides a display case or kiosk displaying transportation information in a prominent area accessible to employees or residents. 24. Provide vanpool, shuttle, mini bus service (alternative fueled preferred).					
AQ-4. Sensitive Receptors. a. Prior to issuance of a grading permit, a permit to operate shall be obtained from the SLOAPCD for any diesel emergency back-up generator, 50 hp or greater, that is included as part of the project plans. If the applicant decides to add a permit-required generator to the facility after the occupancy permit, then this mitigation measure is official notice to the applicant that an APCD permit is required prior to the installation of the proposed generator. b. Prior to any grading activities a geologic evaluation shall be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the SLOAPCD. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM.	On-going	CDD			Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
These requirements may include development of an Asbestos Dust Mitigation Plan, which must be approved by the SLOAPCD prior to construction, and Development and approval of an Asbestos Health and Safety Program (potentially required for some projects).					
Biology					
Mitigation Measure BR-1. If impacts to wetlands would occur as a result of proposed project activities, a mitigation, monitoring, and reporting plan should be prepared and approved by the City and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Wetland mitigation will increase the areal extent of wetland habitat on site at a two-to-one ratio (created wetland area to impacted wetland area), or other ratio determined by the permitting agency. Mitigation implementation and success will be monitored for a minimum of three years, depending on the jurisdictional agencies' requirements.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
Mitigation Measure BR-2. Tree canopies and trunks within 50 feet of proposed disturbance zones should be mapped and numbered by a certified arborist of qualified biologist and a licensed land surveyor. Data for each tree should include date, species, number of stems, diameter at breast height (dbh) of each stem, critical root zone (CRZ) diameter, canopy diameter, tree height, health, habitat notes, and nests observed.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-3. An oak tree protection plan should be prepared by a qualified (City listed)	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
arborist, and approved by the City of Paso Robles.					
Mitigation Measure BR-4. Impacts to the oak canopy or critical root zone (CRZ) should be avoided where practicable. Impacts to oak trees may result from pruning, ground disturbance within the dripline or CRZ of the tree (whichever distance is greater), and damage to tree trunks.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-5. Impacts to oak trees should be assessed by a licensed arborist. Mitigations for impacted trees should comply with the City of Paso Robles tree ordinance.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-6. Replacement oaks for removed trees must be equivalent to 25% of the diameter of the removed tree(s). For example, the replacement requirement for removal of two trees of 15 inches dbh (30 total diameter inches), would be 7.5 inches (30" removed x 0.25 replacement factor). This requirement could be satisfied by planting five 1.5 inch trees, or three 2.5 inch trees, or any other combination totaling 7.5 inches. A minimum of two 24 inch box, 1.5 inch trees should be required for each oak tree removed.	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit
Mitigation Measure BR-7. Replacement trees shall be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least three years. Replacement trees should be of local origin, and of the same species as was impacted or removed. **Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).**	Project	CDD; arborist	Apply	Note on plans	Prior to issuance of grading permit; annual report first 3 years

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
BR-8. Within one week of ground disturbance or tree removal/trimming activities, if work occurs between March 15 and August 15, nesting bird surveys shall be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees and grasslands should not be conducted during the breeding season from March 1 to August 31. If construction activities must be conducted during this period, nesting bird surveys shall take place within one week of habitat disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests until chicks are fledged. Construction activities shall observe a 300-foot buffer for occupied raptor *Althouse and Meade, Inc. – 590.01 Biological Report for River Oaks II, Paso Robles, San Luis Obispo County* 50 nests. A 500-foot buffer should be observed from occupied nests of all special status species. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report will detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. Impacts to significant wildlife movement corridors are not anticipated from the proposed project; therefore no mitigation is recommended. Special status plants were not found and are not expected to occur in the Study Area; therefore no mitigation is recommended. **If construction activities are conducted during the nesting season, from March 15 through August 15, pre-construction nesting bird surveys will be conducted (see BR-8). If occupied nests of special status birds (e.g. Cooper's hawk, sharp-shinned hawk, golden eagle, burrowing owl, yellow warbler,**	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
white-tailed kite, loggerhead shrike, and least Bell's vireo) are present, the following additional mitigation recommendations will be implemented:					
BR-9. All occupied nests of special status bird species will be mapped using GPS or survey equipment. The mapped locations will be placed on a copy of the grading plans with a 500-foot buffer indicated. Work shall not be allowed within the 500-foot buffer while the nest is in use. The buffer zone should be delineated on the ground with orange construction fencing where it overlaps work areas.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-10. Occupied nests of special status bird species that are within 500 feet of project work areas will be monitored bi-monthly through the nesting season to document nest success and check for project compliance with buffer zones. Once nests are deemed inactive and/or chicks have fledged and are no longer dependent on the nest, work can commence.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-11. Grubbing, grading, and other ground disturbance activities conducted within 50 feet of the Salinas River or the perennial pond will be monitored by a qualified biologist. If pond turtles are found in the project areas, they will be moved to an appropriate safe location on site. The biological monitor must have appropriate permits for	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
handling pond turtles. Spadefoot toads breed in ephemeral pools in the Paso Robles region. They are known to occur in the vicinity of the subject property. Surveys of the property conducted during the 2006-2007 rainfall year were not definitive due to the extreme below normal rainfall, and ephemeral pools did not adequately fill. Therefore, additional surveys for spadefoot toad in potential ephemeral pool locations should be conducted prior to project construction.		Water Quality Control Board			
BR-12. Prior to development, a survey of any ephemeral pools should be conducted within three weeks of saturating winter rainfall to determine the presence or absence of spadefoot toad on the property. If spadefoot toad is found, a mitigation plan, which may include avoidance, capture, and relocation, will be developed by a qualified biologist to reduce project effects on this species to a less than significant level.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-13. Prior to development, a survey of any ephemeral pools will be conducted within three weeks of saturating winter rainfall to determine the presence or absence of spadefoot toad on the property. If spadefoot toad is found, a mitigation plan, which may include avoidance, capture, and relocation, will be developed by a qualified biologist to reduce project effects on this species to a less than significant level.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
BR-13. All construction related activities must observe a 100-foot set-back from the Salinas River, as measured from the outer edge of riparian canopy. A minimum 50-foot set-back will be observed from the ephemeral drainages and flood channels, as measured from the outer edge of riparian vegetation.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-14. The project will develop a Stormwater Pollution Prevention Plan (SWPPP) acceptable to the Regional Water Quality Control Board (RWQCB). Appropriate erosion control measures should be implemented at all times in areas that could potentially flow into the Salinas River. Erosion control measures should include, but are not limited to, effective placement of silt fence, straw waddles, hydroseed applications, and erosion control fabric. Project planning should strive for temporary and permanent erosion control.	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit
BR-15. A pre-construction survey will be conducted within thirty days of beginning work on the project to identify if badgers are using the site. The results of the survey will be sent to the project manager, CDFG, and the City of Paso Robles. If the pre-construction survey finds potential badger dens, they should be inspected to determine whether they are occupied. The survey should cover the entire property, and should examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope should be used to examine the den to the end. Inactive dens may be excavated by hand with a shovel to prevent re-use of	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	Type	Monitoring Department or Agency	Shown on Plans	Verified Implementation	Timing/Remarks
dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers from becoming trapped in burrows during construction activity, no grading will occur within 100 feet of active badger dens between February and July. Between July 1 and February 1 all potential badger dens will be inspected to determine if badgers are present. During the winter, badgers do not truly hibernate but are inactive and asleep in their dens for several days at a time. Because they can be torpid during the winter, they are vulnerable to disturbances that may collapse their dens before they rouse and emerge. Therefore, surveys should be conducted for badger dens throughout the year. If badgers are found on the property from July 1 through February 1, a qualified biologist may capture badgers and relocate them to an appropriate location off the property.					
BR-16. San Joaquin Kit Fox (SJKF) habitat. San Joaquin kit fox could occur in the project area. Future development of the property will result in a net loss of kit fox habitat. The project biologist prepared a SJKF habitat evaluation form, which indicates that the mitigation ratio for loss of SJKF habitat is a 2:1 ratio, which requires two acres of habitat to be preserved for every acre of habitat lost to site disturbance. The proposed mitigation strategy, which is provided in Attachment 13, provides for purchase of land bank credits through the Palo Prieto Conservation bank or by paying in-lieu fees through the Nature Conservancy. (Fees shall be paid prior to issuance of permits for ground disturbance/grading.) This strategy was circulated to the California Department of Fish and Wildlife (CDFW), and CDFW is satisfied that this is an acceptable mitigation	Project; ongoing	CDD; California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board		Annual report	Prior to issuance of grading permit

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
strategy, if the City of Paso Robles, as "Lead Agency" is satisfied that these measures provide adequate mitigation					
Cultural Resources					
CR-1. Human Remains. if human remains are found during site disturbance, all grading and/or construction activities shall stop, and the County Coroner shall be contacted to investigate.	Project	CDD			As needed
Hydrology					
HYD-1. Recycled Water. The project shall use recycled water when it becomes available for landscape irrigation and agricultural purposes.	Project	CDD; PW			Recorded with track maps
HYD-2. Well Metering. All on- and off-site wells permitted for use with this project shall have well meters installed per Public Works standards prior to recordation of the first subdivision map.	Project	CDD; PW			Recorded with track maps
HYD-3. Low-impact development. Incorporate all storm water control measures to meet the Regional Water Quality Control Board requirements by incorporating low-impact development features into the future project design.	Project; ongoing	CDD; PW Regional Water Quality Control Board	Apply	Plancheck	Prior to issuance of grading permits
HYD-4. Post-Construction Hydromodification. Incorporate all storm water control measures to manage potential post-construction hydromodification per the Regional Water Quality Control Board requirements into the future project design.	Project; ongoing	CDD; PW; Regional Water Quality Control Board	Apply	Plancheck	Prior to issuance of grading permits

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
Noise					
N-1: Construction Hours. Unless otherwise provided for in a validly issued permit or approval, noise-generating construction activities shall be limited to the hours of 7:00am and 7:00pm. Noise-generating construction activities shall not occur on Sundays or City holidays.	Project	CDD		Notes shown on construction documents.	Prior to issuing grading permit.
N-2: Construction Equipment Noise. Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhausted mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds should be closed during equipment operation.	Project	CDD		Notes shown on construction documents.	Prior to issuing grading permit.
Transportation					
TR-1 State Route 46/Buena Vista Drive. Add a second eastbound left-turn lane. This maintains LOS C conditions during the AM/PM peaks. Queue lengths would be reduced to acceptable levels with the second left-turn lane. This project is included in the City's Traffic Impact Fee program; funding from cumulative projects will be used to ensure that this improvement is implemented. The timing for this improvement depends on growth in the area, particularly increases in staffing and enrollment at Cuesta College North. Payment of the City's impact fees would address these deficiencies.	On-going	CDD			Prior to issuing grading permit.
TR-2 State Route 46/Golden Hill Road. Improve the North River Road/River Oaks Drive intersection with safety improvements, including but not limited to, traffic calming features, enhanced "line-of-sight"	Project	CDD			Prior to issuance of 91st sfr building

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**
visibility, stormwater management, and landscape enhancements, as part of parallel route improvements. This is consistent with the Caltrans SR 46 Corridor System Management Plan, which notes that Golden Hill Road remains a low-priority for location improvement and that local road improvements are a high priority within the corridor. The City's Traffic Impact Fee program funds improvements to parallel local routes. The City has developed plans to improve the intersection of North River Road/River Oaks Drive to reduce delay for the predominant vehicle flows at this intersection. The applicant shall construct improvements at this intersection prior to issuance of the 90th sfr building permit.					
TR-3 Buena Vista Drive. Buena Vista Drive shall be widened and improved to accommodate "Class 2" bike lane improvements on both sides of the street, extending from the project entrance on Buena Vista Drive south to the City boundary. The improvements will be installed concurrently with the connection of street improvements to Buena Vista Drive.	Project	CDD			The improvements will be installed concurrently with the connection of street improvements to Buena Vista Drive.
TR-4 River Trail. The applicant shall dedicate a 25-foot wide easement to the City along the Salinas River corridor west of River Road (the precise alignment to be determined upon implementation of this mitigation measure based upon suitability, such as terrain, vegetation and other constraints) to accommodate a public multi-use trail within the river corridor, consistent with the Salinas River Trail Master Plan. The applicant shall construct said trail improvements, and may enter into a reimbursement agreement for AB 1600 Park and Recreation Impact Fees. Said trail improvements shall be constructed prior to issuance construction permits for the 144th residential unit of the project development.	Project	CDD			Prior to issuance construction permits for the 144th residential unit of the project development

Mitigation Measure GPA 13-002, Rezone 13-001, and Specific Plan Amendment 13-001	**Type**	**Monitoring Department or Agency**	**Shown on Plans**	**Verified Implementation**	**Timing/Remarks**

Explanation of Headings:

Type: ....Project, ongoing, cumulative
Monitoring Department or Agency: ....Department or Agency responsible for monitoring a particular mitigation measure
Shown on Plans: ....When a mitigation measure is shown on the plans, this column will be initialed and dated.
Verified Implementation: ....When a mitigation measure has been implemented, this column will be initialed and dated.
Remarks: ....Area for describing status of ongoing mitigation measure, or for other information.