

## **PROPOSED MITIGATED NEGATIVE DECLARATION**

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

**Buceville Terrace (P16-025)** - The proposed project includes a Tentative Subdivision Map to subdivide the 9.6-acre project site into 85 residential lots and construct 85 single-family homes. Lot sizes for the homes would range from 2,450 sf to 4,320 sf. The single-family homes would be two-story and would range in size from 1,450 sf to 1,799 sf. The homes would be configured around 16,400 sf of open space, which would function as a stormwater detention pond.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required.

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892), and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3<sup>rd</sup> Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m.



# **Bruceville Terrace P16-025**

## **Initial Study / Mitigated Negative Declaration**

PREPARED FOR THE  
CITY OF SACRAMENTO



PREPARED BY RANEY PLANNING & MANAGEMENT, INC.  
SACRAMENTO, CALIFORNIA

DECEMBER 2016



# BRUCEVILLE TERRACE

## INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR ANTICIPATED SUBSEQUENT PROJECTS UNDER THE 2035 GENERAL PLAN MASTER EIR

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

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### ORGANIZATION OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

This IS/MND is organized into the following sections:

**SECTION I - BACKGROUND:** Provides summary background information about the project name, location, sponsor, and the date this IS/MND was completed.

**SECTION II - PROJECT DESCRIPTION:** Includes a detailed description of the proposed project.

**SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION:** Reviews proposed project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the Master EIR for the 2035 General Plan.

**SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:** Identifies which environmental factors were determined to have additional significant environmental effects.

**SECTION V - DETERMINATION:** States whether environmental effects associated with development of the proposed project are significant, and what, if any, added environmental documentation may be required.

**REFERENCES CITED:** Identifies source materials that were consulted in the preparation of the IS/MND.

**APPENDICES:** Appends technical information that was referenced as attached in the preparation of the IS/MND.

## SECTION I - BACKGROUND

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Project Name and File Number: Bruceville Terrace (P16-025)

Project Location: Northwest Corner of Bruceville Road and Jacinto Avenue  
Sacramento, CA 95758  
Assessor's Parcel Number (APN) 117-0910-041

Project Applicant: Mark Wiese  
Threshold Construction  
2115 J Street, Suite 201  
Sacramento, CA 95816  
(916) 325-8124  
[mwiese@pacifichousing.org](mailto:mwiese@pacifichousing.org)

Project Planner: Garrett Norman, Assistant Planner  
(916) 808-7934  
[gnorman@cityofsacramento.org](mailto:gnorman@cityofsacramento.org)

Environmental Planner: Dana Mahaffey, Associate Planner  
(916) 808-2762  
[dmahaffey@cityofsacramento.org](mailto:dmahaffey@cityofsacramento.org)

Date Initial Study Completed: November 2016

This IS/MND was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 1500 *et seq.*). The Lead Agency is the City of Sacramento.

The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that the proposed project is within the scope of the 2035 General Plan Master EIR, and there are no additional significant effects of the project that are not already discussed in the Master EIR. See CEQA Guidelines Section 15177 (c).

The City has prepared the attached IS/MND to review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2035 General Plan Master EIR to determine their adequacy for the project (see CEQA Guidelines Section 15178(b),(c)) and identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177(d)). Policies included in the 2035 General Plan that reduce significant impacts identified in the Master EIR are identified and discussed. See also the Master EIR for the 2035 General Plan. The mitigation monitoring plan for the 2035 General Plan, which provides references to applicable General Plan policies that reduce the environmental effects of development that may occur consistent with the General Plan, is

included in the adopting resolution for the Master EIR. See City Council Resolution No. 2015-0060, beginning on page 60. The resolution is available on the City's website at:

<http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx>.

This analysis incorporates by reference the general discussion portions of the 2035 General Plan Master EIR. (CEQA Guidelines Section 15150(a)). The Master EIR is available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, and on the City's web site at:

<http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>.

All technical environmental studies utilized in preparation of this IS/MND are available for review at the City of Sacramento, Community Development Department, 300 Richards Blvd., 3<sup>rd</sup> Floor, Sacramento, California.

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Written comments should be sent at the earliest possible date, but no later than the 20-day review period ending December 30, 2016.

Please send written responses to:

Dana Mahaffey, Associate Planner  
Community Development Department  
City of Sacramento  
300 Richards Blvd, 3<sup>rd</sup> Floor  
Sacramento, CA 95811  
Direct Line: (916) 808-2762  
DMahaffey@cityofsacramento.org

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## **SECTION II - PROJECT DESCRIPTION**

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### **Introduction**

The Project Description section of the IS/MND provides a description of the Bruceville Terrace Project (proposed project) background, location, existing conditions, surrounding land uses, and project components.

### **Project Background**

The City of Sacramento prepared an IS/MND in 2006 for the Bruceville North Condominium project, which would have been located on the same site as the proposed project. The IS/MND analyzed the impacts of the proposed Bruceville North Condominium project, which included 19 condominium buildings with a total of 162 units and amenities such as a club house with a swimming pool, a common outdoor space, and a children's tot-lot area. 315 parking spaces would have been provided on-site. The project would have received access from Jacinto Avenue, and would have included a light rail easement along the east side of the project site and two lanes dedicated for the widening of Bruceville Road. The Bruceville North Condominium project did not go forward to a public hearing.

The proposed Bruceville North Condominium project IS/MND included mitigation measures for potentially significant impacts related to biological resources, cultural resources, and noise. The previously-prepared IS/MND and any associated technical studies that were prepared are referenced in this analysis, as appropriate.

### **Project Description**

The currently proposed project includes a Tentative Subdivision Map to subdivide the 9.6-acre project site into 85 residential lots for the construction of 85 single-family homes. Lot sizes for the homes would range from 2,800 square feet (sf) to 4,905 sf. The single-family homes would be two-story and would range in size from 1,450 sf to 2,077 sf. The homes would be configured around 16,400 sf of open space, which would function as a stormwater detention pond.

The project would require a General Plan Amendment to redesignate the site from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density. In addition, the project would require approval of the Tentative Subdivision Map, Site Plan and Design Review, and a Conditional Use Permit to establish a gated community.

Further details regarding the project location, existing conditions, surrounding land uses, and project components are provided below.

### **Project Location**

The 9.6-acre project site is located at the northwest intersection of Bruceville Road and Jacinto Avenue in the City of Sacramento and the project site is identified as City of Sacramento APN 117-0910-041 (see Figure 1, Project Location and Figure 2, Aerial Vicinity Map).



**Figure 1**  
**Project Location**



**Figure 2**  
**Aerial Vicinity Map**



## **Existing Conditions and Surrounding Land Uses**

The 9.6-acre proposed project site is currently vacant and regularly disked. A drainage ditch parallels the west edge of the project site and runs south, where the ditch connects with the roadside drainage system associated with Jacinto Road.

The project site is located within the South Area Community Plan (SACP) and the Valley Hi/North Laguna subarea of the SACP. The Valley Hi/North Laguna subarea is located in the southeastern portion of the south area of the City and is generally bounded by Mack Road and the Parkway subarea on the north, the city limits on the south, State Route (SR) 99 on the east, and the Union Pacific tracks and the city limits on the west. This subarea includes the Valley High and North Laguna neighborhoods – suburban neighborhoods that include several infill sites. The Jacinto Creek Planning Area (JCPA) is located adjacent to the site to the east. The project site is currently designated Suburban Neighborhood High Density under the City's General Plan, and the site is zoned R-2B Multi-Family (up to 21 dwelling units per net acre [du/na]).

Land uses surrounding the project site include the following: the College Grove apartment complex directly north; a vacant lot to the east; the Barbara Comstock Morse Elementary School to the southwest; the Wolf Ranch condominium complex to the south; and single-family homes in the remaining vicinity, including to the southeast, south, and west of the site. Shasta Community Park is located northeast of the site.

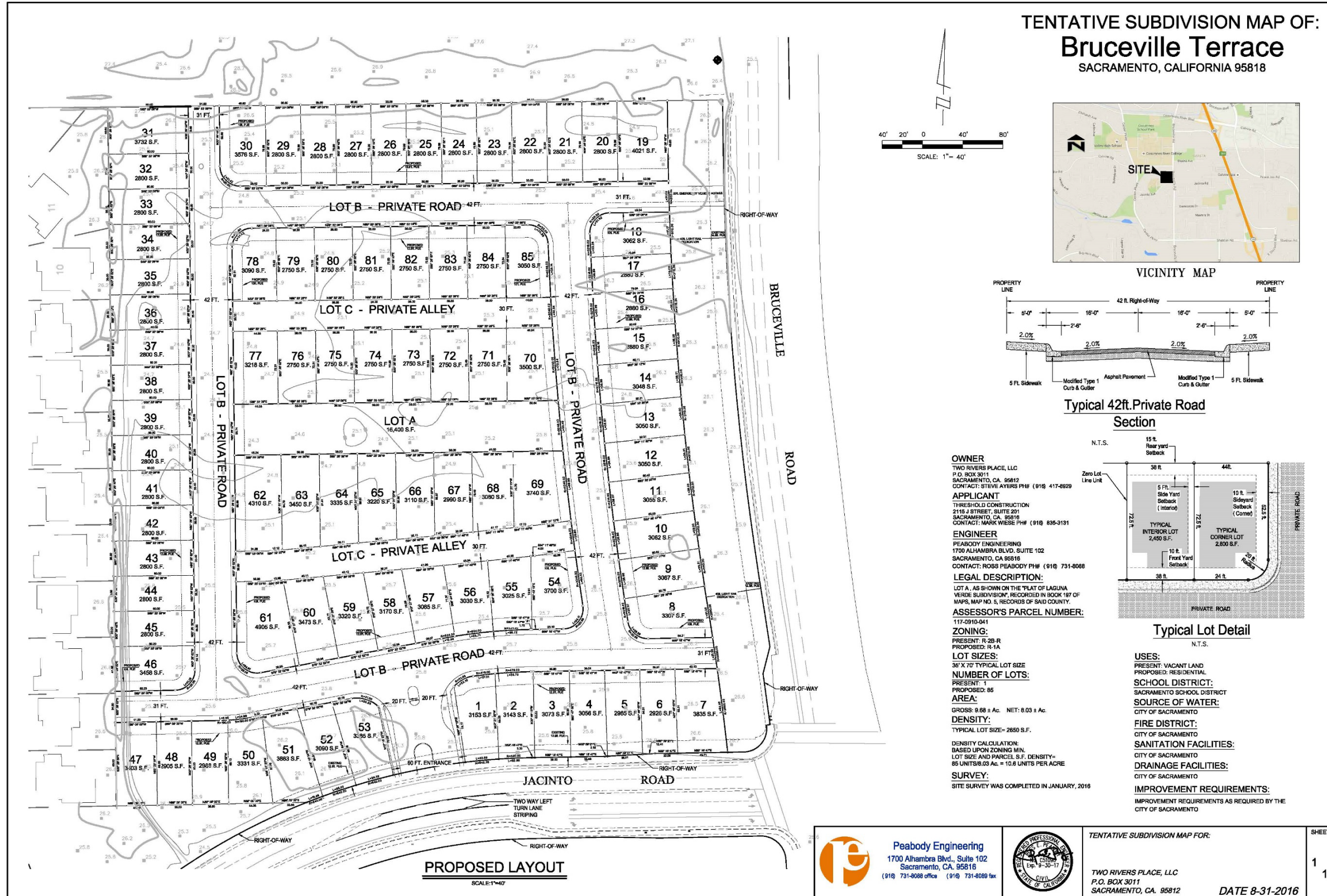
## **Project Components**

The proposed project includes a Tentative Subdivision Map to subdivide the 9.6-acre project site into 85 residential lots (see Figure 4, Tentative Subdivision Map) and construct 85 single-family homes. Lot sizes for the homes would range from 2,450 sf to 4,320 sf. The single-family homes would be two-story and would range in size from 1,450 sf to 1,799 sf (see Figure 4, Site Plan). The homes would be configured around 16,400 sf of open space, which would function as a stormwater detention pond.

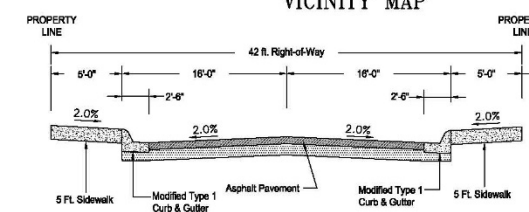
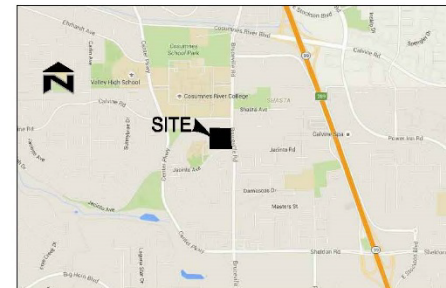
### Site Access

Site access would be provided off of Jacinto Avenue and private roads would be constructed within the subdivision. The proposed project would include construction of a 60-foot-wide access point located off of Jacinto Avenue on the southern boundary of the project site. The site access would lead into private roads that would be constructed within the project site, providing access to all of the proposed residences. The private roads would be 24 feet wide and would include on-street guest parking along certain sections of each of the roads. The project would also include the construction of new curb, gutter, and sidewalks throughout the subdivision.

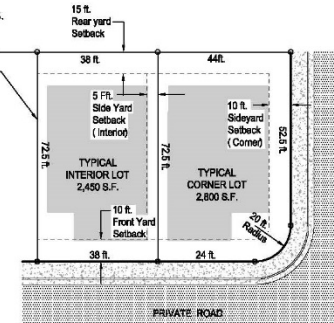
Figure 3  
Tentative Subdivision Map



TENTATIVE SUBDIVISION MAP OF:  
**Bruceville Terrace**  
SACRAMENTO, CALIFORNIA 95818



Typical 42ft. Private Road  
Section



Typical Lot Detail

**OWNER**  
TWO RIVERS PLACE, LLC  
P.O. BOX 3011  
SACRAMENTO, CA. 95812  
CONTACT: STEVE AYERS PH# (916) 417-8929

**APPLICANT**  
THRESHOLD CONSTRUCTION  
2115 J STREET, SUITE 201  
SACRAMENTO, CA. 95816  
CONTACT: MARK WESSE PH# (916) 836-3131

**ENGINEER**  
PEABODY ENGINEERING  
1700 ALHAMBRA BLVD., SUITE 102  
SACRAMENTO, CA 95816  
CONTACT: ROSS PEABODY PH# (916) 731-8088

**LEGAL DESCRIPTION:**  
LOT A, AS SHOWN ON THE "PLAT OF LAGUNA VERDE SUBDIVISION", RECORDED IN BOOK 187 OF MAPS, MAP NO. 5, RECORDS OF SAID COUNTY.

**ASSESSOR'S PARCEL NUMBER:**  
117-0910-041

**ZONING:**  
PRESENT: R-2B-R  
PROPOSED: R-1A

**LOT SIZES:**  
36' X 70' TYPICAL LOT SIZE

**NUMBER OF LOTS:**  
PRESENT: 1  
PROPOSED: 85

**AREA:**  
GROSS: 9.68 ± Ac. NET: 8.03 ± Ac.

**DENSITY:**  
TYPICAL LOT SIZE= 2850 S.F.

**DENSITY CALCULATION:**  
BASED UPON ZONING MIN. LOT SIZE AND PARCEL S.F. DENSITY= 85 UNITS/8.03 Ac. = 10.6 UNITS PER ACRE

**SURVEY:**  
SITE SURVEY WAS COMPLETED IN JANUARY, 2016

**USES:**  
PRESENT: VACANT LAND  
PROPOSED: RESIDENTIAL

**SCHOOL DISTRICT:**  
SACRAMENTO SCHOOL DISTRICT

**SOURCE OF WATER:**  
CITY OF SACRAMENTO

**FIRE DISTRICT:**  
CITY OF SACRAMENTO

**SANITATION FACILITIES:**  
CITY OF SACRAMENTO

**DRAINAGE FACILITIES:**  
CITY OF SACRAMENTO

**IMPROVEMENT REQUIREMENTS:**  
IMPROVEMENT REQUIREMENTS AS REQUIRED BY THE CITY OF SACRAMENTO

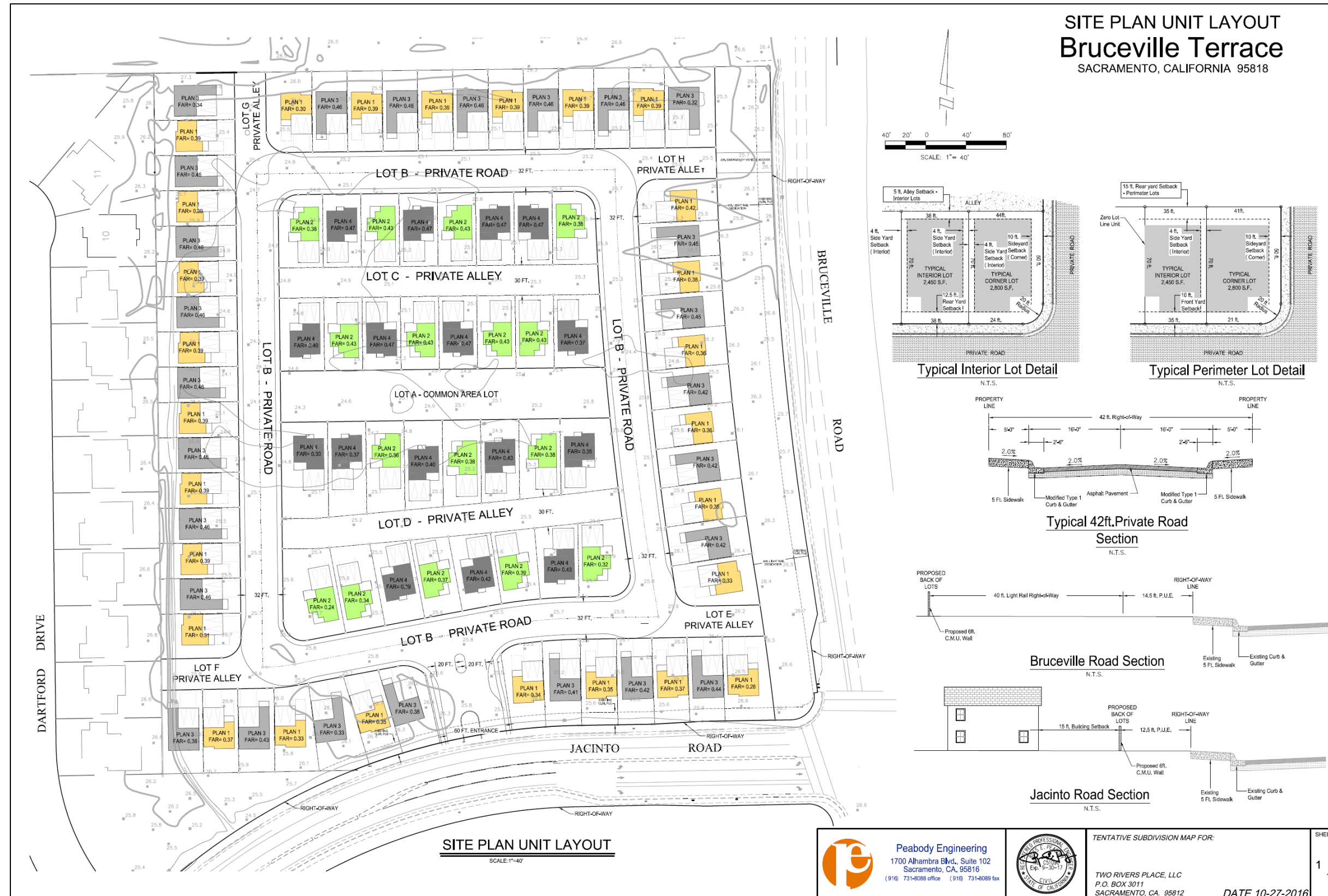
 **Peabody Engineering**  
1700 Alhambra Blvd., Suite 102  
Sacramento, CA. 95816  
(916) 731-8088 office (916) 731-8088 fax



TENTATIVE SUBDIVISION MAP FOR:  
**TWO RIVERS PLACE, LLC**  
P.O. BOX 3011  
SACRAMENTO, CA. 95812  
**DATE 8-31-2016**

SHEET  
1  
1

Figure 4  
Site Plan



**Peabody Engineering**  
1700 Alhambra Blvd., Suite 102  
Sacramento, CA, 95816  
(916) 731-8088 office (916) 731-8089 fax



TENTATIVE SUBDIVISION MAP FOR:  
**TWO RIVERS PLACE, LLC**  
P.O. BOX 3011  
SACRAMENTO, CA. 95812  
DATE 10-27-2016

SHEET  
1  
1

## Project Infrastructure

The following discussion relates to the water, wastewater, and drainage infrastructure components of the proposed project.

### *Water*

The project site is vacant and is not currently serviced by a water facility; however, water service for the project would be provided by the City of Sacramento. The City of Sacramento uses surface water from the Sacramento and American Rivers, and groundwater pumped from the North American and South American sub-basins to meet the City's water demands. The proposed project site would include placement of six-inch minimum water lines within the subdivision that would connect to an existing 12-inch water main located within Jacinto Road along the site's southern boundary (see Figure 5, Preliminary Utility Plan).

### *Wastewater*

The proposed project would be provided wastewater collection and treatment services by the Sacramento Area Sewer District (SASD) and the Sacramento Regional County Sanitation District (SRCSD). Wastewater generated in the project area is collected in the SASD system through a series of sewer pipes and pump stations. Once collected in the SASD system, sewage flows into the SRCSD interceptor system, where the sewage is conveyed to the Sacramento Regional Wastewater Treatment Plant. The proposed project site would include construction of six-inch sanitary sewer lines within the subdivision that would connect to an existing eight-inch sewer line located within Jacinto Road along the site's southern boundary (see Figure 5, Preliminary Utility Plan).

### *Drainage*

Approximately 2.1 acres of the proposed project site drains to the existing 36-inch drainage pipe within Bruceville Road to the east of the site. The remainder of the site currently drains to the drainage ditch at the western edge of the site, then to the existing 18- to 30-inch drainage pipe within Jacinto Road to the south of the site. The proposed project's on-site drainage improvements would consist of construction of underground storm drain piping, above-ground vegetated water quality swales, and a stormwater detention pond. The detention pond would be constructed on Lot A in the central portion of the subdivision (see Figure 3, Tentative Subdivision Map). The proposed drainage improvements would replace the existing drainage ditch.

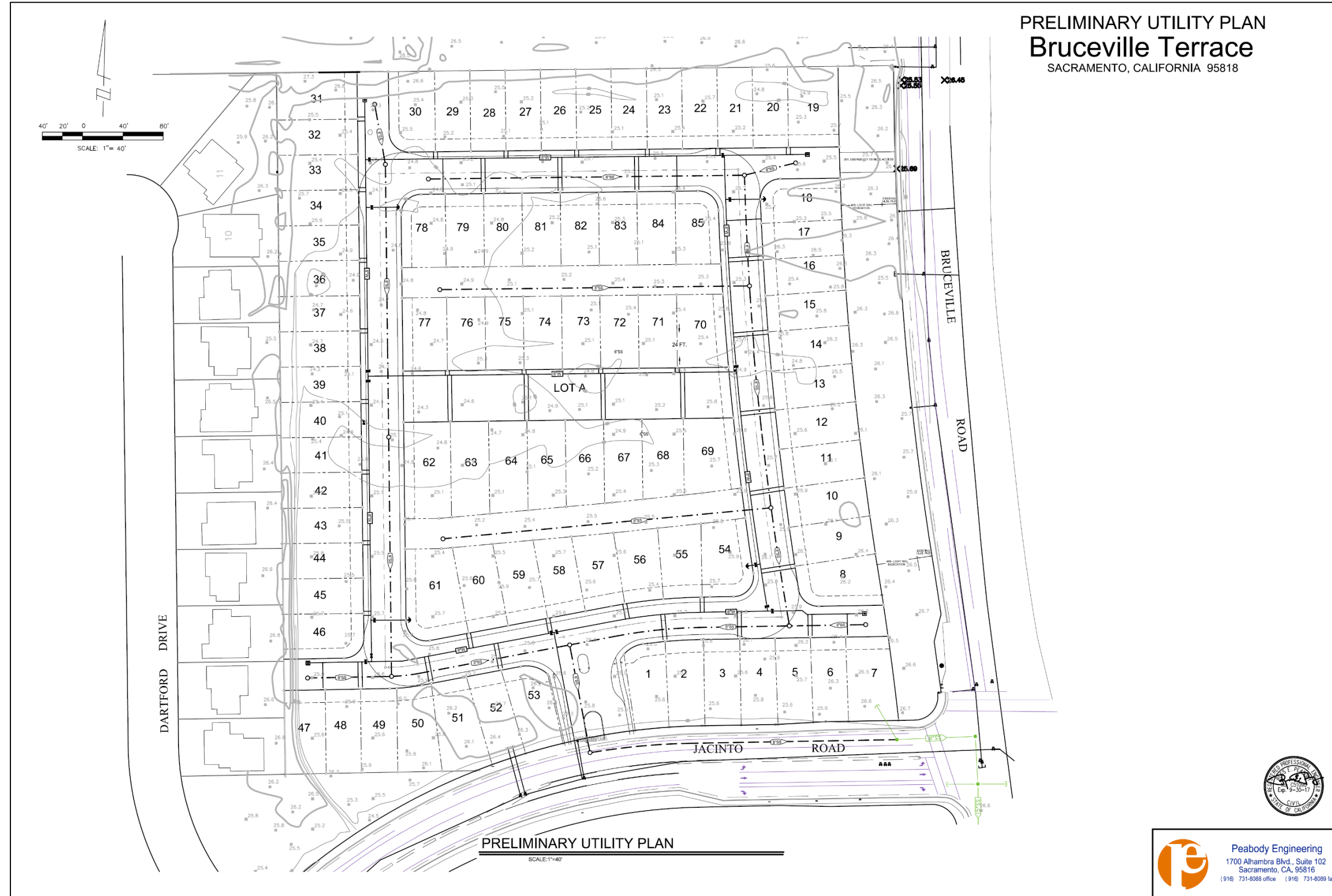
## Project Construction

Construction of the proposed project is expected to begin in 2017 and require a period of approximately 14 to 18 months. Construction of the single-family homes would occur in three, approximately five-month phases. In addition, prior to construction of the homes, construction activities would include site preparation, which includes clearing vegetation and stones prior to grading, grading of the site, and paving for the on-site private streets. Demolition activities would not occur.

The grading and disturbance areas consist of approximately 9.6 acres over the project site with excavation depths varying from 0 to 36 inches for typical site grading and up to 96 inches (eight feet) for utility trenches. The grading and trenching methods would include standard

construction practices utilizing backhoes, excavators, tractors, and compactors, and all construction staging areas would be located on the project site.

Figure 5  
Preliminary Utility Plan





Project Approvals

The proposed project would require the following approvals by the lead agency (i.e., the City of Sacramento):

- Approval of the IS/MND and adoption of the Mitigation Monitoring Plan;
- Approval of a General Plan Amendment to redesignate the site Suburban Neighborhood Medium Density from Suburban Neighborhood High Density;
- Approval of the Tentative Subdivision Map;
- Approval of a Site Plan and Design Review; and
- Approval of a Conditional Use Permit for a gated community.

## SECTION III – ENVIRONMENTAL CHECKLIST AND DISCUSSION

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### LAND USE, POPULATION AND HOUSING, AGRICULTURAL RESOURCES AND ENERGY

#### Introduction

The California Environmental Quality Act (CEQA) requires the Lead Agency to examine the effects of a project on the physical conditions that exist within the area that would be affected by the project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable general plans and regional plans.

An inconsistency between the proposed project and an adopted plan for land use development in a community would not constitute a physical change in the environment. When a project diverges from an adopted plan; however, it may affect planning in the community regarding infrastructure and services, and the new demands generated by the project may result in later physical changes in response to the project.

In the same manner, the fact that a project brings new people or demand for housing to a community does not, by itself, change the physical conditions. An increase in population may, however, generate changes in retail demand or demand for governmental services, and the demand for housing may generate new activity in residential development. Physical environmental impacts that could result from implementing the proposed project are discussed in the appropriate technical sections.

This section of the IS/MND identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project. This section also discusses agricultural resources and energy, and the effect of the project on these resources.

#### Discussion

##### Land Use

The proposed project consists of subdivision of the 9.6-acre project site into 85 residential lots and the construction of 85 single-family residences. The proposed project site is designated Suburban Neighborhood High Density in the 2035 General Plan and is zoned R-2B Multi-Family (up to 21 du/na). The project site is located in an urbanized portion of the community. Existing land uses surrounding the project site include apartments and condominiums to the north and south, a vacant lot to the east, an elementary school to the southwest, and single-family homes to the southeast, south and west of the site. Requested project entitlements include approval of a General Plan Amendment from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density.

The project site's current General Plan land use designation of Suburban Neighborhood High Density provides for single-use multifamily housing and predominantly residential mixed-use development in areas served by major transportation routes and facilities, including multifamily dwellings, mixed-use neighborhood-serving commercial, and compatible public, quasi-public, and special uses.

The site's current land use designation allows a density range of 15 du/na to 30 du/na; however, the proposed project would include 85 units on 8.0 net acres, resulting in a density of 10.6 du/na. Therefore, a General Plan Amendment from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density is required. The Suburban Neighborhood Medium Density designation allows a density range of 7 du/na to 17 du/na and provides for medium-density housing and neighborhood-support uses, including small-lot single-family detached and attached dwellings, multifamily dwellings, limited neighborhood-serving commercial, and compatible public, quasi-public, and special uses.

The project site is currently zoned R-2B Multi-Family (up to 21 du/na). Because the proposed project would result in a density of 10.6 du/na, the project would be consistent with the existing zoning for the project site.

Development of the site as proposed would alter the existing landscape, but the project site has been designated for urban development in the 2035 General Plan. With approval of the General Plan Amendment, development of the project site would be consistent with the amended planning designations and the current Planning and Development Code zoning designation.

The project site is surrounded by existing development and is currently vacant. As such, implementation of the project would not physically divide an established community. In addition, the proposed project site is not currently included as part of any habitat conservation plan or natural community conservation plan.

Therefore, the proposed project would not result in impacts related to land use.

#### Population and Housing

The proposed project site is located within a developed area of the southern portion of the City of Sacramento. Surrounding land uses include apartments and condominiums to the north and south, a vacant lot to the east, an elementary school to the southwest, and single-family homes to the southeast, south and west of the site.

The project would consist of subdivision of the 9.6-acre project site into 89 residential lots and the construction of 89 single-family residences. Implementation of the proposed project would not displace any existing housing units or people and construction or replacement of housing elsewhere would not be necessary for the project.

The project would include a General Plan Amendment to redesignate the site Suburban Neighborhood Medium Density (seven to 17 du/na) from Suburban Neighborhood High Density (15 to 30 du/na); therefore, the project would result in the introduction of fewer new residents, as compared to what was anticipated for the site in the 2035 General Plan. Overall, the project would result in development that is less intense than what was contemplated in the City's General Plan and analyzed in the associated General Plan 2035 EIR.

Therefore, the proposed project would not result in impacts related to population and housing.

#### Agricultural Resources

The Master EIR discussed the potential impact of development under the 2035 General Plan on agricultural resources (see Master EIR, Chapter 6.2). In addition to evaluating the effect of the General Plan on sites within the City, the Master EIR noted that to the extent the 2035 General Plan accommodates future growth within the City limits, the conversion of farmland outside the

City limits is minimized. (Master EIR, page 6.2-13) The Master EIR concluded that the impact of the 2035 General Plan on agricultural resources within the City was less than significant.

The proposed project site is currently vacant and the site is located in an urban area surrounded by residential and school development. The project site is not utilized for agricultural or timber-harvest operations. According to the California Department of Conservation's Sacramento County Important Farmland 2014 Map, the project site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance); the site is considered Urban and Built-Up Land. In addition, the site is not designated or zoned for agricultural uses, nor is the land under a Williamson Act contract.

Therefore, the proposed project would not result in impacts to agricultural resources.

### Energy

Structures built as part of the proposed project would be subject to Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings. The 2035 General Plan includes goals (Energy Resources Goal U 6.1.1) and related policies to encourage energy-efficient technology by offering rebates and other incentives to commercial and residential developers, coordination with local utility providers, and recruitment of businesses that research and promote energy conservation and efficiency.

The Master EIR discussed energy conservation and relevant General Plan policies in Section 6.3 (page 6-3). The discussion concluded that with implementation of the General Plan policies and energy regulation (e.g., Title 24), development allowed in the General Plan would not result in the inefficient, wasteful, or unnecessary consumption of energy.

The Master EIR concluded that implementation of State regulations, coordination with energy providers, and implementation of General Plan policies would reduce the potential impacts from construction of new energy production or transmission facilities to a less-than-significant level. Although the proposed project would require a General Plan Amendment, the amended land use designation would result in lower-intensity development than the type and intensity of development anticipated for the site in the General Plan. The project would result in fewer new residences and residents and, correspondingly, a decreased demand for utilities, including energy.

Therefore, the proposed project would not result in impacts related to energy.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
1. <u>AESTHETICS</u> Would the proposal:			X
A) Create a source of glare that would cause a public hazard or annoyance?			X
B) Create a new source of light that would be cast onto oncoming traffic or residential uses?			X
C) Substantially degrade the existing visual character of the site or its surroundings?			X

**Environmental Setting**

The 9.6-acre proposed project site is vacant and located on flat terrain in a primarily residential area. Requested project entitlements include a General Plan Amendment to redesignate the site from Suburban Neighborhood High Density to Suburban Neighborhood Medium. The redesignation would result in a lower intensity use than originally anticipated.

Land uses surrounding the project site include apartments and condominiums to the north and south, a vacant lot to the east, an elementary school to the southwest, and single-family homes to the southeast, south and west of the site. The surrounding residential areas include both higher-intensity uses, such as condominiums, as well as lower intensity uses such as single-family homes. The proposed development would change the appearance of the site as viewed from nearby areas, but would be consistent with the height, bulk, and character of the surrounding uses. The project site does not contain scenic resources, is not located in an area designated as a scenic resource or vista, and is not visible from any State-designated scenic highways.

**Standards of Significance**

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, thresholds of significance adopted by the City in applicable general plans and previous environmental documents, and professional judgment. A significant impact related to aesthetics would occur if the project would:

- Create a new source of substantial light or glare that is substantially greater than typical urban sources and could cause sustained annoyance or hazard for nearby sensitive receptors; or
- Substantially interfere with an important scenic resource or substantially degrade the view of an existing scenic resource.

**Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR described the existing visual conditions in the General Plan City of Sacramento, and the potential changes to those conditions that could result from development consistent with the 2035 General Plan. See Master EIR, Chapter 4.13, Visual Resources.

The Master EIR identified potential impacts for light and glare (Impact 4.13-1) and concluded that impacts would be less than significant.

## **Answers to Checklist Questions**

### Questions A and B

According to the Master EIR, the City of Sacramento is mostly built out, and a large amount of widespread, ambient light from urban uses already exists. New development permitted under the proposed 2035 General Plan could add sources of light that are similar to the existing urban light sources from any of the following: exterior building lighting, new street lighting, parking lot lights, and headlights of vehicular traffic. These potential new sources of light would be similar to the current urban setting in amount and intensity of light and the day or nighttime views of adjacent sensitive land uses would not be significantly affected. Sensitive land uses would generally be residential uses, especially single-family residential uses.

New development allowed under the 2035 General Plan would be subject to General Plan policies, building codes, and (for larger projects) design review; therefore, the introduction of substantially greater intensity or dispersal of light would not occur. With an emphasis on infill development in the General Plan, additional light sources would be primarily concentrated within existing, well-lit areas of the City and would be similar to the existing character of urban lighting. Although the proposed project includes a General Plan Amendment, the proposed Suburban Neighborhood Medium Density development would be less intense than the approved Suburban Neighborhood High Density. Therefore, the intensity of new sources of light, that would result from the buildout of the proposed project, would be equal to or less than what was anticipated for the site by the 2035 General Plan.

Existing land uses surrounding the proposed project site include the College Grove apartment complex directly north; a vacant lot to the east; the Barbara Comstock Morse Elementary School to the southwest; the Wolf Ranch condominium complex to the south; and single-family homes in the remaining vicinity, including to the southeast, south and west of the site. Shasta Community Park is located northeast of the site. The nearest existing sensitive receptors to the project site that could be affected by light or glare are the existing residences to the north, south, and west of the site.

The Visual Resources section of the Master EIR addresses lighting and glare standards for development projects. Policy ER 7.1.3: Lighting requires the City to minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. In addition, Policy ER 7.1.4: Reflective Glass prohibits new development from resulting in any of the following: (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors; (2) using mirrored glass; (3) using black glass that exceeds 25 percent of any surface of a building; (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building; and (5) using exposed concrete that exceeds 50 percent of any building. The proposed project would comply with these General Plan policies, which would be ensured through the Site Plan and Design Review process.

Although sensitive receptors are located in the vicinity of the project site, the project would be expected to produce the same type and intensity of light as surrounding residential developments. In addition, the proposed project would comply with all applicable General Plan policies related to minimizing light and glare and the project would result in relatively minimal

new lighting intensities surrounding the site. Therefore, the project would result in a ***less-than-significant*** impact related to creation of a source of glare that would cause a public hazard or annoyance or creation of a new source of light that would be cast onto oncoming traffic or residential uses.

### Question C

The City of Sacramento is primarily built out; however, new development associated with the 2035 General Plan could result in changes to important scenic resources as seen from visually sensitive locations. As described above under “Thresholds of Significance” important existing scenic resources include major natural open space features such as the American River and Sacramento River, including associated parkways. Another important scenic resource is the State Capitol (as defined by the Capitol View Protection Ordinance). Other potential important scenic resources include important historic structures listed on the Sacramento Register of Historic and Cultural Resources, California and/or National Registers.

Visually-sensitive public locations include viewpoints where a change to the visibility of an important scenic resource, or a visual change to the resource itself, would affect the general public. Visually-sensitive public locations include public plazas, trails, parks, parkways, or designated, publicly available and important scenic corridors (e.g., Capitol View Protection Corridor).

Policy ER 7.1.1 would guide the City to avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American Rivers and adjacent greenways, landmarks, and the State Capitol along Capitol Mall. In addition, Policy ER 7.1.2, states that the City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers, and along streams. With adherence to these policies, buildout of the 2035 General Plan would not substantially alter views of important scenic resources from visually sensitive areas. According to the Master EIR, with buildout of the 2035 General Plan, impacts related to interference with important existing scenic resources or degrading views of important existing scenic resources, as seen from a visually sensitive, public location would be less than significant.

Significant visual resources such as the Sacramento and American Rivers, the State Capitol, or public trails are not located in the immediate vicinity of the project site. As such the proposed project would not result in any impacts related to changing the visual character of such resources. The nearest public park is Shasta Community Park, which is approximately 670 feet north of the project site, on the east side of Bruceville Road. Because the project is located on the west side of Bruceville Road, existing views of the park looking east from Bruceville Road would not be impacted by the project. Limited views of the park, looking over the project site, from Jacinto Avenue may currently exist. However, impacts to such views would occur with development of the site under the currently approved Suburban Neighborhood High Designation. The proposed project would involve similar, although less dense, residential development than anticipated by the 2035 General Plan. Therefore, impacts to public views of Shasta Park were already anticipated by the 2035 General Plan EIR, and the proposed project would not result in the degradation of scenic resources or important existing scenic resources.

The proposed project site has been previously disturbed, is surrounded by existing development, and is designated for residential use by the City’s General Plan. Surrounding land includes an apartment complex to the north, a vacant lot to the east, a condominium complex to the south, and single-family homes in the remaining vicinity, including to the southeast, south and west of

the site. Barbara Comstock Morse Elementary School is located southwest of the site. The other buildings in the area are primarily one- or two-story residential buildings with some taller residential buildings located to the north and south of the site. The proposed single-family residences would be consistent with the urban use planned for the site and would complement the building sizes that exist in the vicinity. As such, the proposed project would be consistent and compatible with the existing visual character and quality of the immediate project area.

The proposed project site is not designated or recognized as an important scenic resource and the project would be generally consistent with the type of land use anticipated for the site in the City's General Plan, albeit a lower intensity development. The proposed project site is currently surrounded by existing development; therefore, implementation of the proposed project is not anticipated to result in any change to the visual character of the project area. In addition, the project site is not located in the vicinity of any views that are identified within the City's General Plan as scenic resources or vistas. Therefore, overall, the proposed project would result in a ***less-than-significant*** impact related to substantially degrading the existing visual character of the site or the site's surroundings.

### **Mitigation Measures**

None required.

### **Findings**

The project would not have any project-specific environmental effects relating to Aesthetics.



Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>2. AIR QUALITY</b> <i>Would the proposal:</i>			X
A) Result in construction emissions of NO <sub>x</sub> above 85 pounds per day?			X
B) Result in operational emissions of NO <sub>x</sub> or ROG above 65 pounds per day?			X
C) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X
C) Result in PM <sub>10</sub> concentrations equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard?			X
E) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?			X
F) Result in exposure of sensitive receptors to substantial pollutant concentrations?			X
G) Result in TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?			X
H) Conflict with the Climate Action Plan?		X	

**Environmental Setting**

The environmental setting for the proposed project, including the existing climate and meteorological conditions, existing air quality conditions, and greenhouse gas (GHG) emissions, is discussed below.

Climate and Meteorology

The City of Sacramento is located within the Sacramento Valley Air Basin (SVAB), which is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. The terrain in the valley is flat and approximately 25 feet above sea level.

Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley. Throughout the year, daily temperatures may range by 20 degrees Fahrenheit with summer highs often exceeding 100 degrees and winter lows occasionally below freezing. Average annual rainfall is approximately 20 inches and snowfall is very rare. Summertime temperatures are normally moderated by the presence of the “Delta breeze” that arrives through the Carquinez Strait in the evening hours.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap cooler air and pollutants near the ground.

The warmer months in the SVAB (May through October) are characterized by stagnant morning air or light winds, and the Delta breeze that arrives in the evening out of the southwest. Usually, the evening breeze transports a portion of airborne pollutants to the north and out of the Sacramento Valley. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating Federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta breeze begins.

### Air Quality Conditions

The SVAB is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Federal and State air quality standards have been established for six common air pollutants, known as criteria pollutants, because the criteria air pollutants could be detrimental to human health and the environment. The criteria pollutants include particulate matter, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. At the federal level, Sacramento County is designated as severe nonattainment for the 8-hour ozone standard, nonattainment for the 24-hour  $PM_{2.5}$  standard, and attainment or unclassified for all other criteria pollutants. At the State level, the area is designated as a serious nonattainment area for the 1-hour ozone standard, nonattainment for the 8-hour ozone standard, nonattainment for the particulate matter 10 microns in diameter ( $PM_{10}$ ) and particulate matter 2.5 microns in diameter ( $PM_{2.5}$ ) standards, and attainment or unclassified for all other State standards.

Nearly all development projects in the Sacramento region have the potential to generate air pollutants that may increase the difficulty of attaining federal and State AAQS. Therefore, for most projects, evaluation of air quality impacts is required to comply with CEQA. In order to help public agencies evaluate air quality impacts, the SMAQMD has developed the *Guide to Air Quality Assessment in Sacramento County*. The SMAQMD's guide includes recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors, as the area is under nonattainment for the federal and State ozone AAQS. The SMAQMD's guide also includes screening criteria for localized carbon monoxide (CO) emissions and thresholds for new stationary sources of toxic air contaminants (TACs).

In addition to criteria air pollutants, TACs are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Public exposure to TACs can result from emissions from normal operations as well as accidental releases. Health risks from TACs are a function of both the concentration of emissions and the duration of

exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth defects, neurological damage, and death.

Naturally occurring asbestos (NOA) was identified as a TAC in 1986 by CARB. Earth disturbance activity could result in the release of NOA to the air. NOA is located in many parts of California and is commonly associated with ultramafic rocks. According to mapping prepared by the California Geological Survey, the only area within Sacramento County that is likely to contain NOA is eastern Sacramento County. The project site is not located in an area identified as likely to contain NOA.

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors to the project site would be the multi-family residential complex to the north and south of the project site and the single-family residential development to the west of the project site.

### Greenhouse Gas (GHG) Emissions

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

In September 2006, then-Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, which requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. AB 32 delegated the authority for implementation to the CARB and directs the CARB to enforce the statewide cap. In accordance with AB 32, CARB prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008 and revised in 2011.

The City adopted the City of Sacramento Climate Action Plan (CAP) on February 14, 2012 to comply with AB 32. The CAP identified how the City and the broader community could reduce Sacramento's GHG emissions and included reduction targets, strategies, and specific actions. In 2015, the City of Sacramento adopted the 2035 General Plan Update. The update incorporated measures and actions from the CAP into Appendix B, General Plan CAP Policies and Programs, of the General Plan Update. Appendix B includes all City-Wide policies and programs that are supportive of reducing GHG emissions. A CAP Consistency Review Checklist has been prepared by the City in order to provide a streamlined review process for proposed development projects and is attached to this IS/MND as Appendix A.

### **Standards of Significance**

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NO<sub>x</sub> above 85 pounds per day;
- Operational emissions of NO<sub>x</sub> or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Any increase in PM<sub>10</sub> concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

Ambient air quality standards have not been established for toxic air contaminants (TAC). TAC exposure is deemed to be significant if:

- TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

A project is considered to have a significant effect relating to greenhouse gas emissions if it fails to satisfy the requirements of the City's Climate Action Plan.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR addressed the potential effects of the 2035 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthy pollutant concentrations. See Master EIR, Chapter 4.2.

Policies in the 2035 General Plan in Environmental Resources were identified as mitigating potential effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with the California Air Resources Board and the SMAQMD to meet State and federal air quality standards; Policy ER 6.1.2 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.4 and ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of toxic air contaminants (TAC) as a potential effect. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to TACs, and impose appropriate conditions on projects to protect public health and safety, as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The Master EIR found that greenhouse gas emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include: ER 6.1.2, ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 Climate Action

Plan (CAP), which demonstrates compliance mechanisms for achieving the City’s adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emissions reduction goals, ER 6.1.9 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City’s longer-term GHG emissions reductions goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference in this Initial Study. (CEQA Guidelines Section 15150)

The Master EIR identified numerous policies included in the 2035 General Plan that addressed greenhouse gas emissions and climate change. See Draft Master EIR, Chapter 4.14, and pages 4.14-1 et seq. The Master EIR is available for review at the offices of Development Services Department, 300 Richards Boulevard, 3<sup>rd</sup> Floor, Sacramento, CA during normal business hours, and is also available online at: <http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>.

**Answers to Checklist Questions**

Questions A and B

In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants that the area is designated nonattainment, the SMAQMD has established recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors (i.e., reactive organic compounds [ROG] and oxides of nitrogen [NO<sub>x</sub>], as the area is under nonattainment for ozone. The SMAQMD’s recommended thresholds of significance for ROG and NO<sub>x</sub> are in units of pounds per day (lbs/day) and are presented in Table 1.

<b>Table 1</b>		
<b>SMAQMD Thresholds of Significance for Ozone Precursors</b>		
<b>Pollutant</b>	<b>Construction Thresholds</b>	<b>Operational Thresholds</b>
NO <sub>x</sub>	85 lbs/day	65 lbs/day
ROG	-	65 lbs/day

*Source: Sacramento Metropolitan Air Quality Management District. May 2015.<sup>1</sup>*

In order to determine whether the proposed project would result in ozone emissions in excess of the applicable thresholds of significance presented above, the proposed project’s construction-related NO<sub>x</sub> and operational ROG and NO<sub>x</sub> emissions have been estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data is available, such data should be input into the model. Accordingly, based on project-specific information provided by the project applicant, the following assumptions were made for the proposed project’s modeling:

<sup>1</sup> Sacramento Metropolitan Air Quality Management District. *SMAQMD Thresholds of Significance Table*. Available at: <http://www.airquality.org/ceqa/CH2ThresholdsTables5-2015.pdf>. May 2015. Accessed May 2016.

- Construction was assumed to commence in June 2017 and the project would be fully operational by 2018;
- An average daily trip rate of 7.42 was assumed, based on information provided by the City of Sacramento for the proposed project;
- Proposed residences would not include wood or natural gas burning hearths; and
- Exceedance of the current California Building Energy Efficiency Standards Code by 10 percent.

The results of the proposed project’s emissions estimations were compared to the thresholds of significance above in order to determine the associated level of impact. All CalEEMod modeling results are included as Appendix B to this IS/MND.

*Construction Emissions*

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers’ commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Because construction equipment emits relatively low levels of ROG and because ROG emissions from other construction processes (e.g., asphalt paving, architectural coatings) are typically regulated by SMAQMD, SMAQMD has not adopted a construction emissions threshold for ROG. The SMAQMD has, however, adopted a construction emissions threshold for NO<sub>x</sub>, as shown in Table 1, above.

According to the CalEEMod results, the proposed project is estimated to result in maximum daily construction emissions of NO<sub>x</sub> as shown in Table 2.

<b>Table 2</b>		
<b>Maximum Unmitigated Project Construction NO<sub>x</sub> Emissions</b>		
<b>Pollutant</b>	<b>Project Emissions (lbs/day)</b>	<b>SMAQMD Threshold of Significance (lbs/day)</b>
NO <sub>x</sub>	56.40	85
<i>Source: CalEEMod, July 2016 (see Appendix B).</i>		

As shown in the table, the proposed project’s maximum unmitigated construction-related NO<sub>x</sub> emissions would be below the applicable SMAQMD threshold of significance of 85 lbs/day. In addition, all projects under the jurisdiction of SMAQMD are required to comply with all applicable SMAQMD rules and regulations (a complete list of current rules is available at [www.airquality.org/rules](http://www.airquality.org/rules)). Accordingly, the proposed project is required to comply with all applicable SMAQMD rules and regulations for construction, including, but not limited to, Rule 403 (Fugitive Dust), Rule 404 (Particulate Matter), and Rule 442 (Architectural Coatings). Furthermore, all projects are required to implement the SMAQMD’s Basic Construction Emission Control Practices (BCECP). Compliance with SMAQMD rules and regulations and BCECP would help to ensure that construction emissions are minimized.

Based on the above, impacts related to the proposed project’s construction emissions of NO<sub>x</sub> would be less than significant.

*Operational Emissions*

Day-to-day activities such as future residence vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would also occur from area sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, cleaning products, spray paint, etc.).

The CalEEMod modeling assumptions for the proposed project are presented above. As noted, the modeling included the project’s 10 percent exceedance of the 2013 California Building Energy Efficiency Standards Code. All buildings within the State of California are required to comply with the mandatory standards within the 2013 California Building Energy Efficiency Standards Code. The proposed project’s compliance with such would be verified as part of the City’s building approval review process. According to the CalEEMod results, the proposed project’s estimated operational emissions are presented in Table 3. As shown in the table, the proposed project would not result in operational emissions of NO<sub>x</sub> or ROG above the 65 lbs/day SMAQMD threshold of significance. Therefore, impacts related to the proposed project’s operational emissions of NO<sub>x</sub> and ROG would be less than significant.

<b>Table 3</b>		
<b>Maximum Project Operational NO<sub>x</sub> and ROG Emissions</b>		
<b>Pollutant</b>	<b>Project Emissions (lbs/day)</b>	<b>SMAQMD Thresholds of Significance (lbs/day)</b>
NO <sub>x</sub>	5.50	65
ROG	6.58	65

*Source: CalEEMod, July 2016 (see Appendix B).*

*Conclusion*

Because the proposed project would not result in construction emissions of NO<sub>x</sub> above 85 lbs/day or operational emissions of NO<sub>x</sub> or ROG above 65 lbs/day, impacts would be ***less than significant***.

Question C

Adopted SMAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. As future attainment of AAQS is a function of successful implementation of SMAQMD’s planning efforts, according to the SMAQMD Guide, by exceeding the SMAQMD’s project-level thresholds for construction or operational emissions, a project could contribute to the region’s nonattainment status for ozone and PM emissions and could be considered to conflict with or obstruct implementation of the SMAQMD’s air quality planning efforts.

As discussed above and below, the proposed project would result in construction and operational emissions below all applicable SMAQMD thresholds of significance. Therefore, the proposed project would not be considered to contribute to the region’s nonattainment status for ozone or PM emissions and would not conflict with or obstruct implementation of the SMAQMD’s air quality planning efforts. Accordingly, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and impacts would be ***less than significant***.





Question D

As the region is designated nonattainment for PM<sub>10</sub> and PM<sub>2.5</sub>, the SMAQMD has recently adopted mass emissions thresholds of significance for PM<sub>10</sub> and PM<sub>2.5</sub>, which are presented in Table 4.

<b>Table 4</b>			
<b>SMAQMD Thresholds of Significance for PM<sub>10</sub> and PM<sub>2.5</sub></b>			
<b>Pollutant</b>	<b>Construction Thresholds (lbs/day)</b>	<b>Operational Thresholds (lbs/day)</b>	<b>Operational Thresholds (tons/yr)</b>
PM <sub>10</sub>	80	80	14.6
PM <sub>2.5</sub>	82	82	15
<i>Source: SMAQMD, May 2015.</i>			

In order to determine whether the proposed project would result in PM emissions in excess of the applicable thresholds of significance presented above, the proposed project's construction and operational PM<sub>10</sub> and PM<sub>2.5</sub> emissions have been estimated using CalEEMod with the same assumptions as listed above applied. According to the CalEEMod results, the proposed project would result in PM<sub>10</sub> and PM<sub>2.5</sub> emissions as shown in Table 5. As presented in the table, the proposed project's estimated emissions of PM<sub>10</sub> and PM<sub>2.5</sub> would be well below the applicable SMAQMD thresholds of significance.

<b>Table 5</b>						
<b>Maximum Unmitigated Project Emissions of PM<sub>10</sub> and PM<sub>2.5</sub></b>						
<b>Pollutant</b>	<b>Project Construction Emissions (lbs/day)</b>	<b>Construction Thresholds (lbs/day)</b>	<b>Project Operational Emissions (lbs/day)</b>	<b>Operational Thresholds (lbs/day)</b>	<b>Project Operational Emissions (tons/yr)</b>	<b>Operational Thresholds (tons/yr)</b>
PM <sub>10</sub>	20.96	80	3.73	80	0.66	14.6
PM <sub>2.5</sub>	12.50	82	1.10	82	0.19	15
<i>Source: CalEEMod, July 2016 (see Appendix B).</i>						

Therefore, the proposed project is not expected to result in PM<sub>10</sub> concentrations equal to or greater than five percent of the state AAQS, and impacts would be ***less than significant***.

Questions E through G

The proposed project involves the creation of 89 single-family residences; thus, would introduce new sensitive receptors to the area. In addition, the existing nearby residences would be considered sensitive receptors. The major pollutant concentrations of concern are localized CO emissions and TAC emissions, which are addressed in further detail below.

*Localized CO Emissions*

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. Concentrations of CO approaching the ambient air quality standards are only expected where background levels are high, and traffic volumes and congestion levels are high. The SMAQMD's preliminary screening methodology for localized CO emissions provides a conservative indication of whether project-generated vehicle trips would result in the generation of CO emissions that contribute to an exceedance of the applicable threshold of significance.

The first tier of SMAQMD's recommended screening criteria for localized CO states that a project would result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the project would not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project would not contribute additional traffic to an intersection that already operates at LOS of E or F.

Even if a project would result in either of the above, under the SMAQMD's second tier of localized CO screening criteria, if all of the following criteria are met, the project would still result in a less-than-significant impact to air quality for localized CO:

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour;
- The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air would be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

As discussed in further detail in the Transportation and Circulation section of this IS/MND, the proposed project is expected to generate approximately 660 new daily vehicle trips, with 50 trips during the AM peak hour and 66 trips during the PM peak hour. Bruceville Road and Jacinto Avenue currently operate at acceptable levels of service and the minimal number of added trips as a result of the project would not be expected to change the levels of service on these roadways. In addition, the project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway or other locations where horizontal or vertical mixing of air would be substantially limited. Furthermore, the project would not create any substantial changes in the mix of vehicle types at any nearby intersection from County averages.

Consequently, the proposed project would not be expected to result in the generation of CO concentrations that exceed the 1-hour State AAQS (i.e., 20.0 ppm) or the 8-hour State AAQS (i.e., 9.0 ppm). Therefore, impacts related to such would be less than significant.

#### *TAC Emissions*

The CARB Handbook provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, rail yards, chrome platers, dry cleaners, and gasoline dispensing facilities. The CARB has identified DPM from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM.

Construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. All construction equipment and operation thereof would be regulated per the State's In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable SMAQMD rules and regulations, particularly associated with

permitting of air pollutant sources, and would be required to implement the SMAQMD's Basic Construction Emissions Control Practices (BCECP). In addition, construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per the City's Noise Ordinance, and would likely only occur over portions of the project site at a time. Thus, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to would correlate to a higher health risk. Considering the short-term nature of construction activities, and the regulated and intermittent nature of the operation of construction equipment, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time during project construction would be low. For the aforementioned reasons, project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

The CARB, per its Handbook, recommends the evaluation of emissions when freeways are within 500 feet of sensitive receptors. Any project placing sensitive receptors within 500 feet of a major roadway or freeway may have the potential to expose those receptors to DPM. The nearest freeway to the project site would be SR 99, which is located approximately 3,160 feet east of the project site. Due to the buffer between the project site and SR 99, the proposed on-site sensitive receptors would not be exposed to DPM associated with freeway traffic.

As discussed above, the project site is not located in an area identified as likely to contain NOA. Thus, sensitive receptors would not be exposed to NOA as a result of the proposed project.

Overall, the proposed project would not result in TAC exposures that would create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

### *Conclusion*

As discussed above, the proposed project would not cause or be exposed to substantial pollutant concentrations, including localized CO or TAC emissions, including DPM and NOA. Therefore, exposure of sensitive receptors to substantial pollutant concentrations would not occur and a **less-than-significant** impact would occur.

### Question H

The City has developed a CAP Consistency Review Checklist to provide a streamlined review process for proposed development projects. Projects that demonstrate consistency with the CAP would be expected to result in a less-than-significant impact related to GHG emissions and global climate change. The project's CAP Consistency Review Checklist is included as Appendix A.

As determined by the project's CAP Consistency Review Checklist, the project is predominantly consistent with the City's CAP. However, per the CAP, the project is required to reduce GHG emissions associated with energy demand by including on-site renewable energy systems. The project applicant does not intend to include on-site renewable energy, but, the CAP Consistency Review Checklist suggests other GHG reduction measures that may be substituted for an on-site renewable energy system, including exceeding the minimum requirements of the 2013 California Building Energy Efficiency Standards Code. In addition, in order to comply with the CAP, the proposed project must implement Tier 1 water efficiency and conservation standards of the 2013 California Green Building Standards Code (CALGreen Code). Because such a level of design is

not yet available for the project, verification of compliance with the Tier 1 CALGreen Code standards cannot be made at this time. Therefore, verification of exceedance of the California Building Energy Efficiency Standards Code and compliance with the Tier 1 CALGreen Code standards would be necessary at the time building plans are developed. Without full compliance with the CAP, the proposed project could interfere with or impede the City's efforts to reduce GHG emissions, and impacts would be considered ***potentially significant***. Implementation of Mitigation Measures 2-1 and 2-2 would reduce the above impact to a *less-than-significant* level.

### **Mitigation Measures**

Implementation of the following mitigation measures would reduce impacts related to Air Quality to a *less-than-significant* level.

- 2-1            *Prior to the issuance of a building permit, the project applicant shall demonstrate on the plans via notation how the project design would exceed the 2013 California Building Energy Efficiency Standards Code by a minimum of ten percent. The plans shall be subject to review and approval by the City of Sacramento Planning Division.*
- 2-2            *Prior to the issuance of a building permit, the project applicant shall submit a CALGreen checklist demonstrating how the project meets the 2013 CALGreen Tier 1 water efficiency and conservation standards. The checklist shall be subject to review and approval by the City of Sacramento Planning Division.*

### **Findings**

All additional significant environmental effects of the project relating to Air Quality can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>3. <u>BIOLOGICAL RESOURCES</u></b>			
Would the proposal:			
A) Create a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected?			X
B) Result in substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal species?		X	
C) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?		X	

In March 2004, ECORP Consulting prepared a Special-Status Species Assessment for the proposed project site. The purpose of the Special-Status Species Assessment was to serve as a baseline for determining the potential for occurrence of special-status plant and wildlife species on-site, and to identify unique habitats or natural communities within the project site.

In September 2005, Gibson & Skordal, LLC prepared a Jurisdictional Delineation Report in accordance with the 1987 Army Corps of Engineers *Wetlands Delineation Manual* and the Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetlands Delineations* (November 30, 2001).

The Biological Resources section is primarily based upon the Special-Status Species Assessment and Jurisdictional Delineation Report that were prepared for the project site. In addition, Madrone Environmental Services was consulted prior to preparation of this IS/MND to confirm whether the findings of the previous biological assessments continue to apply to the site in its current conditions. Madrone Environmental Services performed a site visit in May 2016 and determined that the entire project area is consistent with the previous findings. In addition, Madrone Environmental Services performed a search of the California Natural Diversity Database (CNDDDB) to identify all special-status species that have been recorded within five miles of the project site.

**Environmental Setting**

The proposed project site is vacant and bordered by existing roads to the south and east, and residential development to the north and west. The site is generally characterized by nearly level to gently sloping terrain that supports annual grassland habitat. The project site is highly disturbed and regularly disked for weed abatement.

Although the majority of the City is developed with residential, commercial, and other urban development, valuable plant and wildlife habitat still exists. The natural plant and wildlife habitats are located primarily outside the city boundaries in the northern, southern and eastern portions of the City, but also occur along river and stream corridors and on a number of undeveloped parcels. Habitats that are present in the City include annual grasslands, riparian

woodlands, oak woodlands, riverine, ponds, freshwater marshes, seasonal wetlands, and vernal pools. The plant and wildlife habitats and their general locations are discussed briefly below.

According to the 2005 Jurisdictional Delineation Report, the site contains altered plant communities typical of farmed/ranched areas. The majority of the study area supports disturbed, non-native annual grasslands dominated by (*Bromus mollis*), oats (*Avena sp.*), rat-tail fescue (*Vulpia myuros*), and perennial rye (*Lolium perenne*). Other common grassland associates observed at the site include rip-gut brome (*Bromus diandrus*), Mediterranean barley (*Hordeum hystrix*), chicory (*Cichorium intybus*), brodiaea (*Brodiaea sp.*), yellow star-thistle (*Centaurea solstitialis*), English plantain (*Plantago lanceolata*), geranium (*Geranium dissectum*), and silver hairgrass (*Aira caryophyllea*). The site contains three vernal pools and one drainage ditch. Given the relatively flat nature of the site's terrain, the vernal pools appear to derive most of their water from rainfall, sheet flow, and localized ground water discharge. The drainage ditch, which averages one foot in width, parallels the western edge of the site and runs to the south, where the ditch connects with the roadside drainage system associated with Jacinto Avenue.

Upon visiting the site, ECORP noted that the existing condition of the project site consists entirely of remnant plant material considered common non-native, weedy species such as wild oat (*Avena spp.*), ripgut brome (*Bromus diandrus*), yellow star-thistle (*Centaurea solstitialis*), common vetch (*Vicia sativa*) and mustard (*Brassica sp.*). Wildlife observed during the field survey was minimal, consisting primarily of bird species. A review of the California Natural Diversity Database (CNDDDB) query identified several special-status wildlife and plant species that have been documented within the area. However, suitable habitat for the majority of these species is lacking from the project site. ECORP developed a list of potentially-occurring special-status species for the project area, based on current land use practices, vegetation communities present on-site, known distribution of special-status species, and species-specific habitat requirements. The list of potentially-occurring species consists of six plants, four branchiopod crustaceans, and eleven birds.

### Waters and Wetlands

The project site contains a total of 0.4055-acre of potential waters of the United States in the study area including three vernal pools totaling 0.3928-acre and one 0.0127-acre drainage ditch. Given the relatively flat nature of the site's terrain, the on-site vernal pools derive most of their water from the rainfall, sheet flow, and localized ground water discharge. The drainage ditch, which averages one foot in width, parallels the west edge of the parcel and runs into the south where the ditch connects with the roadside drainage system associated with Jacinto Avenue. Through the use of historic aerial photography, the determination was made that a likely hydrologic connection exists between the site water features and jurisdictional waters. The aerial photos depict a drainage pattern flowing from the site to Laguna Creek, which is tributary to the navigable Sacramento River by way of Morrison Creek. Therefore, the study area water features are jurisdictional and subject to regulation by the Army Corps of Engineers under Section 404 of the Federal Clean Water Act.

### Special-Status Species

Special-status species are plants and animals in the following categories:

- Listed or proposed for listing as threatened or endangered under federal Endangered Species Act (ESA) or candidates for possible future listing (FWS 2013);
- Listed or candidates for listing by the state of California as threatened or endangered under the California Endangered Species Act (CESA);

- Listed as Fully Protected under the California Fish and Game Code;
- Animals identified by CDFW as species of special concern;
- Taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
  - CRPR 1A Plants presumed to be extinct in California;
  - CRPR 1B Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2 Plants that are rare, threatened, or endangered in California but more common elsewhere;
  - CRPR 3 Plants about which more information is needed (a review list); and
  - CRPR 4 Plants of limited distribution (a watch list).

A locally significant species is a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125[c]) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or otherwise meets the definition of rare or endangered under CEQA §15380(b) and (d).

#### Special-Status Wildlife Species

The special-status wildlife species identified as having the potential to occur in the project vicinity are discussed in further detail below.

#### *Special-Status Bird Species*

California Fish and Game Code §3503 protects most birds and their nests. The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) also protects most birds and their nests, including most non-migratory birds in California. Special-status bird species that may occur on-site include two ground nesting species, northern harrier (*Circus cyaneus*), and burrowing owl (*Athene cunicularia*). The site's current land use includes annual plowing, a process that discourages nesting of these species.

Swainson's hawk (*Buteo swainsoni*) is a tree-nesting species known to nest in the area. The closest CNDDDB record for an active Swainson's hawk nest tree is located within 0.5-mile of the project study area (2003). Although Swainson's hawk is not expected to nest on-site due to the lack of suitable nesting trees, Swainson's hawk may forage on-site. Therefore, development of the proposed project site would remove potential nesting and/or foraging habitat for Swainson's hawk, northern harrier, burrowing owl, and other sensitive raptors. The City of Sacramento requires mitigation for impacts to Swainson's hawk foraging habitat within 10 miles of an active nest.

#### *Vernal Pool Fairy Shrimp/Tadpole Shrimp*

The vernal pools and seasonal wetlands on-site provide habitat for two federally-listed branchiopod crustaceans – vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*). According to the Special-Status Species Assessment, the vernal pools and seasonal wetlands are considered occupied in the absence of determinate level surveys. In addition, the wetlands provide habitat for Midvalley fairy shrimp (*Branchinecta mesovallensis*) and California linderiella (*Linderiella occidentalis*), both of which are federal species of concern.

### Special-Status Plant Species

The site contains altered plant communities typical of farmed/ranched areas. The majority of the study area supports disturbed, non-native annual grasslands dominated by (*Bromus mollis*), oats (*Avena sp.*), rat-tail fescue (*Vulpia myuros*), and perennial rye (*Lolium perenne*). Other common grassland associates observed at the site include rip-gut brome (*Bromus diandrus*), Mediterranean barley (*Hordeum hystrix*), chicory (*Cichorium intybus*), brodiaea (*Brodiaea sp.*), yellow star-thistle (*Centaurea solstitialis*), English plantain (*Plantago lanceolata*), geranium (*Geranium dissectum*), and silver hairgrass (*Aira caryophyllea*).

According to the Special-Status Species Assessment, inundated areas on-site provide potential habitat for the State- and/or federal-listed Boggs Lake hedge-hyssop (*Gratiola heterosepala*), slender Orcutt grass (*Orcuttia tenuis*), and Sacramento Orcutt grass (*Orcuttia viscida*). However, at the time of preparation of the Special-Status Species Assessment, ECORP biologists conducted surveys for the species and none of these wetland plants were observed on-site. As discussed above, Madrone Environmental Services performed a site visit in May 2016 and determined that the entire project area is consistent with the previous findings.

### **Standards of Significance**

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;
- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal; or
- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).

For the purposes of this document, “special-status” has been defined to include those species, which are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, 4700, or 5050);
- Designated as species of concern by U.S. Fish and Wildlife Service (USFWS), or as species of special concern to California Department of Fish and Game (CDFG); or
- Plants or animals that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA).



## Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.3 of the Master EIR evaluated the effects of the 2035 General Plan on biological resources within the City. The Master EIR identified potential impacts in terms of degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.

Policies in the 2035 General Plan were identified as mitigating the effects of development that could occur under the provisions of the 2035 General Plan. Policy ER 2.1.5 calls for the City to preserve the ecological integrity of creek corridors and other riparian resources; Policy ER 2.1.10 requires the City to consider the potential impact on sensitive plants for each project and to require pre-construction surveys when appropriate; and Policy ER 2.1.11 requires the City to coordinate its actions with those of the California Department Fish and Wildlife, U.S. Fish and Wildlife Service, and other agencies in the protection of resources.

The Master EIR discussed biological resources in Chapter 4.3. The Master EIR concluded that policies in the General Plan, combined with compliance with the California Endangered Species Act, Natomas Basin HCP (when applicable) and CEQA would minimize the impacts on special-status species to a less-than-significant level (see Impact 4.3-1), and that the General Plan policies, along with similar compliance with local, state and federal regulation would reduce impacts to a less-than-significant level for habitat for special-status invertebrates, birds, amphibians and reptiles, mammals and fish (Impacts 4.3-3-6).

Given the prevalence of rivers and streams in the incorporated area, impacts to riparian habitat is a common concern. Riparian habitats are known to exist throughout the City, especially along the Sacramento and American rivers and their tributaries. The Master EIR discussed impacts of development adjacent to riparian habitat that could disturb wildlife species that rely on these areas for shelter and food, and could also result in the degradation of these areas through the introduction of feral animals and contaminants that are typical of urban uses. The California Department of Fish and Wildlife (CDFW) regulates potential impacts on lakes, streams, and associated riparian (streamside or lakeside) vegetation through the issuance of Lake or Streambed Alteration Agreements (SAA) (per Fish and Game Code Section 1602), and provides guidance to the City as a resource agency. While there are no federal regulations that specifically mandate the protection of riparian vegetation, federal regulations set forth in Section 404 of the Clean Water Act address areas that potentially contain riparian-type vegetation, such as wetlands.

The General Plan calls for the City to preserve the ecological integrity of creek corridors, canals and drainage ditches that support riparian resources (Policy ER 2.1.5) and wetlands (Policy ER 2.1.6) and requires habitat assessments and impact compensation for projects (Policy ER 2.1.10). has adopted a standard that requires coordination with state and federal agencies if a project has the potential to affect other species of special concern or habitats (including regulatory waters and wetlands) protected by agencies or natural resource organizations (Policy 2.1.11).

Implementation of 2035 General Plan Policy ER 2.1.5 would reduce the magnitude of potential impacts by requiring a 1:1 replacement of riparian habitat lost to development. While this would help mitigate impacts on riparian habitat, large open areas of riparian habitat used by wildlife could be lost and/or degraded directly and indirectly through development under the 2035 General Plan. Given the extent of urban development designated in the General Plan, the preservation and/or restoration of riparian habitat would likely occur outside of the City limits. The Master EIR concluded that the permanent loss of riparian habitat would be a less-than-significant impact. (Impact 4.3-7)

## Answers to Checklist Questions

### Question A

The use, handling, and storage of hazardous materials is regulated by both the Federal Occupational Safety and Health Administration (Fed/OSHA) and the California Occupational Safety and Health Administration (Cal/OSHA). Cal/OSHA is responsible for developing and enforcing workplace safety regulations.

The proposed project would not include any manufacturing, use, or handling of hazardous materials. Because routine transport, use, and disposal of hazardous materials are regulated by existing federal, state, and local regulations, and the proposed project would not involve the use, production, disposal, or handling of materials that could pose a hazard to plant or animal populations in the area, the proposed project would result in a **less-than-significant** impact.

### Question B

The following discussion of the proposed project's potential impacts related to special-status plant and animal species is based on the results of the ECORP Special-Status Species Assessment, the Gibson & Skordal, LLC Jurisdictional Delineation Report, and the consultation and site visit performed by Madrone Environmental Services.

#### *Special-Status Bird Species*

Special-status bird species that may occur on-site include two ground nesting species, northern harrier (*Circus cyaneus*) and burrowing owl (*Athene cunicularia*). The site's current land use includes annual plowing, a process that discourages nesting of these species. In particular, the annual plowing disturbs any vegetation on the site. Northern harriers rely on ground vegetation for nesting, and because the site does not contain significant vegetation due to plowing, the project site is not considered habitat for northern harriers. However, burrowing owls do not rely on vegetation for nesting; rather, burrowing owls use burrows made by other animals, such as ground squirrels, which could exist on the site despite the regular plowing and disturbance. Due to the ground-nesting opportunities associated with the project site and the potential for suitable nests to become established prior to project construction, burrowing owl may not be excluded from the site during the breeding season. Accordingly, implementation of Mitigation Measures 3-1(a), 3-1(b), and 3-2 would be required in order to ensure that any potential impacts to northern harrier and burrowing owl would be reduced to a less-than-significant level.

#### *Swainson's Hawk*

Swainson's hawk (*Buteo swainsoni*) is a tree-nesting species known to nest in the area. Although Swainson's hawk is not expected to nest on-site due to the lack of suitable nesting trees, Swainson's hawk may forage on-site. Therefore, development of the proposed project site could remove potential foraging habitat for Swainson's hawk.

CDFW recommends that impacts to suitable Swainson's hawk foraging habitat within 10 miles of an active nest be mitigated by fee title acquisition or securing a conservation easement on suitable Swainson's hawk foraging habitat in the region. An active nest is one that was used during one or more of the last five years. According to the Special-Status Species Assessment, the closest CNDDDB record for an active Swainson's hawk nest tree is located within 0.5-mile of the project study area (2003). According to the CDFW, for projects within five miles of an active

nest, one acre of similar habitat per acre lost must be preserved. Therefore, with implementation of Mitigation Measure 3-3, the proposed project's impacts related to Swainson's hawk foraging habitat would be considered less than significant.

#### *Vernal Pool Fairy Shrimp/Tadpole Shrimp*

The vernal pools and seasonal wetlands on-site provide habitat for two federally-listed branchiopod crustaceans – vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*). According to the Special-Status Species Assessment, the vernal pools and seasonal wetlands are considered occupied in the absence of determinate level surveys. In addition, the wetlands provide habitat for Midvalley fairy shrimp (*Branchinecta mesovallensis*) and California linderiella (*Linderiella occidentalis*), both of which are federal species of concern. Grading and construction activities that result in discharge of fill material into habitat for vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*) would be considered a potentially significant impact. With implementation of Mitigation Measure 3-4, the proposed project's impacts to vernal pool fairy shrimp/vernal pool tadpole shrimp would be considered less than significant.

#### *Special-Status Plant Species*

Inundated areas on-site provide potential habitat for the state- and/or federal-listed Boggs Lake hedge-hyssop (*Gratia/a heterosepala*), slender Orcutt grass (*Orcuttia tenuis*), Sacramento Orcutt grass (*Orcuttia viscida*). ECORP biologists conducted surveys for the species and none of these wetland plants were observed on-site. Because these special-status plant species do not occur on-site, the project would result in no impact to the species.

#### *Protected Trees*

As discussed throughout this section, the project site is highly disturbed, vacant land that currently supports weedy vegetation. Trees meeting the definition of a heritage tree pursuant to Chapter 12.64 of the City's Municipal Code and/or trees meeting the definition of a street tree pursuant to Chapter 12.56 of the City's Municipal Code do not currently exist on the project site. Because protected trees do not exist on the project site, the proposed project would not result in the removal of any protected trees, and thus the project would not have the potential to conflict with the City's existing regulations regarding tree protection.

#### *Conclusion*

As discussed above, implementation of the proposed project could have the potential to affect burrowing owl, Swainson's hawk, vernal pool fairy shrimp, and vernal pool tadpole shrimp; therefore, the project's impact would be **potentially significant**. Implementation of Mitigation Measures 3-1(a) and (b) through 3-4 would reduce the project's impact to a *less-than-significant* level.

#### Question C

The project site contains a total of 0.4055-acre of potential waters of the United States in the study area including three vernal pools totaling 0.3928-acre and one 0.0127-acre drainage ditch. The drainage ditch, which averages one foot in width, parallels the west edge of the parcel and runs into the south, where the ditch connects with the roadside drainage system associated with Jacinto Avenue. The water features are described in further detail below. See

**Figure 6** for a delineation map showing the study area boundary, location of representative data points, and location and size of wetlands and ditches.

**Figure 6**  
**Wetland Delineation**



<p><b>Jurisdictional Delineation</b> <b>Bruceville Jacinto Road</b></p> <p>Sacramento County, California Corps Action ID: 2004-00-769</p>	<p> Study Area (10 ac.)</p> <p> Reference Point (Decimal Degrees, NAD 83)</p> <p><b>Water Features</b></p> <p> Vernal Pool</p> <p> Depressional Seasonal Wetland</p> <p> Ditch</p>	<p>Scale: 1 inch = 50 feet Reference Elevation Datum: NAVD88 Aerial Base: Microsoft Aerial Base Flight: February 2, 2012 Prepared by: M. Hirakala</p>	<p></p> <p>0 25 50 100 Feet</p>	<p>Prepared For:</p> <p>Mark Wiese 2115 J Street, Suite 201 Sacramento, California 95816</p>	<p>2017 K Street, Suite 175 Sacramento, California 95816 www.gibsonskordal.com phone: 916.522.3233</p> <p><b>Gibson &amp; Skordal, LLC</b> WETLAND CONSULTANTS</p> <p>Prepared Date: May 2015 Revised Date:</p>
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### *Vernal Pools*

Three vernal pools were delineated within the project study area. Vernal pools typically sustain long-term ponding and/or saturated soil conditions that persist during and following periods of heavy precipitation in the winter and early spring. The vernal pools are hydrologically sustained by rainfall and runoff from the immediate watershed that is confined to the property

The vernal pools generally support a wetland plant community dominated by slender popcorn flower (*Plagiobothrys stipitatus*), spike primrose (*Boisduvalia densiflora*), and knotweed (*Polygonum aviculare*). Common associates include loosestrife (*Lythrum hyssopifolia*), perennial ryegrass (*Lolium perenne*), and paradox canary grass (*Phalaris paradoxa*). The adjacent upland is marked by a rise in landscape position lacking indicators of wetland hydrology and/or hydric soils, and the emergence of an upland grassland plant community.

### *Channels*

One 555-foot long drainage ditch (with an average width of one foot) was also mapped along the western edge of the project site. The drainage ditch displays a distinct bed and bank and a plant community dominated by perennial rye. Wild oat (*Avena fatua*) is the sole associate species.

### Jurisdictional Status

The delineated areas represent those features that can be considered potentially jurisdictional waters of the United States due to their physical and biological characteristics. Whether they are, in fact, jurisdictional also depends on their hydrologic relationship to downstream waters. The U.S. Army Corps of Engineers (USACE) maintains jurisdiction under the Federal Clean Water Act over navigable waters of the United States, interstate waters, their tributaries, and wetlands adjacent to these waters.

After reviewing a topographic map of the project site, and 1937, 1957, 1964, and 1987 aerial photography of the area, the conclusion was made that a hydrologic connection exists between the site water features and jurisdictional waters. The historic aerial photos depict a drainage pattern flowing from the site to Laguna Creek, which is tributary to the navigable Sacramento River by way of Morrison Creek. The Jurisdictional Delineation Report determined that the study area water features are jurisdictional and would be subject to regulation by the USACE under Section 404 of the Federal Clean Water Act. Ultimately, however, the USACE is responsible for determining the jurisdictional status of features within the study area.

Because the proposed project site contains water features that may be considered to be potentially jurisdictional waters of the United States, implementation of the project would result in a **potentially significant** impact to wetlands or waters of the United States. Implementation of Mitigation Measure 3-5 would reduce the project's impact to a *less-than-significant* level.

## Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to Biological Resources to a *less-than-significant* level.

3-1(a) *Preconstruction Surveys: The project applicant shall implement the following measure to avoid or minimize impacts to western burrowing owl:*

- *Within 14 days prior to any ground disturbing activities for each phase of construction, the project applicant shall retain a qualified biologist to conduct a preconstruction survey of the site, any off-site improvement areas, and all publicly accessible potential burrowing owl habitat within 500 feet of the project construction footprint. The survey shall be performed in accordance with the applicable sections of the March 7, 2012 (or subsequent applicable), CDFW Staff Report on Burrowing Owl Mitigation. The qualified biologist shall be familiar with burrowing owl identification, behavior, and biology, and shall meet the minimum qualifications described in the 2012 CDFW Staff Report. If the survey does not identify any nesting burrowing owls on the site, further mitigation is not required for that phase unless activity ceases for a period in excess of 14 days in which case the survey requirements and obligations shall be repeated.*
- *If active burrowing owl dens are found within the survey area in an area where disturbance would occur, the project applicant shall implement measures at least equal to the 2012 (or subsequent applicable) CDFW Staff Report, as determined by the qualified biologist.*
- *During the breeding season (February 1 through August 31), the following measures will be implemented:*
  - *Disturbance-free buffers will be established around the active burrow. During the peak of the breeding season, between April 1 and August 15, a minimum of a 500-foot buffer will be maintained. Between August 16 and March 31, a minimum of a 150-foot buffer will be maintained. The qualified biologist (as defined above) will determine, in consultation with the City of Sacramento Planning Division and CDFW, if the buffer should be increased or decreased based on site conditions, breeding status, and non-project-related disturbance at the time of construction.*
  - *Monitoring of the active burrow will be conducted by the qualified biologist during construction on a weekly basis to verify that no disturbance is occurring.*
  - *After the qualified biologist determines that the young have fledged and are foraging independently, or that breeding attempts were not successful, the owls may be excluded in accordance with the non-breeding season measures below. Daily monitoring will be conducted for one week prior to exclusion to verify the status of owls at the burrow.*

- *During the non-breeding season (September 1 to January 31), owls occupying burrows that cannot be avoided will be passively excluded consistent with Appendix E of the 2012 CDFW Staff Report:*
  - *Within 24 hours prior to installation of one-way doors, a survey will be conducted to verify the status of burrowing owls on the site.*
  - *Passive exclusion will be conducted using one-way doors on all burrows suitable for burrowing owl occupation.*
  - *One-way doors shall be left in place a minimum of 48 hours to ensure burrowing owls have left the burrow before excavation.*
  - *While the one-way doors are in place, the qualified biologist will visit the site twice daily to monitor for evidence that owls are inside and are unable to escape. If owls are trapped, the device shall be reset and another 48-hour period shall begin.*
  - *After a minimum of 48 hours, the one-way doors will be removed and the burrows will be excavated using hand tools to prevent reoccupation. The use of a pipe is recommended to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow.*
  - *After the owls have been excluded, the excavated burrow locations will be surveyed a minimum of three times over two weeks to detect burrowing owls if they return. The site will be managed to prevent reoccupation of burrowing owls (e.g., disking, grading, manually collapsing burrows) until development is complete.*
  - *If burrowing owls are found outside the project site during preconstruction surveys, the qualified biologist shall evaluate the potential for disturbance. Passive exclusion of burrowing owls shall be avoided to the maximum extent feasible where no ground disturbance will occur. In cases where ground disturbance occurs within the no-disturbance buffer of an occupied burrow, the qualified biologist shall determine in consultation with the City of Sacramento Planning Division and CDFW whether reduced buffers, additional monitoring, or passive exclusion is appropriate.*

3-1(b)

*Compensatory Mitigation, if Active Owl Dens are Present: If active burrowing owl dens are present and the project would impact active dens, the project applicant shall implement the following:*

- *If active owl burrows are present and the project would impact active burrows, the project applicant shall provide compensatory mitigation for the permanent loss of burrowing owl habitat at least equal to the 2012 (or subsequent applicable), CDFW Staff Report. Such mitigation shall include the permanent protection of land, which is deemed to be suitable burrowing owl habitat through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, or the purchase of burrowing owl conservation bank credits from a CDFW-approved burrowing owl conservation bank. In determining the location and amount of acreage required for permanent protection, the project applicant, in conjunction with the City of Sacramento Planning Division, shall seek lands that include the same types of vegetation communities and fossorial mammal populations found in the lost foraging habitat, with a preference given to lands that are*



*adjacent to, or reasonably proximate to, the lost foraging lands. Such lands shall provide for nesting, foraging, and dispersal comparable to, or better than, the lost foraging land. The minimum amount of acreage for preservation shall be 6.5 acres per nesting pair or unpaired resident bird. Additional lands may be required as determined pursuant to the then current standards/best practices for mitigation acreage as determined by the City of Sacramento Planning Division in consultation with CDFW.*

- 3-2 *If project construction plans require ground disturbance that represents potential nesting habitat for migratory birds or other raptors including Swainson's hawk, the project contractor shall initiate such activity between September 1st and January 31st, outside the bird nesting season, to the extent feasible. If tree removal must occur during the avian breeding season (February 1st to August 31st), a qualified biologist shall conduct a survey for ground-nesting birds. The survey shall be conducted 14 days prior to the commencement of construction and include all potential ground-nesting sites and trees and shrubs within 75 feet of the entire project site. The findings of the survey shall be submitted to the City of Sacramento Community Development Department. If nesting passerines or raptors are identified during the survey within 75 feet of the project site, a 75-foot buffer around the ground nest or nest tree shall be fenced with orange construction fencing. If the ground nest or nest tree is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting passerines are well acclimated to disturbance. If acclimation has occurred, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. Construction or earth-moving activity shall not occur within the established buffer until a qualified biologist has determined that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, which typically occurs by July 15th. However, the date may be earlier or later, and would have to be determined by a qualified biologist. If a qualified biologist is not hired to watch the nesting passerines, then the buffers shall be maintained in place through the month of August and work within the buffer may commence September 1st.*

*Prior to the issuance of a grading permit, the dedication of land suitable for replacement Swainson's hawk foraging habitat shall be dedicated by the project applicant at a ratio of 1:1 for all existing unpaved areas within the project site. The location of the replacement foraging habitat shall be coordinated with, and approved by, the CDFW, and shall be acquired prior to development of the project site. Proof of CDFW approval shall be submitted to the City of Sacramento Community Development Department.*

- 3-3 *Prior to the issuance of a grading permit, the Applicant shall provide to the City of Sacramento Development Services Department evidence of compliance with Federal Endangered Species Act (FESA). The following measures will be implemented to document for the City the Applicant's compliance with FESA:*

- *The Applicant will provide compensatory mitigation as required by USFWS for VPFS and VPTS.*

- *Under the consultation process, the Applicant will be required to prepare a mitigation plan for submittal to USFWS. The mitigation plan will include the following components for direct and indirect impacts:*
  - *Avoidance Component. Demonstrate how the project has been designed to minimize impacts to federal-listed vernal pool crustaceans and their habitat (e.g. ESA, biological monitor, and special-status species training for construction personnel).*
  - *Preservation Component. For every acre of habitat directly or indirectly affected, at least two (2) vernal pool credits will be dedicated within a USFWS-approved ecosystem preservation bank (2:1 ratio).*
  - *Conservation Component. For every acre of habitat directly affected, at least one (1) vernal pool creation credit will be dedicated within a USFWS-approved habitat mitigation bank.*
  - *In the event that preservation or conservation credits are not available for purchase at the time of mitigation implementation, the deposit of funds, the amount of money to be deposited determined by USFWS, into a USFWS Species Fund in lieu fee program shall be acceptable to satisfy both the preservation and conservation components of the mitigation plan.*
- *The USFWS will review the mitigation plan and issue a Biological Opinion. The Biological Opinion will include an incidental take statement and approval of the mitigation plan.*
- *The Applicant will notify the City of Sacramento Development Services Department that VPFS and VPTS mitigation is complete by submitting a copy of the Biological Opinion and bill of sale for the mitigation credits to the City of Sacramento.*

3-4 *Prior to issuance of a grading permit, the Developer will submit a wetland mitigation and monitoring plan to the City:*

- *The mitigation plan will be prepared in accordance with the requirements of the Army Corps of Engineer's Regulatory Guidance Letter (RGL 02-02) for compensatory wetland mitigation and the Mitigation and Monitoring Proposal Guidelines (Corps, 30 December 2004).*
- *The mitigation plan will describe how the jurisdictional wetlands in the grading plan area will be mitigated. Mitigation may include the purchase of wetland mitigation credits at a Corps approved mitigation bank.*
- *A copy of the bill of sale for the purchase of wetland mitigation credits will be submitted to the City.*

## **Findings**

All additional significant environmental effects of the project relating to Biological Resources can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>4. CULTURAL RESOURCES</b> Would the project:			
A) Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in § 15064.5?		X	
B) Directly or indirectly destroy a unique paleontological resource?		X	
C) Adversely affect tribal cultural resources?			X

**Environmental Setting**

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the City. Human burials outside of formal cemeteries often occur in prehistoric contexts. Areas of high sensitivity for archaeological resources, as identified in the 2035 General Plan Background Report, are located within close proximity to the Sacramento and American rivers and other watercourses.

The 2035 General Plan land use diagram designates a wide swath of land along the American River as Parks, which limits development and impacts on sensitive prehistoric resources. High sensitivity areas may be found in other areas related to the ancient flows of the rivers, with differing meanders than found today; however, all such areas are outside of the immediate project vicinity. The 2035 General Plan Background Report also defines moderate sensitivity areas, which are areas such as creeks, other watercourses, and high spots near waterways where the discovery of villages is unlikely, but campsites or special use sites may have existed. Moderate areas are often disturbed by siltation, or development, however discovery of new archaeological resources is still possible. Laguna Creek, which is approximately 0.5-mile away from the site is the nearest moderate resource area.

**Standards of Significance**

For purposes of this Initial Study, cultural resource impacts may be considered significant if construction and/or implementation of the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource; or
- A substantial adverse change in the significance of such resources.

**Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources. See Chapter 4.4.

General Plan policies identified as reducing such effects call for identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR 2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10) and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.14). Demolition of historic resources is deemed a last resort. (Policy HCR 2.1.15)

The Master EIR concluded that implementation of the 2035 General Plan would have a significant and unavoidable effect on historic resources and archaeological resources. (Impacts 4.4-1, 2)

## Answers to Checklist Questions

### Questions A and B

A complete California Historic Resources Information System (CHRIS) records search was conducted at the North Central Information Center (NCIC) located in Sacramento, California by searching CHRIS maps for cultural resource site records and survey reports in Sacramento County within a 0.25-mile radius of the proposed project area. According to the records search, the proposed project site does not contain any recorded prehistoric-period cultural resources and three historic-period cultural resources. In addition, two cultural resources study reports on file at the NCIC cover a portion the proposed project site. According to the search, within the search area, evidence of 19<sup>th</sup>- or 20<sup>th</sup>-century historical activity does not exist, and given the extent of known cultural resources and patterns of local history, the likelihood is low for locating historic-period cultural resources in the vicinity of the proposed project area.

The project site is not located adjacent to a waterway, which suggests that the project site has a low potential for containing prehistoric sites. The project site does not contain structures that could possibly yield important prehistoric or historic information. In addition, the project site has been entirely disturbed given the surrounding development and regular disking for weed abatement. Given the disturbed nature of the project site, surface cultural resources would not likely be found on-site during grading and construction. However, unknown resources below the surface could be encountered during grading and excavation. Therefore, the proposed project could have a **potentially significant** impact related to damaging or destroying prehistoric cultural resources. Implementation of Mitigation Measures 4-1 and 4-2 would reduce the impact to a *less-than-significant* level.

### Question C

Tribal cultural resources are generally defined by Public Resources Code 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. The Native American Heritage Commission (NAHC) was contacted on July 14, 2016, requesting a search of their Sacred Lands File for traditional cultural resources within or near the project area. The reply from the NAHC states that the search failed to indicate the presence of Native American sacred lands or traditional cultural properties in the immediate vicinity. The City of Sacramento distributed a project notification letter per AB 52. The mandatory 30-day response period closed on August 15, 2016 and the City did not receive a request for consultation. As such, given the results of the NAHC sacred lands file search, and the existing disturbed environment of the project site, the project would result in a **less-than-significant** impact to tribal cultural resources.

## Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to Cultural Resources to a *less-than-significant* level.

- 4-1 *In the event that subsurface historic or prehistoric archeological features or deposits are discovered during construction-related ground disturbing activities, all work within 50 meters of the resource shall be halted, and the City shall consult with a qualified archaeologist to assess the significance of the find. If warranted, archaeological test excavations shall be conducted by a qualified archaeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archaeologist, representatives of the City and the qualified archaeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation. In addition, a report shall be prepared by the qualified archaeologist according to current professional standards.*
- 4-2 *If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives. If Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists, who are listed in the Register of Professional Archaeologists (RPA) and/or meet the Secretary of Interior Standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representative(s) assigned by the Native American Heritage Commission.*
- 4-3 *If human remains are discovered during project development, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If human bone or bone of unknown origin are discovered, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Sacramento County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains are Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the deceased Native American(s). The MLD shall make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.*
- 4-4 *Should paleontological resources be identified during any phase of project development, the construction manager shall cease operation at the site of the discovery and immediately notify the City of Sacramento Community Development Department. The project applicant shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less than significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the Community Development Department shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs,*

*land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.*

## **Findings**

All additional significant environmental effects of the project relating to Cultural Resources can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<p><b>5. <u>GEOLOGY AND SOILS</u></b></p> <p>A) Would the project allow a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards?</p>			X

Krazan & Associates, Inc. prepared a Geotechnical Engineering Investigation<sup>2</sup> (Geotechnical Investigation) for the proposed project site in December 2003. The Geology and Soils section is primarily based on the findings of the Geotechnical Investigation.

### **Environmental Setting**

#### *Seismicity*

The Sacramento 2035 General Plan Master EIR identifies all of the City of Sacramento as being subject to potential damage from earthquake groundshaking at a maximum intensity of VIII on the Modified Mercalli scale (SGP Master EIR, Table 6.5-6). The closest potentially active faults to the project area include the Foothills Fault System, located approximately 23 miles from Sacramento; the Great Valley fault, located 26 miles from Sacramento; Concord-Green Valley Fault, located approximately 38 miles from Sacramento; and the Hunting Creek-Berryessa Fault, located 38 miles from Sacramento. The Foothills Fault System is considered capable of generating an earthquake with a Richter-Scale magnitude of 6.5; the Great Valley Fault is capable of generating an earthquake with a magnitude of 6.8; the Concord-Green Valley fault is capable of generating an earthquake with a magnitude 6.9, and the Hunting Creek-Berryessa Fault could generate a 6.9 magnitude earthquake. A major earthquake on any of these faults could cause strong groundshaking in the project area.

#### *Topography*

Terrain in the City of Sacramento features very little relief and the potential for slope instability within the City is minor due to the relatively flat topography of the area. The project site is relatively level with no major changes in grade.

#### *Regional Geology*

The project site lies near the southern end of the Sacramento Valley portion of the Great Valley Geomorphic Province. The Great Valley is bordered to the north by the Cascade and the Klamath Ranges, to the west by the Coast Ranges, to the east by the Sierra Nevada Mountain Range, and to the south by the transverse ranges. The valley formed by tilting of Sierran Block with the western side dropping to form the valley and the eastern side being uplifted to the form the Sierra Nevada Mountain Range. The valley is characterized by a thick sequence of sediments derived from erosion of the adjacent Sierra Nevada Mountain Range to the east and the Coast Range to the west. These sedimentary rocks are mainly Cretaceous in age. The

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<sup>2</sup> Krazan & Associates, Inc. *Geotechnical Engineering Investigation*. December 2003.

depths of the sediments vary from a thin veneer at the edges of the valley to depths in excess of 50,000 feet near the western edge of the valley. In the vicinity of the project site, these sediments are approximately 15,000 feet deep. According to published geologic maps, the project site is underlain by the Basin Deposits. The Basin generally consists of unconsolidated silts and clays deposited during flood events.<sup>3</sup>

### *Project Site Soils*

The project area is underlain by Pleistocene Alluvium-Victor Formation (SGPU DEIR, Exhibit T-2). This is a complex mixture of consolidated, ancient river-borne sediments of all textures. (SGPU DEIR, T-1). Weathering subsequent to formation during the Ice Ages has typically caused a hardpan layer to develop near the surface, generally allowing only a moderate-to-low rate of rainwater infiltration. The Natural Resources Conservation Service (NRCS) provides maps and descriptions of soils throughout the United States. Soil survey information is regularly updated and posted to the NRCS Web Soil Survey. According to the NRCS Web Soil Survey conducted for the project site, the following soils exist on the site: Galt clay, 0 to 2 percent slopes and San Joaquin silt loam, 0 to 3 percent slopes. These are both moderately deep, moderately well-drained soils found in low terrace features. Surface water may pond temporarily after heavy rains or over-irrigation due to the presence of an underlying hardpan and claypan. The Galt clay unit includes small areas of Clear Lake, Dierssen, and San Joaquin soils and Urban land, while the San Joaquin silt loam contains inclusions of Bruella, Galt, Hedge, and Kimball soils.

Krazan & Associates performed soil borings on the project site to depths in excess of 12 feet. The soils ranged from very soft/very loose sandy clay or sandy clayey silt to predominately dense to very dense silty or sandy silt.

### **Standards of Significance**

For the purposes of this Initial Study, an impact is considered significant if it allows a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

Chapter 4.5 of the Master EIR evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, existing mineral resources and paleontological resources in the City. Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level. Policy EC 1.1.1 requires regular review of the City's seismic and geologic safety standards, and Policy EC 1.1.2 requires geotechnical investigations for project sites to identify and respond to geologic hazards, when present.

### **Answers to Checklist Questions**

#### Question A

#### *Geologic Hazards*

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<sup>3</sup> Krazan & Associates, Inc. *Geotechnical Engineering Investigation*. December 2003.



The Geotechnical Investigation that was prepared for the proposed project site documents existing geologic and soil conditions near and on the proposed project site and included field investigations where test borings were drilled in various locations on the project site. The test borings on the project site were conducted to determine the types of soil underlain the project site and to determine the depth of the groundwater table. The Foundation Investigation identifies site-specific recommendations for the following: general construction procedures; site clearing; site preparation and sub-excavation; engineered fill construction; utility trench backfill; foundation design; interior floor slab support; floor slab moisture penetration resistance; exterior flatwork; pavement design; construction testing and observation; and review of final plans and specifications to ensure that the recommendations within the investigation are implemented as part of the proposed project. As part of the building permit process, a Geotechnical Investigation is required to be submitted with the building permit application and implemented via the building plan review process prior to issuance of the building permit.

The proposed project site is not located on or in the vicinity of an Alquist-Priolo Fault Zone; therefore, the potential for fault rupture on the proposed project site is considered to be low. The proposed project site is located in an area of the City of Sacramento that is topographically flat. Elevations on the proposed project site range from 27 to 30 feet above mean sea level (amsl). Seismically-induced landslides or landslides induced by soil failure typically occur on slopes with gradients of 30 percent or higher. Considering the proposed project site is topographically flat, the potential for seismically-induced or soil failure landslides does not exist.

Soil liquefaction is a phenomenon primarily associated with the saturated soil layers located close to the ground surface. These soils lose strength during ground shaking generated by seismic events. Due to the loss of strength, the soil acquires “mobility” sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (minute silt and clay fraction) may also liquefy. According to the NRCS, soils at the project site include Galt clay, 0 to 2 percent slopes and San Joaquin silt loam, 0 to 3 percent slopes. The proposed project site is not located within a State-Designated Seismic Hazard Zone for liquefaction. Based on the nature of the underlying soils, the absence of groundwater within the test borings that were conducted on-site, and the historic seismicity in the area, the potential for liquefaction at the proposed project site during a seismic event is low.

#### *Soil Hazards*

The Geotechnical Investigation recommended specific site preparation procedures for the project, depending on the type of foundation system used, and following these recommendations would reduce any possible impacts from geologic risks. In addition, the Uniform Building Code would require construction and design of the building to meet standards that would reduce risks associated with subsidence or liquefaction. Because the topography of the area is relatively flat, and the project site is not near an active fault system, landslides and earthquakes do not present a hazard to the project site.

The proposed project would also be required to be consistent with the City of Sacramento Building Code; and, therefore would comply with the 2010 California Building Code (CBC) as the City implements the CBC through the building permit process. The CBC provides minimum standards for building design in the State of California. Chapter 16 of the CBC (Structural Design Requirements) includes regulations and building standards governing seismically-resistant construction and construction techniques to protect people and property from hazards associated with excavation cave-ins and falling debris/construction materials. Chapter 18 of the

CBC provides regulations regarding site demolition, excavations, foundations, retaining walls, and grading, including (but not limited to) requirements for seismically-resistant design, foundation investigation, stable cut and fill slopes, and excavation, shoring, and trenching. The CBC also defines different building regions in California and ranks them according to their seismic hazard potential. Seismic Zone 1 has the least seismic potential and Zone 4 has the highest seismic potential. The City of Sacramento is in Seismic Zone 3; accordingly, the proposed project would be required to comply with all design standards applicable to Seismic Zone 3.

The proposed project would also require grading and excavation during the construction period and would, therefore, require a Grading and Erosion and Sediment Control Plan to be submitted and approved per Chapter 15.88 of the City's Municipal Code. Chapter 15.88 of the Municipal Code (Grading and Erosion and Sediment Control) is used to regulate grading on property within the City of Sacramento to safeguard life, limb, health, property and the public welfare; to avoid pollution of watercourses with nutrients, sediments, or other materials generated by surface runoff from construction activities; to comply with the City's National Pollution Discharge Elimination System Permit; and, to ensure graded sites within the City comply with all applicable City standards and ordinances.

The proposed project would not include the use of septic tanks or alternative wastewater disposal systems; therefore, impacts would not occur due to inadequate soils being able to support such wastewater storage/disposal systems.

### *Conclusion*

As discussed above, the Geotechnical Investigation for the proposed project recommended specific site preparation procedures for the proposed project. All applicable recommendations provided in the Geotechnical Investigation would be implemented as part of the proposed project, as required, through the building permit process. Because the necessary requirements of soil condition modification would be ensured through the building permit process, site-specific impacts would be ***less-than-significant*** through compliance with the City of Sacramento Building Code and Chapter 15.88 of the City's Municipal Code.

### **Mitigation Measures**

None required.

### **Findings**

The project would have no additional project-specific environmental effects relating to Geology and Soils.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>6. HAZARDS</b> Would the project:			
A) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?			X
B) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?			X
C) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?			X

**Environmental Setting**

A Phase I Environmental Site Assessment (ESA) was conducted in July 2003 by Krazan & Associates. The purpose of the assessment was to examine the site for potential hazardous materials and conditions, including petroleum products or containers, underground storage tanks, pools of noxious liquids, potential polychlorinated biphenyl (PCB) containing equipment, pits, ponds or lagoons, stained soil and/or pavement, wastewater discharges or wells. In addition, a subsequent Phase I ESA was conducted in November 2009 by TSS Consultants.<sup>4</sup>

Historical review of building record and aerial photos further confirm that the site has been vacant since 1937. At the time of preparation of the 2003 Phase I ESA, the eastern and the southern adjacent property appeared to be occupied by agricultural uses and dwellings were visible on adjacent properties.

On October 23, 2009, an on-site walk-through inspection of the proposed project site was conducted by TSS Consultants. At that time, the land was vacant, covered with bare soil, grass, and weeds. Part of the site appeared to have been recently furrowed. At the time of preparation of this IS/MND, the project site remains in a similar condition.

Listings in the Geotracker system were reviewed for their potential to impact the site. Only facilities within one-quarter mile of, and upgradient of, the proposed project site have the potential to adversely impact soil or groundwater at the project site. All other facilities identified by Geotracker are interpreted to have a low likelihood of adversely impacting soil or groundwater at the project site. The general groundwater flow in the vicinity of the project site is not known, but because hazardous materials sites were not identified within one-quarter mile of the site, the direction of groundwater flow is not important to the question of possible contamination of the groundwater beneath the site from any adjacent contaminated sites.

**Standards of Significance**

For the purposes of this Initial Study, an impact is considered significant if the proposed project would:

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<sup>4</sup> TSS Consultants. *Phase I Environmental Site Assessment, Jacinto Terrace, Proposed Senior Community, 8500 Bruceville Road.* November 1, 2009.

- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR evaluated effects of development on hazardous materials, emergency response and aircraft crash hazards (see Chapter 4.6). Implementation of the General Plan may result in the exposure of people to hazards and hazardous materials during construction activities, and exposure of people to hazards and hazardous materials during the life of the General Plan. Impacts identified related to construction activities and operations were found to be less than significant. Policies included in the 2035 General Plan, including PHS 3.1.1 (investigation of sites for contamination) and PHS 3.1.2 (preparation of hazardous materials actions plans when appropriate) were effective in reducing the identified impacts.

### **Goal PHS 5.1 Human Services and Healthy Community. Improve Provision of Human Services and Promote Health and Safety.**

Policy PHS 5.1.10 Pest/Vector Management. The City shall coordinate with appropriate agencies (e.g., Sacramento-Yolo Mosquito and Vector Management District) to support pest/vector management strategies (e.g., mosquito control), require drainage of untreated pools and other water features in homes and businesses that are vacant or in sale proceedings, and enhance public awareness of vector control.

### **Answers to Checklist Questions**

#### Question A

The proposed project would include the subdivision of the 9.6-acre project site into 89 residential lots and construction of 89 single-family homes. Grading and disturbance would consist of approximately 9.6 acres over the project site with excavation depths varying from 0 to 36 inches for typical site grading and up to eight feet for utility trenches.

The site is not included on a list of hazardous materials sites compiled by the County pursuant to Government Code 65962.5. In addition, known contaminated soils do not occur on the project site, according to the Department of Toxic Substances Control. Therefore, construction workers or other sensitive receptors are not anticipated to be impacted by hazardous materials released during project construction activities and the project would result in a **less-than-significant** impact.

#### Question B

Five potentially-contaminated sites exist in the vicinity of the proposed project site. The 2009 Phase I ESA determined that none of the sites have the potential to environmentally impact the site. Additionally, the project site is currently vacant and no structures that could contain asbestos exist on the site.

In addition, the site reconnaissance and research of available records did not indicate any records of potential hazardous materials storage/release or environmentally-persistent pesticides on the site. In addition, the 2009 Phase I ESA indicated that none of the following potential hazards were present at the proposed project site: underground storage tanks or aboveground storage tanks; strong, pungent, or noxious odors; pools of water or other liquids; drums or other containers; hazardous substance or petroleum product containers; materials containing polychlorinated biphenyls (PCBs) (used in electrical transformers, hydraulic fluids, and electrical equipment such as fluorescent light ballasts); asbestos-containing materials; pits, ponds, or lagoons; stained soil or pavement; stressed vegetation; wastewater; wells; or septic systems. In 2003, empty paint cans and other containers, pieces of concrete, and a single, discarded lead acid automotive battery were observed on the site. The containers, concrete, and battery have since been removed.

Naturally-occurring asbestos (NOA) exists in many parts of California. Earth disturbing activities, such as those associated with construction activities, could release NOA into the air, if NOA is present in the area of disturbance. According to mapping prepared by the California Geological Survey, the only area within Sacramento County that is likely to contain NOA is eastern Sacramento County. The project site is not located in an area identified as likely to contain NOA, and thus the project is not anticipated to result in the release of NOA.<sup>5</sup>

In conclusion, the 2009 Phase I ESA determined that evidence does not exist of recognized environmental conditions associated with the proposed project site. Since the completion of the 2009 Phase I ESA, conditions related to site use and hazardous materials have not significantly changed at the site, and the conclusions of the ESA remain valid. Therefore, the project's impact related to exposing people to existing sources of potential health hazards is considered ***less-than-significant***.

#### Question C

The 2003 Phase I ESA indicated that groundwater beneath the proposed project site is approximately 80 feet below ground surface. Construction activities on the proposed project site would include grading and disturbance on approximately 9.6 acres on-site, with excavation depths varying from 0 to 36 inches for typical site grading and up to eight feet for utility trenches. Based on the excavation and utility trench depths and the depth of the groundwater table at the project site, dewatering activities would not occur during project construction. Therefore, construction activities would not result in exposure of people to existing contaminated groundwater, and impacts would be ***less than significant***.

#### **Mitigation Measures**

None required.

#### **Findings**

The project would have no additional project-specific environmental effects relating to Hazards.

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<sup>5</sup> Department of Conservation, California Geological Survey. *Relative Likelihood for the Presence of Naturally Occurring Asbestos in Eastern Sacramento County, California*. 2006.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>7. HYDROLOGY AND WATER QUALITY</b> Would the project:			
A) Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project?			X
B) Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood?			X

**Environmental Setting**

The proposed project site is located in a highly developed area of Sacramento, approximately four miles east of the Sacramento River and 1.5 miles south of the American River. A 555-foot-long drainage ditch exists at the western edge of the project site. Currently, very little impervious surface exists on the project site and, as a result, stormwater is either absorbed on-site or drains to the adjacent drainage ditch and storm drain system.

The City of Sacramento’s Grading Ordinance requires that development projects comply with the requirements of the City’s Stormwater Quality Improvement Plan (SQIP). The SQIP outlines the priorities, key elements, strategies, and evaluation methods of the City’s Stormwater Management Program. The Program is based on the NPDES municipal stormwater discharge permit. The comprehensive Program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. In addition, before the onset of any construction activities, where the disturbed area is one acre or more in size, projects are required to obtain coverage under the NPDES General Construction Permit and include erosion and sediment control plans. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. Measures that reduce or eliminate post-construction-related water quality problems range from source controls, such as reduced surface disturbance, to treatment of polluted runoff, such as detention or retention basins. The City’s SQIP and the *Stormwater Quality Design Manual for the Sacramento Region* (Sacramento Stormwater Quality Partnership 2014) include BMPs to be implemented to mitigate impacts from new development and redevelopment projects.

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRMs) that delineate flood hazard zones for communities. The project site is designated by FIRM *Community Panel Number 06067C0308H*<sup>6</sup> as being located within an area designated as Zone X, which is applied to areas determined to be outside the 0.2 percent annual chance floodplain. FEMA does not have building regulations for development in areas designated Zone X and would not require mandatory flood insurance for structures in Zone X.

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<sup>6</sup> Federal Emergency Management Agency. *Flood Insurance Rate Map Community Panel Number 06067C0308H*. August 16, 2012.

Section 13.08.145 of the Sacramento City Municipal Code (Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities) requires that when a property would contribute drainage to the storm drain system or combined sewer system, all stormwater and surface runoff drainage impacts resulting from the improvement or development must be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that an increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property does not occur. The project is within the service area of the Sacramento Area Sewer District (SASD). New connections within the SASD service area are subject to sewer impact fees, which are used to recover a share of SASD's cost for any new system facilities necessary to service new connections.<sup>7</sup> In addition to sewer service provided by SASD, the project would also be within the Sacramento Regional County Sanitation District (SRCSD). In order to connect with the SRCSD wastewater conveyance and treatment system, developers must pay impact fees.

### **Standards of Significance**

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the proposed project; or
- Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

Chapter 4.7 of the Master EIR evaluates the potential effects of the 2035 General Plan as they relate to surface water, groundwater, flooding, stormwater and water quality. Potential effects include water quality degradation due to construction activities (Impacts 4.7-1, 4.7-2), and exposure of people to flood risks (Impacts 4.7-3). Policies included in the 2035 General Plan, including a directive for regional cooperation (Policies ER 1.1.2, EC 2.1.1), comprehensive flood management (Policy EC 2.1.23), and construction of adequate drainage facilities with new development (Policy ER 1.1.1 to ER 1.1.10) were identified that the Master EIR concluded would reduce all impacts to a less-than-significant level.

### **Answers to Checklist Questions**

#### Question A

The proposed project has the potential to degrade water quality during both construction and operations. Further details regarding the potential effects are provided below.

#### *Construction*

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<sup>7</sup> Sacramento Area Sewer District. *Sewer Ordinance SDI-0072*. Effective May 27, 2016.

Construction activities associated with the proposed project would create the potential to degrade water quality from increased sedimentation and increased discharge (increased flow and volume of runoff) associated with storm water runoff. Disturbance of site soils would increase the potential for erosion from storm water. The State Water Resources Control Board (SWRCB) adopted a statewide general National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges associated with construction activity. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009- 0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation.

The City's SQIP contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. This General Construction Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list BMPs the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutant to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Compliance with City requirements to protect storm water inlets would require the developer to implement BMPs such as the use of straw bales, sandbags, gravel traps, and filters; erosion control measures such as vegetation and physical stabilization; and sediment control measure such as fences, dams, barriers, berms, traps, and basins. City staff inspects and enforces the erosion, sediment and pollution control requirements in accordance with City codes (Grading, Erosion and Sediment Control ordinance).

Conformance with City regulations and permit requirements along with implementation of BMPs would ensure that construction activities of the proposed project, including the future realignment of the project access roadway, would result in a less-than-significant impact related to water quality.

### *Operation*

Approximately 2.1 acres of the proposed project site drains to the existing 36-inch drainage pipe within Bruceville Road to the east of the site. The remainder of the site would drain to the existing 18- to 30-inch drainage pipe within Jacinto Avenue through on-site drainage improvements consisting of underground storm drain piping, above-ground vegetated water quality swales, and a stormwater detention pond. Collected runoff from on-site impervious services would be detained on-site via an in-pipe detention system, which not only detains peak flows during rain events, but also serves as an infiltration basin for stormwater treatment. The detention pond would be constructed on Lot A in the central portion of the subdivision.

The City Department of Utilities would review the Improvement Plans for the proposed project prior to approval to ensure that adequate water quality control facilities are incorporated. It should be noted that the project would comply with Section 13.08.145, Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities, of the City of Sacramento Municipal Code, which requires the following:



"When property that contributes drainage to the storm drain system or combined sewer system is improved or developed, all stormwater and surface runoff drainage impacts resulting from the improvement or development shall be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that there is no increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property."

### *Conclusion*

Overall, design of the proposed project site and conformance with City and state regulations would ensure that a substantial degradation to water quality or violation of any water quality objectives due to increases in sediments and other contaminants generated by construction and/or development of the project would not occur. In addition, the proposed project design provides for containment of all runoff water associated with the site; therefore, discharge of runoff to surface waters or groundwater would not result from the proposed project. Furthermore, the project would comply with LID treatments associated with the City's MS4 permit. The proposed project's impacts related to substantial degradation of water quality or violation of any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project, would be ***less than significant***.

### Question B

As described above, the project site is not located within a 100-year flood hazard area. As such, the proposed project would not place housing or structures within a 100-year flood hazard area and would not expose people or property to the risk of injury or damage in the event of a 100-year flood. Therefore, impacts related to flooding would be ***less than significant***.

### **Mitigation Measures**

None required.

### **Findings**

The project would have no additional project-specific environmental effects relating to Hydrology and Water Quality.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>8. NOISE</b> Would the project:			
A) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases?		X	
B) Result in residential interior noise levels of 45 dBA L <sub>dn</sub> or greater caused by noise level increases due to the project?		X	
C) Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance?			X
D) Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction?			X
E) Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations?			X
F) Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic?			X

## Environmental Setting

### Noise

Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard by the human ear. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz). Discussing sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference defined as 0 dB. Other sound pressures are compared to the reference pressure and the logarithm is taken to keep the numbers in practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. A strong correlation exists between the way humans perceive sound and A-weighted sound levels. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment for community exposures. All sound levels expressed as dB in this section are A-weighted sound levels, unless noted otherwise.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L<sub>eq</sub>), over a

given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptors, day-night average level ( $L_{dn}$ ) and the community noise equivalent level (CNEL), and shows very good correlation with community response to noise for the average person. The median noise level descriptor, denoted  $L_{50}$ , represents the noise level which is exceeded 50 percent of the hour. In other words, half of the hour ambient conditions are higher than the  $L_{50}$  and the other half are lower than the  $L_{50}$ .

The  $L_{dn}$  is based upon the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average,  $L_{dn}$  tends to disguise short-term variation in the noise environment. Where short-term noise sources are an issue, noise impacts may be assessed in terms of maximum noise levels, hourly averages, or other statistical descriptors.

Another common descriptor is the CNEL. The CNEL is similar to the  $L_{dn}$ , except CNEL has an additional weighting factor. Both average noise energy over a 24-hour period. The CNEL applies a +5 dB weighting to events that occur between 7:00 PM and 10:00 PM, in addition to the +10 dB weighting between 10:00 PM and 7:00 AM associated with  $L_{dn}$ .

### Vibration

Vibration is like noise in that vibration involves a source, a transmission path, and a receiver. While vibration is related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and a frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating. Vibration can be measured in terms of acceleration, velocity, or displacement. Vibration magnitude is measured in vibration decibels (VdB) relative to a reference level of 1 micro-inch per second peak particle velocity (ppv), the human threshold of perception. The background vibration level in residential areas is usually 50 VdB or lower. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible. The range of environmental interest is typically from 50 VdB to 90 VdB (or 0.12 inch per second ppv), the latter being the general threshold where structural damage can begin to occur in fragile buildings.

### **Standards of Significance**

For purposes of this Initial Study, impacts due to noise may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies:

- Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- Result in residential interior noise levels of 45 dBA  $L_{dn}$  or greater caused by noise level increases due to the project;
- Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;

- Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR evaluated the potential for development under the 2035 General Plan to increase noise levels in the community. New noise sources include vehicular traffic, aircraft, railways, light rail and stationary sources. The General Plan policies establish exterior (Policy EC 3.1.1) and interior (Policy EC 3.1.3) noise standards. A variety of policies provide standards for the types of development envisioned in the General Plan. See Policy EC 3.1.8, which requires new mixed-use, commercial and industrial development to mitigate the effects of noise from operations on adjoining sensitive land use, and Policy 3.1.9, which calls for the City to limit hours of operations for parks and active recreation areas to minimize disturbance to nearby residences. Notwithstanding application of the General Plan policies, noise impacts for exterior noise levels (Impact 4.8-1) and interior noise levels (Impact 4.8-2), and vibration impacts (Impact 4.8-4) were found to be significant and unavoidable.

### **Answers to Checklist Questions**

#### Questions A and B

The proposed project would include the subdivision of the 9.6-acre project site into 89 residential lots and the project would include construction of 89 single-family homes. The project site is surrounded by the following uses: the College Grove apartment complex directly north; a vacant lot to the east; the Barbara Comstock Morse Elementary School to the southwest; the Wolf Ranch condominium complex to the south; and single-family homes in the remaining vicinity, including to the southeast, south and west of the site. Shasta Community Park is located northeast of the site.

The City of Sacramento General Plan Noise Element establishes exterior noise level criteria for determining the compatibility of land uses. For residential land uses, exterior noise levels below 60 dB  $L_{dn}$  are considered "Normally Acceptable". Exterior noise levels between 60 and 70 dB  $L_{dn}$  are classified "Conditionally Acceptable" and are acceptable on the condition that all feasible noise attenuation measures have been attempted. For areas where exterior noise levels are between 70 and 75 dB  $L_{dn}$ , which is considered "Normally Unacceptable", new construction or development is discouraged. New construction or development should not be undertaken at locations where exterior noise levels exceed 75 dB  $L_{dn}$  due to traffic or stationary sources. With regards to interior noise levels, interior noise levels for residential land uses that exceed 45 dB are considered unacceptable. In addition, maximum instantaneous interior noise levels due to rail operations should not be allowed to exceed 50 dB in bedrooms and 55 dB in other habitable rooms.

The proposed project is located in a developed area with various continuous noise sources. The primary noise source in the vicinity of the project site is traffic noise associated with Bruceville

Road to the east and Jacinto Avenue to the south. Light rail service is planned to be added to the area. Due to the light rail easement along the eastern border of the site, potential future light rail traffic associated with the planned light rail line would be a future source of noise. With regards to noise levels associated with light rail activities, the City of Sacramento General Plan Noise Element provides the following statement:

The running of light rail cars was believed initially to be a potential major noise source. It has since been proven otherwise by the Regional Transit District. Existing information indicates that the noise generated by industrial noise does not exceed the "normally acceptable" level for surrounding proposed land uses.

The previously adopted IS/MND for the Bruceville North Condominium project included an analysis of the anticipated exterior and interior noise levels at the project site associated with the noise sources in the vicinity. According to the previous IS/MND, the maximum exterior sound level anticipated at the project site due to roadway noise, future light rail traffic noise, and other noise in the vicinity (e.g., aircraft flight noise, general human activity, and mechanical equipment) was estimated to be 70 dB  $L_{dn}$ , which would occur along the eastern boundary of the site nearest Bruceville Road. The maximum exterior sound level would exceed the normally acceptable level of 60 dB  $L_{dn}$ .

A sound wall is proposed as part of the project along the eastern boundary of the site. Although design details of the sound wall have not yet been finalized, typical sound attenuation due to a sound wall is on the order of 5 to 10 dBA, depending on the height of the wall and other factors. With inclusion of a sound wall, the exterior noise levels would be reduced to up to approximately 60 dB, which would meet the normally acceptable noise level.

Modern construction typically provides a 25 dB reduction in exterior-to-interior noise levels with windows closed. Accordingly, sensitive receptors exposed to exterior noise of 70 dB  $L_{dn}$ , or less, would typically comply with the City's 45 dB interior noise level standard. Based on the estimated maximum exterior noise level at the site of 70 dB and a 25 dB exterior-to-interior noise level reduction, the maximum interior noise levels anticipated at the project site would be approximately 45 dB  $L_{dn}$ , which would meet the 45 dB interior threshold.

It should be noted that the cumulative plus project average daily traffic volume assumed along Bruceville Road (the primary source of noise in the project vicinity) for the previously adopted IS/MND was 37,000. However, the 2035 General Plan Background Report identifies an average daily traffic volume of 32,400 along Bruceville Road under cumulative conditions including full buildout of the General Plan, which is based on more recent data. In addition, the proposed project involves fewer residential units than what was proposed and analyzed in the previously adopted IS/MND. Thus, the proposed project's contribution to traffic along local roadways would be less than what was assumed for the previously approved project, which correlates to less contribution to local traffic noise. As a result, the noise levels estimated for the project site in the previously adopted IS/MND would be considered conservative for the proposed project.

Based on the above, with incorporation of a sound wall, the proposed project is not expected to result in exterior noise levels above the upper value of the normally acceptable category for a single-family residential land use or result in interior noise levels of 45 dBA or greater. However, because details regarding the proposed sound wall are not available at this time, further verification would be necessary to ensure that the sound wall is designed sufficient to adequately reduce exterior noise levels at the project site. Therefore, without implementation of Mitigation Measure 8-1 below, the proposed project could result in a ***potentially significant*** impact.

### Question C

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Construction activities generate considerable amounts of noise, especially during earth-moving activities when heavy equipment is used. The highest maximum noise levels generated by project construction would typically range from about 76 to 90 dBA at a distance of 50 feet from the noise source. Construction-generated noise levels drop off at a rate of approximately six dBA per doubling of distance between the source and receptor.

Title 8 – Health and Safety, Chapter 8.68 of the City's Municipal Code exempts construction operations that occur between 7:00 AM and 6:00 PM, Monday through Saturday and between 9:00 AM and 6:00 PM on Sundays from the applicable noise standards. If construction operations were to occur during the noise-sensitive hours of 6:00 PM to 7:00 AM, Monday through Saturday or from 6:00 PM to 9:00 AM on Sundays, the applicable noise standards could potentially be exceeded at the aforementioned sensitive receptors surrounding the project site. However, because the City has determined that all construction within the City limits must comply with the City's Noise Ordinance, nighttime construction activities would not occur and construction noise associated with use of on-site equipment during the project construction phases would be insignificant. Therefore, overall, the proposed project would not result in a substantial increase in ambient noise levels in the project vicinity due to construction and impacts would be ***less than significant***.

### Questions D through F

For structural damage, the California Department of Transportation (Caltrans) uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec PPV), for buildings structurally sound and designed to modern engineering standards; 0.2 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern; and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened.<sup>8</sup> Accordingly, the City uses a threshold of significance for vibration levels of 0.5 in/sec PPV for residential and commercial areas, and 0.2 in/sec PPV for historic buildings and archaeological sites.

The primary vibration-generating activities associated with development of the proposed project would occur during grading, placement of infrastructure, and construction of foundations and structures. Construction activities would be temporary, and construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per the City of Sacramento Municipal Code, and would likely only occur over portions of the project site at a time. Although vibration levels would vary depending on soil conditions, construction methods, and equipment used, Table 6 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet.

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<sup>8</sup> Caltrans. *Transportation and Construction Vibration Guidance Manual*. September 2013.

<b>Table 6</b>	
<b>Vibration Source Levels for Construction Equipment</b>	
<b>Equipment</b>	<b>PPV at 25 ft (in/sec)</b>
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

*Source: Caltrans, Transportation and Construction Vibration: Guidance Manual. September 2013.*

As shown in the table, construction equipment anticipated to be used at the project site would not exceed the 0.5 in/sec PPV threshold used by the City for residential and commercial areas. In addition, the nearest single-family residences to the west would be separated from the nearest proposed on-site buildings by the required backyard setbacks. The nearest buildings of the multi-family residential complex to the south are separated from the project site by Jacinto Avenue and a landscaped setback, and are over 100 feet from the project site boundaries. The nearest buildings of the multi-family residential complex to the north are over 75 feet from the project site boundaries, separated by the existing parking lot area for the complex. Therefore, the proposed project would not expose any residential or commercial areas to vibration levels greater than 0.5 in/sec PPV due to project construction.

A vibratory roller is the only piece of construction equipment that could exceed the 0.2 in/sec PPV threshold used for exposure to historic buildings and archaeological sites if used within 25 feet of such a building or site. As discussed in the Cultural Resources section of this IS/MND, historic buildings or archaeological sites are not located in the vicinity of the proposed project site. Thus, the proposed project would not expose any historic buildings or archaeological sites to vibration levels greater than 0.2 in/sec PPV due to project construction.

The proposed project site is not adjacent to a highway and would not be exposed to excessive highway traffic vibration. Although light rail is planned along the eastern border of the site, according to the 2035 General Plan Master EIR, vibration-induced structural damage to residential and commercial development associated with light rail operations would not occur due to compliance with current building code and standards. As such, the proposed project would not expose any residential or commercial areas to vibration levels greater than 0.5 in/sec PPV due to highway traffic or rail operations.

Based on the above, the proposed project would not expose any residential or commercial areas, or historic buildings or archaeological sites to excessive vibration levels, and the project's impact would be ***less than significant***.

**Mitigation Measures**

Implementation of the following mitigation measures would reduce impacts related to Noise to a *less-than-significant* level.

- 8-1 *Prior to the approval of improvement plans, the project applicant shall demonstrate on the project plans the inclusion of a sound wall along the eastern project border, subject to review and approval by the City Building Division and City Engineer. The project applicant shall hire an acoustical engineering consultant once complete civil and architectural plans for the project have been developed to verify that the sound wall design is sufficient to reduce exterior*

*noise levels to 60 dB or below. Proof of verification shall be submitted to the City Engineer. If necessary, additional mitigation measures to protect indoor living areas of the project shall be developed, which may include, but would not be limited to, increasing the STC ratings of certain windows and doors, to the satisfaction of the City Engineer. The project plans shall also show that the ventilation system chosen complies with the 2013 California Building and Mechanical Code as well as the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The ventilation system selected shall not compromise the outdoor-to-indoor noise attenuation of the structure.*

## **Findings**

All additional significant environmental effects of the project relating to Noise can be mitigated to a less-than-significant level.



Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<p><b>9. PUBLIC SERVICES</b></p> <p>A) Would the project result in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan?</p>		X	

**Environmental Setting**

The project site is located in the southern area of Sacramento, approximately 11 miles from the downtown core of the City, and is served with fire protection and police protection facilities by the City of Sacramento.

The Sacramento Fire Department (SFD) provides fire protection services to the entire City and some small areas just outside the City boundaries within the County limits. The nearest fire station is Station 7 located at 6500 Wyndham Drive, approximately two miles north of the project site.

Police protection services are provided by the Sacramento Police Department (SPD) for areas within the City. The SPD provides law enforcement protection to the proposed project site from the Rooney Station located at 5303 Franklin Boulevard. In addition to the SPD and Sheriff’s Department, the California Highway Patrol and the Regional Transit Police Department provide police protection within the City of Sacramento.

The project site is within the Elk Grove Unified School District (EGUSD). The EGUSD covers 320 square miles, including portions of the City of Sacramento, and serves 62,000 students on 58 campuses. The nearest school is Barbara Comstock Morse Elementary School, which is located adjacent to the project site to the west.

**Standards of Significance**

For the purposes of this IS/MND, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, school facilities, roadway maintenance, or other governmental services beyond what was anticipated in the 2035 General Plan.

**Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR evaluated the potential effects of the 2035 General Plan on various public services. These include police, fire protection, schools, libraries and emergency services (Chapter 4.10).

The General Plan provides that adequate staffing levels for police and fire are important for the long-term health, safety and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master EIR concluded that effects of development that could occur under the General Plan would be less than significant.

General Plan policies that call for the City to consider impacts of new development on schools (see, for example, Policy ERC 1.1.2 setting forth locational criteria, and Policy ERC 1.1.4 that encourages joint-use development of facilities) reduce impacts on schools to a less-than-significant level. (Impacts 4.10-3, 4) Impacts on library facilities were considered less than significant (Impact 4.10-5).

## **Answers to Checklist Questions**

### Question A

The Master EIR discusses the potential for impacts to public services as a result of increased development and population in the City of Sacramento. The Master EIR analyzes the 2035 General Plan policies related to law enforcement service, fire protection service, educational service, and library service, to determine if adequate public services will exist as development and population in the City increases. Individual projects developed in the City of Sacramento would be required to comply with the public service policies presented in the 2035 General Plan.

According to the Master EIR, implementation of the 2035 General Plan public service policies by individual projects would ensure that adequate public services are available in the City of Sacramento as development and population increases. Although the project would require a General Plan Amendment to redesignate the site from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density, the project would still result in development of residential uses, albeit at a lower intensity. Therefore, the project would be generally consistent with the type of development anticipated for the site in the 2035 General Plan, and would be expected to generate fewer impacts to public services due to implementation of the project resulting in the introduction of fewer new residents to the site.

Therefore, based on the analysis in the Master EIR, the proposed project would not impact public services nor would the proposed project require the development of new public service facilities beyond what was anticipated in the 2035 General Plan.

### *Fire Protection*

The proposed project would include the subdivision of the 9.6-acre project site into 89 residential lots and construction of 89 single-family homes. Three fire stations are located the vicinity of the proposed project site. The proposed project would be served by SFD Station 7, located approximately two miles north of the project site, Station 57 located approximately three miles north of the project site, and Station 16 located approximately five miles northwest of the project site. According to the General Plan Master EIR, the SFD requires a ratio of one fire station per 16,000 residents.

The population of the project area requiring SFD services would be expected to increase as a result of the proposed project. Although the proposed project would require a General Plan Amendment, redesignation of the site would still result in residential development of the site, albeit at a lower intensity. The General Plan Master EIR concluded that at full buildout of the General Plan, including the proposed project site, the City would be required to provide approximately 12 new fire stations and additional fire personnel to accommodate the increase in population. Furthermore, the proposed project would include fire protection features, as required in the City Code. Therefore, impacts to fire service from the proposed project have already been accounted for, and the project would comply with the requirements of the City Code and General Plan policies regarding adequate fire protection services.

*Police Protection*

Similar to the SFD, the added population from the proposed project would create an increased demand in police services to the project area. The project area is currently served by the Rooney Police Station of the SPD, located at 5303 Franklin Boulevard, approximately eight miles northwest of the project site. Although the proposed project would increase the service population for the SPD in the project area, the SPD does not have an adopted office-to-resident ratio. The SPD uses a variety of data that includes GIS based data, call and crime frequency information, and available personnel to rebalance the deployment of resources on an annual basis to meet the changing demands of the City. Additionally, the location of the project would be consistent with established service areas in the Sacramento General Plan. It should be noted that the project applicant would be required to pay fees for the provision of public services, including police protection.

*Schools*

Development of the proposed project would generate additional students in the area. Based on the student generation rates from the 2035 General Plan EIR, the proposed 89 single-family units would generate approximately 70 K-12 students that would require accommodation in local EGUSD schools (see Table 7).

<b>Table 7</b>			
<b>Student Generation Projections for the Bruceville Terrace Project</b>			
<b>Grade Levels</b>	<b>Student Generation Factor per Household</b>	<b># of Units</b>	<b>New Students</b>
<b>Single-Family Generation Rate</b>			
Elementary	0.44	89	39
Middle	0.12	89	11
High School	0.23	89	20
<b>Total</b>			<b>70</b>
<i>Source: City of Sacramento. Draft Master EIR for the City of Sacramento 2035 General Plan Update. August 2014.</i>			

According to EGUSD, Students residing in the proposed development would attend Barbara Comstock Morse Elementary, Edward Harris Jr. Middle School, and Monterey Trail High School.<sup>9</sup> Enrollment information for the aforementioned schools is provided below, in Table 8. As shown in Table 8, sufficient capacity exists at Edward Harris Jr. Middle School and Monterey Trail High School. Although capacity information for Barbara Comstock Morse Elementary School was not available at the time of environmental analysis, information for six other elementary schools in the district indicated that enrollment capacity remains within the district.<sup>10</sup>

<sup>9</sup> Elk Grove Unified School District. *School Locator*. Available at [http://www.egusd.net/new\\_to\\_egusd/schlist.cfm](http://www.egusd.net/new_to_egusd/schlist.cfm). Accessed in September 2016.

<sup>10</sup> City of Elk Grove. *City Council Staff Report, Agenda Item No. 8.7. June 22, 2016*

<b>Table 8</b>				
<b>Capacity Information For Nearby Schools</b>				
<b>School</b>	<b>Grade Level</b>	<b>Enrollment (2015)</b>	<b>Designed Capacity</b>	<b>Remaining Capacity</b>
Barbara Comstock Morse	Elementary	790	*	*
Edward Harris Jr.	Middle	1,176	1,475	299
Monterey Trail	High	2,500	2,303	197
<i>Notes: Capacity information for Barbara Comstock Morse Elementary School not currently available</i>				
<i>Source: City of Elk Grove. City Council Staff Report, Agenda Item No. 8.7. June 22, 2016</i>				
<i>Elk Grove Board of Education. Barbara Comstock Morse Elementary 2015-2016 School Accountability Report Card – Executive Summary. Available at <a href="http://www.egusd.net/schools/sarcs/short/Morse.pdf">http://www.egusd.net/schools/sarcs/short/Morse.pdf</a>. Accessed in September 2016.</i>				

*Conclusion*

The proposed project would be required to pay statutory developer fees under California SB 50. Without payment of such fees the project may result in impacts through increased demand school services. As such, the project would result in a **potentially significant** impact related to schools. Implementation of Mitigation Measure 9-1 would reduce the above impact to a *less-than-significant* level.

**Mitigation Measures**

Implementation of the following mitigation measure would reduce impacts related to Public Services to a *less-than-significant* level.

- 9-1 *Prior to the issuance of a building permit, the project applicant shall pay the applicable SB 50 School Impact Fees to the SCUSD, and provide proof of payment of said SB 50 School Impact Fees to the City of Sacramento Community Development Department for verification.*

**Findings**

All additional significant environmental effects of the project relating to Public Services can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>10. RECREATION</b> Would the project:			
A) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?		X	
B) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?		X	

**Environmental Setting**

The City of Sacramento Parks and Recreation Department maintains all parks and recreational facilities within the City of Sacramento. The Parks Department classifies parks according to three distinct types: 1) neighborhood parks; 2) community parks; and, 3) regional parks. Neighborhood parks are typically less than ten acres in size and are intended to be used primarily by residents within a half-mile radius. Community Parks are generally 10 to 60 acres and serve an area of approximately two to three miles, encompassing several neighborhoods and meeting the requirements of a large portion of the City. Regional parks are larger in size and are developed with a wide range of improvements not usually found in local neighborhood and community parks. As noted in the City’s General Plan Background Report, the City currently contains 226 developed and undeveloped park sites, 88 miles of off-street bikeways and trails, 21 lakes/ponds or beaches, over 20 aquatic facilities, and extensive recreation facilities in the City parks. The 226 parks comprise 3,200 acres. Of these, 1,573 acres are neighborhood and community parks and the remaining are city and non-city regional parks. The City currently provides approximately 3.4 acres of neighborhood and community park per 1,000 persons citywide.

Residential and non-residential projects that are built in the City of Sacramento are required to pay a park development impact fee per Chapter 18.44 of the Sacramento City Code. The fees collected pursuant to Chapter 18.44 are primarily used to finance the construction of neighborhood and community park facilities.

The closest park to the proposed project site is Shasta Community Park, which is located approximately 0.15 miles northeast of the project site. Additionally, North Laguna Creek Park is located 0.3 miles southeast of the project site.

**Standards of Significance**

For purposes of this Initial Study, impacts to recreational resources are considered significant if the proposed project would do either of the following:

- Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities; or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

## Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.9 of the Master EIR considered the effects of the 2035 General Plan on the City's existing parkland, urban forest, recreational facilities and recreational services. The General Plan identified a goal of providing an integrated park and recreation system in the City (Goal ERC 2.1). New residential development will be required to dedicate land, pay in-lieu fees or otherwise contribute a fair share to the acquisition and development of parks and recreation facilities (Policy ERC 2.2.5). Impacts were considered less than significant after application of the applicable policies (Impacts 4.9-1 and 4.9-2).

### Answers to Checklist Questions

#### Questions A and B

The Master EIR analyzed potential impacts to parks and recreational facilities with implementation of future projects, including the proposed project. Policies have been provided in the 2035 General Plan to ensure that future residential and non-residential development would not impact existing parks and recreational facilities and to ensure that adequate park and recreational facilities are provided to the residents of Sacramento. The Master EIR concluded that, with implementation of the policies in the 2030 General Plan, future development would not impact park and recreational facilities. Therefore, the proposed project would not accelerate substantial deterioration of existing parks and recreational facilities, nor would the project require the construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

The proposed project consists of subdivision of the 9.6-acre project site and construction of 89 single-family residences. The project does not include construction or expansion of recreational facilities; therefore, the proposed project would not result in adverse environmental effects related to the physical construction or expansion of recreational facilities.

The new residents introduced by the proposed project would likely utilize existing parks in the vicinity. Based on the current persons per household of 2.7,<sup>11</sup> the proposed project is expected to increase the total population by approximately 240 persons (89 units x 2.7 persons per household = 240); however, because the proposed project would include fewer units than anticipated for the site in the General Plan, the project's demand would be less than anticipated in the 2035 General Plan Master EIR. General Plan goals and policies have been adopted to ensure that adequate park and recreational facilities are provided to accommodate the increase in new residents (e.g., Goal ERC 2.1, Policy 2.2.5, and Policy 2.5.4).

According to the General Plan, the City's park service goal is to provide five acres of parkland per 1,000 persons. Because development of the project site would add a projected 240 persons to the area, the project would require approximately 1.2 acres of parkland. However, the project would not include on-site park acreage; therefore, in compliance with Chapter 18.44 of the Sacramento City Code, the project applicant will be required to pay in lieu and/or development fees. However, if development or in lie fees are not paid, the increased number of residents in the area resulting from the proposed project would increase the demand on park facilities, and impacts would be considered **potentially significant**. Implementation of Mitigation Measures 10-1 would reduce the above impact to a *less-than-significant* level.

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<sup>11</sup> City of Sacramento. 2013-2021 Housing Element. December 17, 2013.

### **Mitigation Measures**

Implementation of the following mitigation measure would reduce impacts related to Recreation to a *less-than-significant* level.

- 10-1            *Prior to issuance of a building permit, and consistent with General Plan Policy ERC 2.5.4 and Chapter 18.44 of the Sacramento City Code, the project applicant shall pay the City of Sacramento in-lieu fees and/or development impact fees for park facilities to the satisfaction of the City's Community Development Department.*

### **Findings**

All additional significant environmental effects of the project relating to Recreation can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>11. TRANSPORTATION AND CIRCULATION</b>			
Would the project:			
A) Roadway segments: degrade peak period level of service (LOS) from A, B, C or D (without the project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.			X
B) Intersections: degrade peak period level of service from A, B, C or D (without project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more?			X
C) Freeway facilities: off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway; project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service; project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or the expected ramp queue is greater than the storage capacity?			X
D) Transit: adversely affect public transit operations or fail to adequately provide for access to public transit?			X
E) Bicycle facilities: adversely affect bicycle travel, bicycle paths or fail to adequately provide for access by bicycle?			X
F) Pedestrian: adversely affect pedestrian travel, pedestrian paths or fail to adequately provide for access by pedestrians?			X

The City of Sacramento Department of Public Works analyzed trip generation for the proposed project, based on the Institute of Transportation Engineers' (ITE) trip rates published in *Trip Generation, 9th Edition*.

**Environmental Setting**

According to the previously-approved IS/MND for the project site, traffic impacts resulting from development of the project area were analyzed in the JCPA EIR. Although the project site is outside of the JCPA, the JCPA EIR considered potential traffic impacts that would result from the buildout of the JCPA and from development of areas adjacent to the JCPA (such as development of the proposed project site).



The JCPA EIR found less-than-significant impacts to intersections in the vicinity of the proposed project when specific mitigation measures were included. Mitigation measures included signalizing intersections and including left turn lanes. The majority of the mitigation measures called for in the JCPA EIR have been implemented (e.g., signalizing intersections). The Bruceville Road Widening project, which widened the roadway to four lanes in 2005, included the installation of a traffic signal at intersection of Bruceville Road and Jacinto Avenue and several other intersections in the vicinity of the project.

The project site is located at the northwest corner of Bruceville Road and Jacinto Avenue less than 1,000 feet away from Cosumnes River Light Rail Station, which is located within the Cosumnes River College Campus.

Bruceville Road is an arterial road which provides the major north-south connection between Cosumnes River Boulevard and Sheldon Road in the study area. The roadway is constructed with four to six thru lanes and limited access from fronting parcels. Jacinto Avenue (Road) is a two-lane collector street, connecting directly from Center Parkway to W. Stockton Blvd. Dartford Drive is a residential street adjacent to the west boundary of the project site. The project includes a proposal to modify the existing median along Jacinto Avenue to provide a two-way left turn to facilitate project traffic entering and exiting the project site. Additionally, the frontage improvement along Bruceville Road will provide a dedicated right turn lane from the southbound Bruceville Road to Jacinto Avenue and a direct emergency access from Bruceville Road.

Project Trip Generation

Table 9 shows the trip generation estimates of the proposed project based on trip rates published in *Trip Generation, 9th Edition* (Institute of Transportation Engineers, 2012). After accounting for a 30 percent trip credit for anticipated pedestrian, bicycle, and transit trips, the proposed project is expected to generate approximately 660 new daily vehicle trips, with 50 trips during the AM peak hour and 66 trips during the PM peak hour. Bruceville Road and Jacinto Avenue currently operate at level of service (LOS) A and the number of added project trips would not be expected to change the levels of service on these roadways.

<b>Table 9 Project Trip Generation</b>									
<b>Land Use</b>	<b>Quantity</b>	<b>ITE Land Use Code</b>	<b>Trips</b>						
			<b>Daily</b>	<b>AM Peak Hour</b>			<b>PM Peak Hour</b>		
				<b>In</b>	<b>Out</b>	<b>Total</b>	<b>In</b>	<b>Out</b>	<b>Total</b>
Single-Family Residences	89	210	943	18	54	72	60	35	95
<i>Walk/Transit/Bike Trips (-30%)</i>			-283	-6	-16	-22	-18	-11	-29
<b>New Trips</b>			<b>660</b>	<b>12</b>	<b>38</b>	<b>50</b>	<b>42</b>	<b>24</b>	<b>66</b>

*Source: City of Sacramento, Department of Public Works. July 14, 2016.  
Note: A 30% Walk/Transit/ Bike Trip reduction is a conservative estimate for the location of the project site.*

Site Access

The proposed project would include a 60-foot-wide gated access point to the site off of Jacinto Avenue, along the southern boundary of the site. The project site would also include one emergency vehicle access point off of Bruceville Road, along the eastern boundary of the site. The site plan for the project indicates that private roads would be constructed throughout the project site.

### Transit

In the Sacramento area, public transit service is provided by Sacramento Regional Transit. Routes 54 and 56 provide daily transit service in the vicinity of the project site. The routes provide connections from the Florin, Parkway, Meadowview, and Pocket areas. In addition, the Blue Line extension to Cosumnes River College (CRC) is located less than 1,000 feet north of the project site. The Blue Line to CRC was recently completed and added four new light rail stations (Morrison Creek, Franklin, Center Parkway and CRC), 2,700 park-and-ride spaces and a major new transit center and parking structure at the CRC light rail station.

### Bicycle and Pedestrian Access

Bicycle lanes currently exist along Bruceville Road along the eastern boundary of the proposed project site and along Jacinto Avenue along the southern boundary of the site. In addition, sidewalks exist along the aforementioned roadways. The proposed project would include construction of sidewalks within the proposed subdivision and connections would be included to the existing sidewalk systems along Bruceville Road and Jacinto Avenue.

### **Standards of Significance**

For purposes of this Initial Study, impacts resulting from changes in transportation or circulation may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

#### Roadway Segments

- The traffic generated by a project degrades peak period level of service (LOS) from A,B,C or D (without the project) to E or F (with project); or
- The LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.

#### Intersections

- The traffic generated by a project degrades peak period level of service from A, B, C or D (without project) to E or F (with project); or
- The LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

#### Freeway Facilities

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;

- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- The expected ramp queue is greater than the storage capacity.

#### Transit

- Adversely affect public transit operations; or
- Fail to adequately provide for access to public transit.

#### Bicycle Facilities

- Adversely affect bicycle travel, bicycle paths; or
- Fail to adequately provide for access by bicycle.

#### Pedestrian Circulation

- Adversely affect pedestrian travel, pedestrian paths; or
- Fail to adequately provide for access by pedestrians.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

Transportation and circulation were discussed in the Master EIR in Chapter 4.12. Various modes of travel were included in the analysis, including vehicular, transit, bicycle, pedestrian and aviation components. The analysis included consideration of roadway capacity and identification of levels of service, and effects of the 2035 General Plan on the public transportation system. Provisions of the 2035 General Plan that provide substantial guidance include Mobility Goal 1.1, calling for a transportation system that is effectively planned, managed, operated and maintained, promotion of multimodal choices (Policy M 1.2.1), identification of level of service standards (Policy M 1.2.2), support for state highway expansion and management consistent with the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG MTP/SCS) (Policy M 1.5.6) and development that encourages walking and biking (Policy LU 4.2.1).

While the General Plan includes numerous policies that direct the development of the City's transportation system, the Master EIR concluded that General Plan development would result in significant and unavoidable effects. See Impacts 4.12-3 (roadway segments in adjacent communities, and Impact 4.12-4 (freeway segments).

### **Answers to Checklist Questions**

#### Questions A through C

As discussed above, according to the trip generation assessment prepared for the proposed project by the City Department of Public Works, after accounting for a conservative 30 percent trip reduction for anticipated pedestrian, bicycle, and transit trips, the project is expected to generate approximately 660 new daily vehicle trips, with 50 trips during the AM peak hour and 66 trips during the PM peak hour (see Table 9). Additionally, the project is proposing to modify the existing median at Jacinto Avenue across from the proposed main access to facilitate traffic entering and exiting the site without interfering with traffic along Jacinto Road. Therefore, the proposed project is not expected to change the LOS of public streets within the project vicinity,

and a traffic study was not required for the proposed project because the project is not expected to result in 100 or more new AM peak hour or PM peak hour trips.

It should be noted that the proposed project would require a General Plan Amendment to redesignate the site from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density, resulting in a less-intense residential land use (single-family residences vs. condominiums) and an associated reduction in new trips. The City Department of Public Works determined that the same trip generation rate would have applied for the condominium use of the previously-approved project. The previously-approved project would have included 162 condominium units while the proposed project includes 85 single-family units; therefore, the proposed project would result in the generation of fewer new trips on surrounding roadways.

Jacinto Avenue and Bruceville Road currently operate at acceptable levels of service and, according to the Department of Public Works, the addition of project trips is not anticipated to change the levels of service of any of the transportation facilities within the project vicinity. The volume of traffic the proposed project would add to roadways is less than the County of Sacramento roadway impact threshold of 0.05 volume-to-capacity ratio (v/c). Therefore, overall, the proposed project would result in a **less-than-significant** impact related to degradation of peak period LOS on roadways in the project vicinity or degradation of freeway facilities.

#### Question D

As stated above, Sacramento Regional Transit Routes 54 and 56 provide daily transit service in the vicinity of the project site. In addition, the Blue Line to Cosumnes River College (CRC) light rail is located less than 1,000 feet just north of the project site. Accordingly, adequate public access would be available to future residents at the site. The project site was previously approved for a 162-unit development; the addition of 89 new residential units, rather than the anticipated 162-units, would result in a reduction of the anticipated number of new transit riders. Because the project would reduce the number of potential riders in the area, the project would similarly reduce any adverse effects to public transit operations that may result from increased ridership, as compared to the previously approved 162-unit development. Overall, the proposed project would result in a **less-than-significant** impact related to public transit.

#### Question E

As discussed above, bicycle lanes currently exist along Bruceville Road along the eastern boundary of the proposed project site and along Jacinto Avenue along the southern boundary of the site. Adequate provisions of access to the site by bicycle would be provided and the project would not affect bicycle travel or paths. Therefore, impacts related to bicycle facilities would be **less than significant**.

#### Question F

As discussed above, sidewalks exist along Jacinto Avenue and Bruceville Road, adjacent to the project site. The proposed project would include construction of new curb, gutter, and sidewalks within the proposed subdivision and connections would be included to the existing sidewalk systems along Bruceville Road and Jacinto Avenue. The project is not expected to involve any modifications to the existing roadway network that could adversely affect pedestrian travel or pedestrian paths. Therefore, the proposed project would result in a **less-than-significant** impact related to pedestrian access.

**Mitigation Measures**

None required.

**Findings**

The project would have no additional project-specific environmental effects relating to Transportation and Circulation.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>12. UTILITIES AND SERVICE SYSTEMS</b> Would the project:			
A) Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?			X
B) Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts?			X

**Environmental Setting**

The project site's existing utilities and service systems are discussed below.

Wastewater

The proposed project would be provided wastewater collection and treatment services by the SASD and the SRCSD. Wastewater generated in the project area is collected in the SASD system through a series of sewer pipes and pump stations. Once collected in the SASD system, sewage flows into the SRCSD interceptor system, where the sewage is conveyed to the Sacramento Regional Wastewater Treatment Plant. The City's Department of Utilities is responsible for providing and maintaining water, sewer collection, storm drainage, and flood control services for residents and businesses within the city limits.

The proposed project site would include construction of six-inch sanitary sewer lines within the subdivision that would connect to an existing eight-inch sewer line located within Jacinto Avenue along the site's southern boundary (see Figure 5 above, Preliminary Utility Plan).

Water Supply

As mentioned above, the project site is vacant and is not currently serviced by a water facility; however, water service for the project would be provided by the City of Sacramento. The City of Sacramento uses surface water from the Sacramento and American Rivers to meet the majority of its water demands. To meet the City's water demand, the City uses surface water from the Sacramento and American Rivers, and groundwater pumped from the North American and South American Subbasins.

Wastewater Service

The project site is located within an area of the City served by the SASD. The SASD owns and operates thousands of miles of lower lateral and main line pipes, 108 pump stations, and is responsible for the day-to-day operations and maintenance of such sewer pipes. Once collected in the SASD system, sewage flows into the SRCSD interceptor system, where the sewage is conveyed to SRWWTP located near Elk Grove. The SRWWTP is permitted to treat an average dry weather flow (ADWF) of 181 million gallons per day (mgd). According to the Regional Water Quality Control Board's 2010 wastewater discharge permit for SRCSD's SRWWTP, the average dry weather flow at the time was approximately 141 mgd. Expansion of the SRWWTP was previously proposed; however, due to slow growth and potential reclamation, the SRCSD

decided not to expand the plant at that time. Sewage treated by the SRCSD at the Sacramento Regional Wastewater Treatment Plant is then safely discharged into the Sacramento River.

### Water Service

Water service in the project vicinity is currently provided by the City of Sacramento. The City of Sacramento provides domestic water service to the City through a combination of surface water and groundwater sources. Two water treatment plants supply domestic water to residents and businesses from the American and Sacramento rivers, as well as groundwater supply wells.

The project site is vacant and is not currently serviced by a water facility; however, water service for the project would be provided by the City of Sacramento. The proposed project site would include construction of six-inch minimum water lines within the subdivision that would connect to an existing 12-inch water main located within Jacinto Avenue along the site's southern boundary (see Figure 5, Preliminary Utility Plan).

### Solid Waste Service

The City of Sacramento does not provide commercial solid waste collection services. Rather, commercial garbage, recycling or yard waste services are provided by a franchised hauler authorized by the Sacramento Solid Waste Authority to collect commercial garbage and commingled recycling within the City. Kiefer Landfill, located at 12701 Kiefer Boulevard in Sloughhouse, California, is the primary location for the disposal of waste by the City of Sacramento. According to the Master EIR, the landfill is permitted to accept up to 10,815 tons per day and the current peak and average daily disposal is much, much lower than the permitted amount. The landfill is anticipated to be capable of adequately serving the area, including the anticipated population growth, until the year 2065.

Solid waste collected at commercial/industrial uses in the area is currently disposed of at the Kiefer Landfill. Any waste currently generated at the project site associated with the existing use is disposed of at the Kiefer Landfill.

### **Standards of Significance**

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the following:

- Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments; or
- Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts.

### **Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies**

The Master EIR evaluated the effects of development under the 2035 General Plan on water supply, sewer and storm drainage, solid waste, electricity, natural gas and telecommunications. See Chapter 4.11.

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2035 General Plan. Policies in the General Plan would reduce the impact generally to a less-than-significant level (see Impact 4.11-1) but the Master EIR

concluded that the potential increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and which could require construction of new water supply facilities, would result in a significant and unavoidable effect (Impact 4.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a less-than-significant effect (Impact 4.11-4). Impacts on solid waste facilities were less than significant (Impact 4.11-5). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the California Code of Regulations for residential and non-residential buildings, would reduce effects for energy to a less-than-significant level.

## **Answers to Checklist Questions**

### Questions A and B

#### *Wastewater Service*

The proposed project would connect to an existing eight-inch sanitary sewer line that runs along Jacinto Avenue, adjacent to the southern boundary of the project site. The on-site sewer system for the project would connect to this sewer main for sewer flow conveyance. Although the project would require a General Plan Amendment from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density, the project would still be generally consistent with the land use analyzed within the General Plan for the site, albeit at a lower intensity. Therefore, the project would be expected to generate less demand for wastewater service than what was accounted for in the General Plan Master EIR. According to the General Plan Master EIR, the existing 181 million gallons per day (mgd) average dry weather flow (ADWF) capacity of the SRWWTP will be sufficient for at least 40 more years and impacts related to wastewater service would be less-than-significant.

#### *Storm Drainage*

As discussed in the Hydrology and Water Quality section of this IS/MND, stormwater from the project site would be collected and detained on-site in a detention pond prior to release to storm drainage infrastructure within Jacinto Avenue and Bruceville Road. Runoff from the site would be then conveyed into existing City infrastructure. The proposed project includes on-site detention such that all increased runoff from the new impervious services are detained on-site during peak storm events and released at a rate equal to that which currently occurs at the project site.

According to the project engineer, the detention pond, at a capacity of 260,000 gallons, would provide enough storage for detention of the 235,000 gallons needed for the project site. In addition, the City drainage system that the project would tie into would have the capacity to handle the outflow from the site after water is detained on-site. These conditions would result in maintaining existing drainage peak flows from the site at pre-project conditions, meeting the City's "Do-No-Harm" standard for drainage peak flows coming from the site. As a result, a peak flow impact to the City drainage system would not occur.<sup>12</sup>

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<sup>12</sup> Personal email communication between Ross Peabody, Peabody Engineering, and Rod Stinson, Raney Planning & Management, Inc. September 9, 2016.



### *Water Supply*

The proposed project would include six-inch minimum water lines within the subdivision that would connect to an existing 12-inch water main located within Jacinto Avenue along the site's southern boundary.

Although the project would require a General Plan Amendment from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density, the project would still be generally consistent with the land use analyzed within the General Plan for the site, albeit at a lower intensity. Therefore, the project would be expected to generate less demand for water than what was accounted for in the General Plan Master EIR. The General Plan Master EIR concluded that the City's existing water right permits and United States Bureau of Reclamation (USBR) contract are sufficient to meet the total water demand projected for buildout of the proposed 2035 General Plan, including the proposed project site, albeit at the higher density anticipated by the existing land use designation. In addition, according to the 2010 Sacramento Urban Water Management Plan (UWMP), the City's water supply would be well below the City's water demand during a multiple-dry year in 2015, 2020, 2025, 2030, and 2030. During a drought year in 2030, the City's water yearly supply is expected to be 346,800 acre feet (AFY), while the City's yearly water demand would be 249,984 AFY; the City anticipates that there would be a 96,816 AFY surplus of water supply in the year 2030 during drought.

### *Solid Waste*

The proposed project (85 single-family residences) would generate approximately 536 pounds per day of solid waste (based on a generation rate of 1.1 tons per year per residential unit<sup>13</sup>). The projected solid waste generation of the proposed project was included in the Sacramento Master EIR, which concluded that at full buildout of the 2035 General Plan, the capacities at the Lockwood and Kiefer landfills would not be exceeded. The Master EIR determined that the remaining capacity and expected lifespan at the Lockwood and Kiefer Landfills, combined with the use of the existing transfer stations and development of one new transfer station in the North Sacramento area would not exceed the capacity of the landfills at full buildout of the 2035 General Plan.

Although the project would require a General Plan Amendment from Suburban Neighborhood High Density to Suburban Neighborhood Medium Density, the project would still be generally consistent with the land use analyzed within the General Plan for the site, albeit at a lower intensity. Therefore, the project would be expected to generate less solid waste than what was accounted for in the General Plan Master EIR, effects which were determined to be insignificant. In addition, the proposed project would be required to comply with Title 17.72 of the City of Sacramento City Code which addresses recycling and solid waste disposal requirements for new and existing developments. Such requirements include compliance with all federal, state, and local statutes and regulations related to waste reduction and recycling, including the requirement that all planning documents prepared for the project be submitted to the City Solid Waste Division for approval.

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<sup>13</sup> Rate provided by the City of Sacramento, as part of the proposed 2035 General Plan MEIR analysis.

*Conclusion*

Based on the above information and analysis related to wastewater services, water supply, storm drainage, and solid waste services, the proposed project is expected to result in a less-than-significant impact related to all utilities and service systems.

**Mitigation Measures**

None required.

**Findings**

The project would have no additional project-specific environmental effects relating to Utilities and Service Systems.

### MANDATORY FINDINGS OF SIGNIFICANCE

Issues:	Effect remains significant with all identified mitigation	Effect can be mitigated to less than significant	No additional significant environmental effect
<b>13. <u>MANDATORY FINDINGS OF SIGNIFICANCE</u></b>			
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?			X
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.)			X
C.) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

#### Answers to Checklist Questions

##### Question A

As described throughout this IS/MND, implementation of the proposed project would have the potential to adversely impact sensitive natural communities, special-status animals and previously undiscovered cultural resources and/or human remains. The proposed project would implement and comply with applicable Sacramento 2035 General Plan policies, as discussed throughout this IS/MND. With implementation of the mitigation measures required by this IS/MND, compliance with City of Sacramento 2035 General Plan policies, and application of standard BMPs during construction, development of the proposed project would not result in any of the following: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory. Therefore, the project’s impact would be ***less than significant***.

##### Question B

The proposed project includes subdivision of the 9.6-acre project site into 89 residential lots and construction of 89 single-family homes. While the project would require a General Plan

Amendment for the site, amending the land use designation would result in a less intense use on the site than what was anticipated within the 2035 General Plan. As such, the proposed project was included in the cumulative analysis of City buildout in the 2035 General Plan. Applicable policies from the 2035 General Plan would be implemented as part of the proposed project, as well as the project-specific mitigation measures included in this IS/MND, to reduce the project's contribution to potentially cumulative impacts. The potential impacts of the proposed project would be individually limited and would not be cumulatively considerable. As demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level with implementation of project-specific mitigation measures and compliance with applicable 2035 General Plan policies. When viewed in conjunction with other closely related past, present or reasonably foreseeable future projects, development of the proposed project would not contribute to cumulative impacts in the City of Sacramento and the project's cumulative impact would be ***less than significant***.

#### Question C

As described in this IS/MND, implementation of the proposed project could result in temporary impacts related to biological resources, cultural resources, and noise during the construction period. However, the proposed project would be required to implement the project-specific mitigation measures within this IS/MND, as well as applicable policies of the Sacramento 2035 General Plan, to reduce any potential direct or indirect impacts that could occur to human beings or various resources and, as demonstrated in this IS/MND, with implementation of the identified mitigation measures, all impacts would be reduced to less-than-significant levels. Therefore, overall, the project's impact would be ***less than significant***.

**SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

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The environmental factors checked below would potentially be affected by this project.

	Aesthetics		Hazards
X	Air Quality	X	Noise
X	Biological Resources	X	Public Services
X	Cultural Resources	X	Recreation
	Geology and Soils		Transportation/Circulation
	Hydrology and Water Quality		Utilities and Service Systems
	None Identified		

**SECTION V - DETERMINATION**

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**On the basis of the initial study:**

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed project is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the proposed project; and (d) the proposed project will have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the proposed project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178(b))



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Signature

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Date

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Dana Mahaffey  
Printed Name

## REFERENCES CITED

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- California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
- California Air Resources Board. *Climate Change Scoping Plan*. December 2008.
- California Air Resources Board. *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document*. August 19, 2011.
- California Department of Conservation Division of Land Resource Protection Farmland Mapping and Monitoring Program. *Sacramento County Important Farmland Map*. 2014.
- City of Elk Grove. *City Council Staff Report, Agenda Item No. 8.7*. June 22, 2016
- City of Sacramento. *2013-2021 Housing Element*. December 17, 2013.
- City of Sacramento. *Base Zones Map*. Updated September 03, 2014.
- City of Sacramento. *Bruceville North Condominiums Initial Study/Mitigated Negative Declaration*. November 2006.
- City of Sacramento. *Sacramento 2035 General Plan*. Adopted on March 3, 2015.
- City of Sacramento. *Sacramento 2030 General Plan Draft Master EIR*. August 2014.
- City of Sacramento. *Sacramento City Code*. Current through February 2016.
- City of Sacramento. *Wastewater Services and Rates*. Available at: <http://www.cityofsacramento.org/Utilities/Services/Wastewater-Service>. Accessed May 2016.
- City of Sacramento, Department of Public Works. *Email communication re: Bruceville Terrace Project Trip Generation*. July 14, 2016.
- Department of Conservation, California Geological Survey. *Relative Likelihood for the Presence of Naturally Occurring Asbestos in Eastern Sacramento County, California*. 2006.
- Department of Toxic Substances Control. *Hazardous Waste and Substances Site List*. Available at: <http://www.envirostor.dtsc.ca.gov>. Accessed July 2016.
- Elk Grove Board of Education. *Barbara Comstock Morse Elementary 2015-2016 School Accountability Report Card – Executive Summary*. Available at <http://www.egusd.net/schools/sarcs/short/Morse.pdf>. Accessed in September 2016.
- Elk Grove Unified School District. *School Locator*. Available at [http://www.egusd.net/new\\_to\\_egusd/schlist.cfm](http://www.egusd.net/new_to_egusd/schlist.cfm). Accessed in September 2016.
- Gibson & Skordal, LLC. *Bruceville-Jacinto Road Property, Jurisdictional Delineation Report*. September 2005.

Federal Emergency Management Agency. *Flood Insurance Rate Map (Map Number ID: 06067C0308H)*. Available at: <https://msc.fema.gov/portal>. Accessed July 2016.

Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Guidelines*. May 2006.

Personal email communication between Ross Peabody, Peabody Engineering, and Rod Stinson, Raney Planning & Management, Inc. September 9, 2016.

The Acoustics and Vibration Group. *Noise Impact on Bruceville North Condominium Development and Recommendations to Meet Noise Limits of City of Sacramento*. August 9, 2006.

TSS Consultants. *Phase I Environmental Site Assessment, Jacinto Terrace, Proposed Senior Community, 8500 Bruceville Road*. November 1, 2009.

United States Department of Agriculture Natural Resources Conservation Science. *Web Soil Survey*. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed July 2016.



## APPENDIX A

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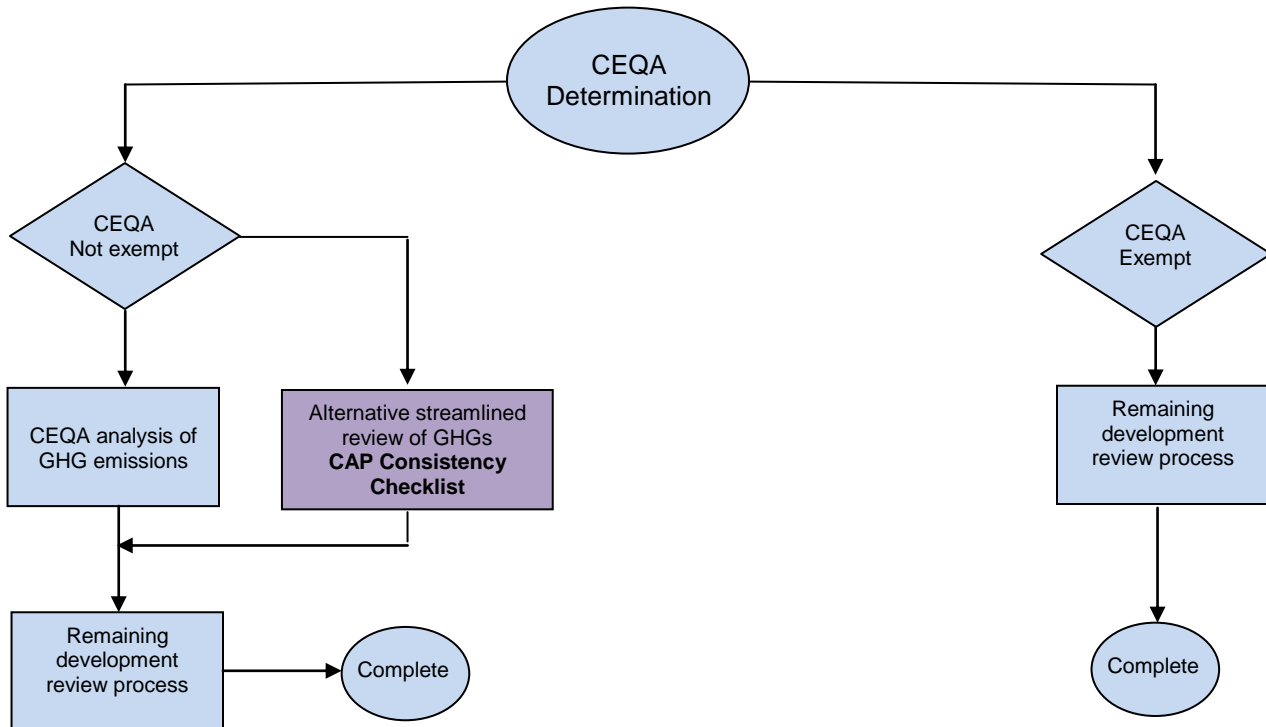
## CLIMATE ACTION PLAN – CONSISTENCY REVIEW CHECKLIST

The purpose of the Climate Action Plan Consistency Review Checklist (CAP Consistency Review Checklist) is to provide a streamlined review process for proposed new development projects which are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA)..

CEQA Guidelines require the analysis of greenhouse gas (GHG) emissions and potential climate change impacts from new development. The Sacramento Climate Action Plan qualifies under section 15183.5 of the CEQA Guidelines as a plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. This allows projects that demonstrate consistency with the CAP to be eligible for this streamlining procedure. Projects that demonstrate consistency with the CAP and the Sacramento 2030 General Plan may be able to answer “No additional significant environmental effect” in the City’s initial study checklist. Projects that do not demonstrate consistency may, at the City’s discretion, prepare a more comprehensive project-specific analysis of GHG emissions consistent with CEQA requirements. (See FAQ about the CAP Consistency Review Checklist for more details.)

The diagram below shows the context for the CAP Consistency Review Checklist within the planning review process framework.

### Streamlined Review of GHG Emissions in Development Projects



## CLIMATE ACTION PLAN – CONSISTENCY REVIEW CHECKLIST

### Application Submittal Requirements

1. The CAP Consistency Review Checklist is required only for proposed new development projects which are subject to CEQA review (non-exempt projects)
2. If required, the CAP Consistency Review Checklist must be submitted in addition to the basic set of requirements set forth in the Universal Application and the Planning Application Submittal Matrix.
3. The applicant shall work with staff to meet the requirements of this checklist. These requirements will be reflected in the conditions of approval and/or mitigation measures.
4. All conditions of approval and mitigation measures from this checklist shall be shown on full-size sheets for building plan check submittals.

### Application Information

Project Number: \_\_\_\_\_

Address of Property: \_\_\_\_\_

Was a special consultant retained to complete this checklist?  Yes  No. If yes, complete following

Consultant Name\*: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_ E-Mail: \_\_\_\_\_

**CAP Consistency Checklist Form for Projects that are Not Exempt from CEQA**

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	No*
1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan, as it currently exists?		
Please explain how proposed project compares to 2035 General Plan with respect to density standards, FAR, land use and urban form. (See directions for filling out CAP Checklist)		

2. Would the project incorporate traffic calming measures? (Examples of traffic calming measures include, but are not limited to: curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers.)	Yes	NA
Please explain how the proposed project meets this requirement (list traffic calming measures). If "not applicable" (NA), explain why traffic calming measures were not required.		

\*If "No", equivalent or better GHG reduction must be demonstrated as part of the project and incorporated into the conditions of approval.

Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	NA
3. Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?		
Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required.		

4. Would the project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen?	Yes	NA
Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required.		

\*If "No", equivalent or better GHG reduction must be demonstrated as part of the project and incorporated into the conditions of approval.

*Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.*

Checklist Item (Check the appropriate box, and provide explanation for your answer).	Yes	No*	NA
5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15% of the project's total energy demand on-site? (CAP Actions: 3.4.1 and 3.4.2)			
<p>Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required. If project does not meet requirements, see DIRECTIONS FOR FILLING OUT CAP CONSISTENCY REVIEW CHECKLIST re: alternatives to meeting checklist requirements.</p> <p>Attach a copy of the CalEEMod input and output. Record the model and version here _____.            Do NOT select the "use historical" box in CalEEMod for energy demand analysis related to this requirement.</p>			
6. Would the project (if constructed on or after January 1, 2014) comply with minimum CALGreen Tier I water efficiency standards?	Yes	NA	
<p>Please explain how the proposed project meets this requirement. If "not applicable" (NA), explain why this was not required.</p>			

\*If "No", equivalent or better GHG reduction must be demonstrated as part and incorporated into the conditions of approval.

Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.

### **Certification**

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **DIRECTIONS FOR FILLING OUT CAP CONSISTENCY REVIEW CHECKLIST**

### **General Plan Consistency & Sustainable Land Use**

**1. Is the proposed project substantially consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's [2035 General Plan](#)?**

Consistency with the General Plan land use and urban form designation, FAR and/or density standards is a key determining factor in whether or not the CAP Consistency Review procedure can be used. This is because future growth and development consistent with the General Plan was used to estimate business as usual emission forecasts, as well as emission reductions from actions that would be applicable to new development.

Refer to the 2035 General Plan, Land Use and Urban Form Designations and Development Standards starting on page 2-29. If a project is not fully consistent with the General Plan, the project still may qualify for consistency with the CAP, but this determination will need to be closely coordinated with the City. The City will determine whether the proposed land uses under consideration could be found consistent with the growth projections and assumptions used to develop the GHG emissions inventory and projections in the CAP.

### **Mobility**

**2. Would the project incorporate traffic calming measures? (Applicable CAP Action: 2.1.1)**

List the traffic calming measures that have been incorporated into the project. These may include, but are not limited to: curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers.

The project proponent and City staff should consult with staff in the Department of Public Works-Transportation Division to verify that traffic calming measures are adequate and in compliance with the City's Street Design Standards.

If the proposed project does not include any roadway or facility improvements, traffic calming measures may not apply. For example, certain infill projects may not result in on-street or transportation facility improvements because sufficient infrastructure already exists.

**3. Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan? (Applicable CAP Action: 2.2.1)**

List the pedestrian facilities and connections to public transportation that have been included in the proposed project on the Checklist. These may include, but are not limited to: sidewalks on both sides of streets, marked crosswalks, count-down signal timers, curb extensions, median islands, transit shelters, street lighting.

The project proponent and City staff should consult with Department of Public Works-Transportation Division staff to verify that pedestrian facilities are consistent with the [Pedestrian Master Plan](#). As in the previous example, if "not applicable", an explanation shall be documented in the Checklist. For example, certain infill projects may not require on-street or transportation facility improvements because sufficient infrastructure already exists.



The “Pedestrian Review Process Guide” ([Appendix A to the Master Plan](#)) will be used to determine consistency, as follows:

- For typical infill development projects where existing streets will serve the site (no new streets are proposed): the level of pedestrian improvements necessary to determine Pedestrian Master Plan consistency will be measured according to the “Basic, Upgrade or Premium” categories defined in Appendix A to the Pedestrian Master Plan, which are based on project location, surrounding land uses, proximity to transit, etc. If the proposed project does not include the minimum level of improvements per the assigned category for the project’s location, the project will be required as a condition of approval to include appropriate features, per the approval of the Department of Public Works-Transportation Division.
- For new “greenfield” projects and/or larger infill development projects where new streets are proposed as part of the project, the following will apply:
  - “Basic, Upgrade or Premium” levels of improvement will be required based on the proposed project’s location and context, where applicable, consistent with the criteria defined in the Master Plan. If the proposed project does not include the minimum level of improvements per the assigned category, the project will be required as a condition of approval to include appropriate features, per the approval of the Department of Public Works-Transportation Division.
  - The “Pedestrian Smart Growth Scorecard” (Appendix A to the Master Plan) will be required to be completed for the project, and a minimum score of 3 or better will need to be achieved. If the proposed project cannot achieve the minimum score, changes to the proposed project may be required, and/or the project may be required as a condition of approval to include certain improvements such that the average score will meet 3 or better. (Note: an Excel version of the Pedestrian Smart Growth Scorecard is available, to assist in automating the rating & scoring process)

**4. Would the project incorporate bicycle facilities consistent with the City’s Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen? (Applicable CAP Action: 2.3.1)**

List the bicycle facilities that are incorporated into the proposed project on the Checklist. These include, but are not limited to: Class I bike trails and Class II bike lanes connecting the project site to an existing bike network and transit stations, bike parking [bike racks, indoor secure bike parking, bike lockers], end-of-trip facilities at non-residential land uses [showers, lockers]).

The project proponent and City staff should consult with staff in the Transportation Division of the Department of Public Works to verify that such facilities are consistent with the [Bikeway Master Plan](#) and meet or exceed Zoning Code and CALGreen standards. Generally, the following guidelines will be used:

- If existing on-street and off-street bikeways are already present and determined to be consistent with the Bikeway Master Plan, no additional on-street bikeways will be required. Check the “not applicable” box if appropriate. However, on-site facilities shall still be required to meet or exceed minimum Zoning and CALGreen requirements.
- If not applicable, fully document the reasons why using the Checklist.

- If on-street bicycle facilities are not present or are only partially consistent with the Master Plan, the project will be required as a condition of approval to construct or pay for its fair-share of on-street and/or off-street bikeways described in the Master Plan, in addition to meeting or exceeding minimum on-site facilities.
- In some cases, a combination of new or upgraded on-street and off-street bikeways may be used to determine consistency with the Master Plan, at the discretion of the Department of Public Works-Transportation Division staff.

### Energy Efficiency and Renewable Energy

- 5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating etc. ) that would generate at least 15% of the project's total energy demand? (CAP Actions: 3.4.1 and 3.4.2)**

For projects of the minimum size specified in this measure, a commitment in the project description or in a mitigation measure that the project shall generate a minimum of 15% of the project's energy demand on-site is sufficient to demonstrate consistency with this measure. However, the project conditions of approval or mitigation measures should specify the intended renewable energy technology to be used (e.g. solar photovoltaic, solar water heating, wind, etc.) and estimated size of the systems to meet project demand based on the project description.

"Total energy demand" refers to the energy (electricity and natural gas) consumed by the built environment (including HVAC systems, water heating systems, and lighting systems) as well as uses that are independent of the construction of buildings, such as office equipment and other plug-ins.

Applicants may estimate the total energy demand of their projects using California Emissions Estimator Model (CalEEMod 2013.2), the same software used to estimate greenhouse gas emissions. **For CalEEMod estimates of energy demand to meet this specific requirement, the user should NOT select the "use historical" box, otherwise they will be "double-counting" emissions reductions that have already been counted.** CalEEMod outputs for electricity demand are provided in annual kWh, and natural gas demand is provided in annual kBtu.

The energy demand estimate by CalEEMod is based on two datasets:

- The California Commercial End Use Survey (CEUS);
- The Residential Appliance Saturation Survey (RASS)

CalEEMod takes energy use intensity data (above) and forecasts energy demand based on climate zone, land use subtype (such as "hospital", "arena", or "apartments, mid rise"), building area, and the number of buildings or units. This is an appropriate level of analysis for use at the planning submittal stage, but it may not provide an accurate picture of actual project energy demand because it does not factor project specifics such as building design.

Therefore, the applicant is advised (but not required) to run a more comprehensive energy simulation once project-specific details are known: basic building design, square-footage, building envelope, lighting design (at least rudimentary), and the mechanical system (at least minimally zoned). Some of the energy simulation programs that are appropriate for this level of analysis include: DOE 2.2, Trace 700, and Energy Pro.

The U.S. DOE maintains a list of energy simulation programs that are available.

[http://apps1.eere.energy.gov/buildings/tools\\_directory/subjects.cfm/pagename=subjects/pagename\\_menu=whole\\_building\\_analysis/pagename\\_submenu=energy\\_simulation](http://apps1.eere.energy.gov/buildings/tools_directory/subjects.cfm/pagename=subjects/pagename_menu=whole_building_analysis/pagename_submenu=energy_simulation)

The applicant may then revise the estimate and make a final determination regarding the size of the PV system that is required.

**Substitutions:** Projects may substitute a quantity of energy efficiency for renewable energy, as long as the substituted GHG reduction does not “double count” GHG reductions already taken by the CAP. In other words, substitutions must reduce GHG emissions from the project beyond what is already accounted for in the CAP (to avoid double-counting).

- Additional mitigation may include equivalent or better GHG reduction from individual measures or a combination of:
- In lieu of installing PV systems that would generate 15% of the projects total energy, the project may exceed energy efficiency standards of Title 24, part 6 of the California Building Code, such as building to CALGreen Tier 1 energy standards. (Residential projects shall exceed the 2013 Title 24 energy efficiency by a minimum of 10% and commercial projects shall exceed 2013 Title 24 energy efficiency by a minimum of 5%).

#### **6. Would the project comply with minimum CALGreen Tier I water efficiency standards? (CAP Action: 5.1.1)**

The [California Green Building Standards Code \(CALGreen\)](#) includes mandatory green building measures, as well as voluntary measures that local jurisdictions may choose to adopt to achieve higher performance tiers, at either Tier 1 or Tier 2 compliance levels. Sacramento has adopted Tier 1 Water Efficiency Standards to be required on or after January 1, 2014. Currently, in order to meet the Tier 1 Water Efficiency Standards, buildings are required to implement all mandatory water efficiency and conservation measures as well as certain Tier 1 specific measures that exceed minimum mandatory measures (e.g. 30% increase in indoor water efficiency). Specific Tier 1 provisions can be found in the CALGreen Code at <http://www.bsc.ca.gov/Home/CALGreen.aspx>.

The City recognizes that project construction details are often not known at the environmental review stage, and it may be premature for a project proponent to identify compliance with precise requirements of CALGreen. A condition of approval requiring the project to comply with minimum CALGreen Tier 1 water efficiency and conservation standards is sufficient to demonstrate consistency with this criterion.

Planning approval of your project will include the following condition:

Project must meet CALGreen Tier 1 water efficiency and conservation standards. Copies of the appropriate CalGreen checklist (see FAQ) shall be included on the full-size sheets for building plan check submittals.

*Note: Requirements from this checklist should be incorporated into the conditions of approval, and shown on the full-size plans submitted for building plan check.*

## APPENDIX B

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**Bruceville Terrace**  
**Sacramento County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	89.00	Dwelling Unit	9.68	160,200.00	238

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2018
<b>Utility Company</b>	Sacramento Municipal Utility District				
<b>CO2 Intensity (lb/MWhr)</b>	479.09	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - CO2 Intensity Factor updated per SMUD progress towards RPS

Land Use - Based on site plans

Construction Phase - Information from Applicant

Vehicle Trips - Traffic information provided by City

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	306.00
tblConstructionPhase	NumDays	230.00	306.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	PhaseEndDate	1/2/2020	11/14/2018
tblConstructionPhase	PhaseEndDate	8/1/2017	8/29/2017
tblConstructionPhase	PhaseEndDate	9/27/2017	8/29/2017
tblConstructionPhase	PhaseStartDate	11/1/2018	9/13/2017
tblConstructionPhase	PhaseStartDate	7/1/2017	7/31/2017
tblConstructionPhase	PhaseStartDate	8/30/2017	8/1/2017
tblGrading	AcresOfGrading	11.00	10.00
tblLandUse	LotAcreage	28.90	9.68
tblProjectCharacteristics	CO2IntensityFactor	590.31	479.09
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	10.08	7.42
tblVehicleTrips	SU_TR	8.77	7.42
tblVehicleTrips	WD_TR	9.57	7.42

## 2.0 Emissions Summary

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**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	0.7544	0.0107	0.9243	5.0000e-005		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	1.4993	1.4993	1.4900e-003	0.0000	1.5305
Energy	0.0154	0.1319	0.0561	8.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	296.5438	296.5438	0.0116	4.6000e-003	298.2144
Mobile	0.3719	0.8434	3.9278	9.0200e-003	0.6308	0.0116	0.6424	0.1690	0.0107	0.1797	0.0000	665.9238	665.9238	0.0269	0.0000	666.4893
Waste						0.0000	0.0000		0.0000	0.0000	17.3923	0.0000	17.3923	1.0279	0.0000	38.9772
Water						0.0000	0.0000		0.0000	0.0000	2.0516	9.0592	11.1108	7.6100e-003	4.5700e-003	12.6889
<b>Total</b>	<b>1.1417</b>	<b>0.9860</b>	<b>4.9082</b>	<b>9.9100e-003</b>	<b>0.6308</b>	<b>0.0273</b>	<b>0.6581</b>	<b>0.1690</b>	<b>0.0264</b>	<b>0.1954</b>	<b>19.4439</b>	<b>973.0260</b>	<b>992.4698</b>	<b>1.0755</b>	<b>9.1700e-003</b>	<b>1,017.9001</b>



## 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	0.7544	0.0107	0.9243	5.0000e-005		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	1.4993	1.4993	1.4900e-003	0.0000	1.5305
Energy	0.0110	0.0942	0.0401	6.0000e-004		7.6200e-003	7.6200e-003		7.6200e-003	7.6200e-003	0.0000	248.0230	248.0230	0.0105	3.7400e-003	249.4030
Mobile	0.3719	0.8434	3.9278	9.0200e-003	0.6308	0.0116	0.6424	0.1690	0.0107	0.1797	0.0000	665.9238	665.9238	0.0269	0.0000	666.4893
Waste						0.0000	0.0000		0.0000	0.0000	17.3923	0.0000	17.3923	1.0279	0.0000	38.9772
Water						0.0000	0.0000		0.0000	0.0000	2.0516	9.0592	11.1108	7.6400e-003	4.5800e-003	12.6911
<b>Total</b>	<b>1.1373</b>	<b>0.9484</b>	<b>4.8922</b>	<b>9.6700e-003</b>	<b>0.6308</b>	<b>0.0243</b>	<b>0.6551</b>	<b>0.1690</b>	<b>0.0234</b>	<b>0.1924</b>	<b>19.4439</b>	<b>924.5053</b>	<b>943.9491</b>	<b>1.0744</b>	<b>8.3200e-003</b>	<b>969.0910</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.39</b>	<b>3.82</b>	<b>0.33</b>	<b>2.42</b>	<b>0.00</b>	<b>11.12</b>	<b>0.46</b>	<b>0.00</b>	<b>11.51</b>	<b>1.56</b>	<b>0.00</b>	<b>4.99</b>	<b>4.89</b>	<b>0.10</b>	<b>9.27</b>	<b>4.80</b>

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2017	6/30/2017	5	22	
2	Grading	Grading	7/31/2017	8/29/2017	5	22	
3	Paving	Paving	8/1/2017	8/29/2017	5	21	
4	Building Construction	Building Construction	8/30/2017	10/31/2018	5	306	
5	Architectural Coating	Architectural Coating	9/13/2017	11/14/2018	5	306	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 0**

**Residential Indoor: 324,405; Residential Outdoor: 108,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

**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	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	32.00	10.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

### 3.2 Site Preparation - 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					0.1987	0.0000	0.1987	0.1092	0.0000	0.1092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0532	0.5693	0.4334	4.3000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	39.9469	39.9469	0.0122	0.0000	40.2040
<b>Total</b>	<b>0.0532</b>	<b>0.5693</b>	<b>0.4334</b>	<b>4.3000e-004</b>	<b>0.1987</b>	<b>0.0303</b>	<b>0.2290</b>	<b>0.1092</b>	<b>0.0279</b>	<b>0.1371</b>	<b>0.0000</b>	<b>39.9469</b>	<b>39.9469</b>	<b>0.0122</b>	<b>0.0000</b>	<b>40.2040</b>

#### 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	5.9000e-004	7.1000e-004	7.4100e-003	2.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.2465	1.2465	6.0000e-005	0.0000	1.2478
<b>Total</b>	<b>5.9000e-004</b>	<b>7.1000e-004</b>	<b>7.4100e-003</b>	<b>2.0000e-005</b>	<b>1.4500e-003</b>	<b>1.0000e-005</b>	<b>1.4600e-003</b>	<b>3.9000e-004</b>	<b>1.0000e-005</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>1.2465</b>	<b>1.2465</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.2478</b>

**3.2 Site Preparation - 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					0.1987	0.0000	0.1987	0.1092	0.0000	0.1092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0532	0.5693	0.4334	4.3000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	39.9469	39.9469	0.0122	0.0000	40.2039
<b>Total</b>	<b>0.0532</b>	<b>0.5693</b>	<b>0.4334</b>	<b>4.3000e-004</b>	<b>0.1987</b>	<b>0.0303</b>	<b>0.2290</b>	<b>0.1092</b>	<b>0.0279</b>	<b>0.1371</b>	<b>0.0000</b>	<b>39.9469</b>	<b>39.9469</b>	<b>0.0122</b>	<b>0.0000</b>	<b>40.2039</b>

**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	5.9000e-004	7.1000e-004	7.4100e-003	2.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.2465	1.2465	6.0000e-005	0.0000	1.2478
<b>Total</b>	<b>5.9000e-004</b>	<b>7.1000e-004</b>	<b>7.4100e-003</b>	<b>2.0000e-005</b>	<b>1.4500e-003</b>	<b>1.0000e-005</b>	<b>1.4600e-003</b>	<b>3.9000e-004</b>	<b>1.0000e-005</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>1.2465</b>	<b>1.2465</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.2478</b>

### 3.3 Grading - 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					0.0716	0.0000	0.0716	0.0370	0.0000	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0380	0.3958	0.2792	3.3000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	30.3729	30.3729	9.3100e-003	0.0000	30.5683
<b>Total</b>	<b>0.0380</b>	<b>0.3958</b>	<b>0.2792</b>	<b>3.3000e-004</b>	<b>0.0716</b>	<b>0.0224</b>	<b>0.0940</b>	<b>0.0370</b>	<b>0.0206</b>	<b>0.0576</b>	<b>0.0000</b>	<b>30.3729</b>	<b>30.3729</b>	<b>9.3100e-003</b>	<b>0.0000</b>	<b>30.5683</b>

#### 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	4.9000e-004	5.9000e-004	6.1700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0387	1.0387	5.0000e-005	0.0000	1.0398
<b>Total</b>	<b>4.9000e-004</b>	<b>5.9000e-004</b>	<b>6.1700e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>1.0000e-005</b>	<b>1.2200e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>1.0387</b>	<b>1.0387</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.0398</b>

### 3.3 Grading - 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					0.0716	0.0000	0.0716	0.0370	0.0000	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0380	0.3958	0.2792	3.3000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	30.3728	30.3728	9.3100e-003	0.0000	30.5682
<b>Total</b>	<b>0.0380</b>	<b>0.3958</b>	<b>0.2792</b>	<b>3.3000e-004</b>	<b>0.0716</b>	<b>0.0224</b>	<b>0.0940</b>	<b>0.0370</b>	<b>0.0206</b>	<b>0.0576</b>	<b>0.0000</b>	<b>30.3728</b>	<b>30.3728</b>	<b>9.3100e-003</b>	<b>0.0000</b>	<b>30.5682</b>

#### 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	4.9000e-004	5.9000e-004	6.1700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0387	1.0387	5.0000e-005	0.0000	1.0398
<b>Total</b>	<b>4.9000e-004</b>	<b>5.9000e-004</b>	<b>6.1700e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>1.0000e-005</b>	<b>1.2200e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>1.0387</b>	<b>1.0387</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.0398</b>

### 3.4 Paving - 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	0.0200	0.2131	0.1546	2.3000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	21.7281	21.7281	6.6600e-003	0.0000	0.0000	21.8679
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0200</b>	<b>0.2131</b>	<b>0.1546</b>	<b>2.3000e-004</b>		<b>0.0120</b>	<b>0.0120</b>		<b>0.0110</b>	<b>0.0110</b>	<b>0.0000</b>	<b>21.7281</b>	<b>21.7281</b>	<b>6.6600e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>21.8679</b>

#### 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	4.7000e-004	5.6000e-004	5.8900e-003	1.0000e-005	1.1600e-003	1.0000e-005	1.1700e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9915	0.9915	5.0000e-005	0.0000	0.9926
<b>Total</b>	<b>4.7000e-004</b>	<b>5.6000e-004</b>	<b>5.8900e-003</b>	<b>1.0000e-005</b>	<b>1.1600e-003</b>	<b>1.0000e-005</b>	<b>1.1700e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9915</b>	<b>0.9915</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9926</b>



### 3.4 Paving - 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	0.0200	0.2131	0.1546	2.3000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	21.7281	21.7281	6.6600e-003	0.0000	21.8679
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0200</b>	<b>0.2131</b>	<b>0.1546</b>	<b>2.3000e-004</b>		<b>0.0120</b>	<b>0.0120</b>		<b>0.0110</b>	<b>0.0110</b>	<b>0.0000</b>	<b>21.7281</b>	<b>21.7281</b>	<b>6.6600e-003</b>	<b>0.0000</b>	<b>21.8679</b>

#### 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	4.7000e-004	5.6000e-004	5.8900e-003	1.0000e-005	1.1600e-003	1.0000e-005	1.1700e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9915	0.9915	5.0000e-005	0.0000	0.9926
<b>Total</b>	<b>4.7000e-004</b>	<b>5.6000e-004</b>	<b>5.8900e-003</b>	<b>1.0000e-005</b>	<b>1.1600e-003</b>	<b>1.0000e-005</b>	<b>1.1700e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9915</b>	<b>0.9915</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9926</b>

**3.5 Building Construction - 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	0.1365	1.1619	0.7977	1.1800e-003		0.0784	0.0784		0.0736	0.0736	0.0000	105.3708	105.3708	0.0259	0.0000	105.9154
<b>Total</b>	<b>0.1365</b>	<b>1.1619</b>	<b>0.7977</b>	<b>1.1800e-003</b>		<b>0.0784</b>	<b>0.0784</b>		<b>0.0736</b>	<b>0.0736</b>	<b>0.0000</b>	<b>105.3708</b>	<b>105.3708</b>	<b>0.0259</b>	<b>0.0000</b>	<b>105.9154</b>

**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	5.0500e-003	0.0330	0.0663	9.0000e-005	2.5100e-003	4.9000e-004	3.0000e-003	7.2000e-004	4.5000e-004	1.1700e-003	0.0000	8.1635	8.1635	6.0000e-005	0.0000	8.1648
Worker	4.1900e-003	5.0300e-003	0.0527	1.2000e-004	0.0103	8.0000e-005	0.0104	2.7500e-003	7.0000e-005	2.8200e-003	0.0000	8.8637	8.8637	4.5000e-004	0.0000	8.8732
<b>Total</b>	<b>9.2400e-003</b>	<b>0.0380</b>	<b>0.1190</b>	<b>2.1000e-004</b>	<b>0.0129</b>	<b>5.7000e-004</b>	<b>0.0134</b>	<b>3.4700e-003</b>	<b>5.2000e-004</b>	<b>3.9900e-003</b>	<b>0.0000</b>	<b>17.0272</b>	<b>17.0272</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>17.0380</b>

### 3.5 Building Construction - 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	0.1365	1.1619	0.7977	1.1800e-003		0.0784	0.0784		0.0736	0.0736	0.0000	105.3707	105.3707	0.0259	0.0000	105.9153
<b>Total</b>	<b>0.1365</b>	<b>1.1619</b>	<b>0.7977</b>	<b>1.1800e-003</b>		<b>0.0784</b>	<b>0.0784</b>		<b>0.0736</b>	<b>0.0736</b>	<b>0.0000</b>	<b>105.3707</b>	<b>105.3707</b>	<b>0.0259</b>	<b>0.0000</b>	<b>105.9153</b>

#### 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	5.0500e-003	0.0330	0.0663	9.0000e-005	2.5100e-003	4.9000e-004	3.0000e-003	7.2000e-004	4.5000e-004	1.1700e-003	0.0000	8.1635	8.1635	6.0000e-005	0.0000	8.1648
Worker	4.1900e-003	5.0300e-003	0.0527	1.2000e-004	0.0103	8.0000e-005	0.0104	2.7500e-003	7.0000e-005	2.8200e-003	0.0000	8.8637	8.8637	4.5000e-004	0.0000	8.8732
<b>Total</b>	<b>9.2400e-003</b>	<b>0.0380</b>	<b>0.1190</b>	<b>2.1000e-004</b>	<b>0.0129</b>	<b>5.7000e-004</b>	<b>0.0134</b>	<b>3.4700e-003</b>	<b>5.2000e-004</b>	<b>3.9900e-003</b>	<b>0.0000</b>	<b>17.0272</b>	<b>17.0272</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>17.0380</b>

**3.5 Building Construction - 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	0.2909	2.5354	1.9111	2.9200e-003		0.1629	0.1629		0.1531	0.1531	0.0000	258.0790	258.0790	0.0632	0.0000	259.4053
<b>Total</b>	<b>0.2909</b>	<b>2.5354</b>	<b>1.9111</b>	<b>2.9200e-003</b>		<b>0.1629</b>	<b>0.1629</b>		<b>0.1531</b>	<b>0.1531</b>	<b>0.0000</b>	<b>258.0790</b>	<b>258.0790</b>	<b>0.0632</b>	<b>0.0000</b>	<b>259.4053</b>

**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	0.0104	0.0736	0.1481	2.3000e-004	6.2200e-003	1.1200e-003	7.3300e-003	1.7800e-003	1.0300e-003	2.8000e-003	0.0000	19.8496	19.8496	1.5000e-004	0.0000	19.8528
Worker	9.2600e-003	0.0112	0.1172	3.1000e-004	0.0256	1.8000e-004	0.0258	6.8100e-003	1.7000e-004	6.9800e-003	0.0000	21.1278	21.1278	1.0300e-003	0.0000	21.1494
<b>Total</b>	<b>0.0196</b>	<b>0.0848</b>	<b>0.2654</b>	<b>5.4000e-004</b>	<b>0.0318</b>	<b>1.3000e-003</b>	<b>0.0331</b>	<b>8.5900e-003</b>	<b>1.2000e-003</b>	<b>9.7800e-003</b>	<b>0.0000</b>	<b>40.9774</b>	<b>40.9774</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>41.0021</b>

### 3.5 Building Construction - 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	0.2909	2.5354	1.9111	2.9200e-003		0.1629	0.1629		0.1531	0.1531	0.0000	258.0786	258.0786	0.0632	0.0000	259.4049
<b>Total</b>	<b>0.2909</b>	<b>2.5354</b>	<b>1.9111</b>	<b>2.9200e-003</b>		<b>0.1629</b>	<b>0.1629</b>		<b>0.1531</b>	<b>0.1531</b>	<b>0.0000</b>	<b>258.0786</b>	<b>258.0786</b>	<b>0.0632</b>	<b>0.0000</b>	<b>259.4049</b>

#### 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	0.0104	0.0736	0.1481	2.3000e-004	6.2200e-003	1.1200e-003	7.3300e-003	1.7800e-003	1.0300e-003	2.8000e-003	0.0000	19.8496	19.8496	1.5000e-004	0.0000	19.8528
Worker	9.2600e-003	0.0112	0.1172	3.1000e-004	0.0256	1.8000e-004	0.0258	6.8100e-003	1.7000e-004	6.9800e-003	0.0000	21.1278	21.1278	1.0300e-003	0.0000	21.1494
<b>Total</b>	<b>0.0196</b>	<b>0.0848</b>	<b>0.2654</b>	<b>5.4000e-004</b>	<b>0.0318</b>	<b>1.3000e-003</b>	<b>0.0331</b>	<b>8.5900e-003</b>	<b>1.2000e-003</b>	<b>9.7800e-003</b>	<b>0.0000</b>	<b>40.9774</b>	<b>40.9774</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>41.0021</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	0.2555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0852	0.0729	1.2000e-004		6.7600e-003	6.7600e-003		6.7600e-003	6.7600e-003	0.0000	9.9577	9.9577	1.0500e-003	0.0000	9.9798
<b>Total</b>	<b>0.2685</b>	<b>0.0852</b>	<b>0.0729</b>	<b>1.2000e-004</b>		<b>6.7600e-003</b>	<b>6.7600e-003</b>		<b>6.7600e-003</b>	<b>6.7600e-003</b>	<b>0.0000</b>	<b>9.9577</b>	<b>9.9577</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>9.9798</b>

#### 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	7.0000e-004	8.4000e-004	8.7500e-003	2.0000e-005	1.7200e-003	1.0000e-005	1.7300e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.4731	1.4731	7.0000e-005	0.0000	1.4747
<b>Total</b>	<b>7.0000e-004</b>	<b>8.4000e-004</b>	<b>8.7500e-003</b>	<b>2.0000e-005</b>	<b>1.7200e-003</b>	<b>1.0000e-005</b>	<b>1.7300e-003</b>	<b>4.6000e-004</b>	<b>1.0000e-005</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>1.4731</b>	<b>1.4731</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.4747</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	0.2555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0852	0.0729	1.2000e-004		6.7600e-003	6.7600e-003		6.7600e-003	6.7600e-003	0.0000	9.9577	9.9577	1.0500e-003	0.0000	9.9798
<b>Total</b>	<b>0.2685</b>	<b>0.0852</b>	<b>0.0729</b>	<b>1.2000e-004</b>		<b>6.7600e-003</b>	<b>6.7600e-003</b>		<b>6.7600e-003</b>	<b>6.7600e-003</b>	<b>0.0000</b>	<b>9.9577</b>	<b>9.9577</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>9.9798</b>

#### 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	7.0000e-004	8.4000e-004	8.7500e-003	2.0000e-005	1.7200e-003	1.0000e-005	1.7300e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.4731	1.4731	7.0000e-005	0.0000	1.4747
<b>Total</b>	<b>7.0000e-004</b>	<b>8.4000e-004</b>	<b>8.7500e-003</b>	<b>2.0000e-005</b>	<b>1.7200e-003</b>	<b>1.0000e-005</b>	<b>1.7300e-003</b>	<b>4.6000e-004</b>	<b>1.0000e-005</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>1.4731</b>	<b>1.4731</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.4747</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	0.7469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0340	0.2287	0.2114	3.4000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	29.1071	29.1071	2.7700e-003	0.0000	29.1652
<b>Total</b>	<b>0.7809</b>	<b>0.2287</b>	<b>0.2114</b>	<b>3.4000e-004</b>		<b>0.0172</b>	<b>0.0172</b>		<b>0.0172</b>	<b>0.0172</b>	<b>0.0000</b>	<b>29.1071</b>	<b>29.1071</b>	<b>2.7700e-003</b>	<b>0.0000</b>	<b>29.1652</b>

#### 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	1.8200e-003	2.2000e-003	0.0230	6.0000e-005	5.0200e-003	4.0000e-005	5.0600e-003	1.3400e-003	3.0000e-005	1.3700e-003	0.0000	4.1432	4.1432	2.0000e-004	0.0000	4.1474
<b>Total</b>	<b>1.8200e-003</b>	<b>2.2000e-003</b>	<b>0.0230</b>	<b>6.0000e-005</b>	<b>5.0200e-003</b>	<b>4.0000e-005</b>	<b>5.0600e-003</b>	<b>1.3400e-003</b>	<b>3.0000e-005</b>	<b>1.3700e-003</b>	<b>0.0000</b>	<b>4.1432</b>	<b>4.1432</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>4.1474</b>



### 3.6 Architectural Coating - 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					
Archit. Coating	0.7469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0340	0.2287	0.2114	3.4000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	29.1071	29.1071	2.7700e-003	0.0000	29.1652
<b>Total</b>	<b>0.7809</b>	<b>0.2287</b>	<b>0.2114</b>	<b>3.4000e-004</b>		<b>0.0172</b>	<b>0.0172</b>		<b>0.0172</b>	<b>0.0172</b>	<b>0.0000</b>	<b>29.1071</b>	<b>29.1071</b>	<b>2.7700e-003</b>	<b>0.0000</b>	<b>29.1652</b>

#### 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	1.8200e-003	2.2000e-003	0.0230	6.0000e-005	5.0200e-003	4.0000e-005	5.0600e-003	1.3400e-003	3.0000e-005	1.3700e-003	0.0000	4.1432	4.1432	2.0000e-004	0.0000	4.1474
<b>Total</b>	<b>1.8200e-003</b>	<b>2.2000e-003</b>	<b>0.0230</b>	<b>6.0000e-005</b>	<b>5.0200e-003</b>	<b>4.0000e-005</b>	<b>5.0600e-003</b>	<b>1.3400e-003</b>	<b>3.0000e-005</b>	<b>1.3700e-003</b>	<b>0.0000</b>	<b>4.1432</b>	<b>4.1432</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>4.1474</b>

### 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	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	0.3719	0.8434	3.9278	9.0200e-003	0.6308	0.0116	0.6424	0.1690	0.0107	0.1797	0.0000	665.9238	665.9238	0.0269	0.0000	666.4893
Unmitigated	0.3719	0.8434	3.9278	9.0200e-003	0.6308	0.0116	0.6424	0.1690	0.0107	0.1797	0.0000	665.9238	665.9238	0.0269	0.0000	666.4893

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	660.38	660.38	660.38	1,694,607	1,694,607
Total	660.38	660.38	660.38	1,694,607	1,694,607

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504263	0.068212	0.178684	0.146863	0.044671	0.006294	0.020946	0.016568	0.002299	0.002275	0.006187	0.000564	0.002174

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	138.9038	138.9038	8.4100e-003	1.7400e-003	139.6197
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	143.8428	143.8428	8.7100e-003	1.8000e-003	144.5841
NaturalGas Mitigated	0.0110	0.0942	0.0401	6.0000e-004	7.6200e-003	7.6200e-003	7.6200e-003	7.6200e-003	7.6200e-003	7.6200e-003	0.0000	109.1192	109.1192	2.0900e-003	2.0000e-003	109.7833
NaturalGas Unmitigated	0.0154	0.1319	0.0561	8.4000e-004	0.0107	0.0107	0.0107	0.0107	0.0107	0.0107	0.0000	152.7009	152.7009	2.9300e-003	2.8000e-003	153.6303

### 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	2.86151e+006	0.0154	0.1319	0.0561	8.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	152.7009	152.7009	2.9300e-003	2.8000e-003	153.6303
<b>Total</b>		<b>0.0154</b>	<b>0.1319</b>	<b>0.0561</b>	<b>8.4000e-004</b>		<b>0.0107</b>	<b>0.0107</b>		<b>0.0107</b>	<b>0.0107</b>	<b>0.0000</b>	<b>152.7009</b>	<b>152.7009</b>	<b>2.9300e-003</b>	<b>2.8000e-003</b>	<b>153.6303</b>

### 5.2 Energy by Land Use - NaturalGas

#### 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	2.04482e+006	0.0110	0.0942	0.0401	6.0000e-004		7.6200e-003	7.6200e-003		7.6200e-003	7.6200e-003	0.0000	109.1192	109.1192	2.0900e-003	2.0000e-003	109.7833
<b>Total</b>		<b>0.0110</b>	<b>0.0942</b>	<b>0.0401</b>	<b>6.0000e-004</b>		<b>7.6200e-003</b>	<b>7.6200e-003</b>		<b>7.6200e-003</b>	<b>7.6200e-003</b>	<b>0.0000</b>	<b>109.1192</b>	<b>109.1192</b>	<b>2.0900e-003</b>	<b>2.0000e-003</b>	<b>109.7833</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	661920	143.8428	8.7100e-003	1.8000e-003	144.5841
<b>Total</b>		<b>143.8428</b>	<b>8.7100e-003</b>	<b>1.8000e-003</b>	<b>144.5841</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	639192	138.9038	8.4100e-003	1.7400e-003	139.6197
<b>Total</b>		<b>138.9038</b>	<b>8.4100e-003</b>	<b>1.7400e-003</b>	<b>139.6197</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	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	0.7544	0.0107	0.9243	5.0000e-005		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	1.4993	1.4993	1.4900e-003	0.0000	1.5305
Unmitigated	0.7544	0.0107	0.9243	5.0000e-005		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	1.4993	1.4993	1.4900e-003	0.0000	1.5305

## 6.2 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	0.1002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0285	0.0107	0.9243	5.0000e-005		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	1.4993	1.4993	1.4900e-003	0.0000	1.5305	
<b>Total</b>	<b>0.7544</b>	<b>0.0107</b>	<b>0.9243</b>	<b>5.0000e-005</b>		<b>5.0400e-003</b>	<b>5.0400e-003</b>		<b>5.0400e-003</b>	<b>5.0400e-003</b>	<b>0.0000</b>	<b>1.4993</b>	<b>1.4993</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>1.5305</b>	

## 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	0.1002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0285	0.0107	0.9243	5.0000e-005		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	1.4993	1.4993	1.4900e-003	0.0000	1.5305
<b>Total</b>	<b>0.7544</b>	<b>0.0107</b>	<b>0.9243</b>	<b>5.0000e-005</b>		<b>5.0400e-003</b>	<b>5.0400e-003</b>		<b>5.0400e-003</b>	<b>5.0400e-003</b>	<b>0.0000</b>	<b>1.4993</b>	<b>1.4993</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>1.5305</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11.1108	7.6400e-003	4.5800e-003	12.6911
Unmitigated	11.1108	7.6100e-003	4.5700e-003	12.6889

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	5.79871 / 3.65571	11.1108	7.6100e-003	4.5700e-003	12.6889
<b>Total</b>		<b>11.1108</b>	<b>7.6100e-003</b>	<b>4.5700e-003</b>	<b>12.6889</b>

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	5.79871 / 3.65571	11.1108	7.6400e-003	4.5800e-003	12.6911
<b>Total</b>		<b>11.1108</b>	<b>7.6400e-003</b>	<b>4.5800e-003</b>	<b>12.6911</b>

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste



**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.3923	1.0279	0.0000	38.9772
Unmitigated	17.3923	1.0279	0.0000	38.9772

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	85.68	17.3923	1.0279	0.0000	38.9772
<b>Total</b>		<b>17.3923</b>	<b>1.0279</b>	<b>0.0000</b>	<b>38.9772</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	85.68	17.3923	1.0279	0.0000	38.9772
<b>Total</b>		<b>17.3923</b>	<b>1.0279</b>	<b>0.0000</b>	<b>38.9772</b>

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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**Bruceville Terrace**  
**Sacramento County, Winter**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	89.00	Dwelling Unit	9.68	160,200.00	238

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2018
<b>Utility Company</b>	Sacramento Municipal Utility District				
<b>CO2 Intensity (lb/MWhr)</b>	479.09	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - CO2 Intensity Factor updated per SMUD progress towards RPS

Land Use - Based on site plans

Construction Phase - Information from Applicant

Vehicle Trips - Traffic information provided by City

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	306.00
tblConstructionPhase	NumDays	230.00	306.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	PhaseEndDate	1/2/2020	11/14/2018
tblConstructionPhase	PhaseEndDate	8/1/2017	8/29/2017
tblConstructionPhase	PhaseEndDate	9/27/2017	8/29/2017
tblConstructionPhase	PhaseStartDate	11/1/2018	9/13/2017
tblConstructionPhase	PhaseStartDate	7/1/2017	7/31/2017
tblConstructionPhase	PhaseStartDate	8/30/2017	8/1/2017
tblGrading	AcresOfGrading	11.00	10.00
tblLandUse	LotAcreage	28.90	9.68
tblProjectCharacteristics	CO2IntensityFactor	590.31	479.09
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	10.08	7.42
tblVehicleTrips	SU_TR	8.77	7.42
tblVehicleTrips	WD_TR	9.57	7.42

## 2.0 Emissions Summary

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**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	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963
Energy	0.0846	0.7225	0.3074	4.6100e-003		0.0584	0.0584		0.0584	0.0584		922.3231	922.3231	0.0177	0.0169	927.9362
Mobile	2.1463	4.8990	23.6955	0.0485	3.5882	0.0642	3.6524	0.9585	0.0592	1.0177		3,949.3455	3,949.3455	0.1634		3,952.7760
<b>Total</b>	<b>6.4363</b>	<b>5.7073</b>	<b>31.3975</b>	<b>0.0535</b>	<b>3.5882</b>	<b>0.1630</b>	<b>3.7512</b>	<b>0.9585</b>	<b>0.1579</b>	<b>1.1164</b>	<b>0.0000</b>	<b>4,884.8898</b>	<b>4,884.8898</b>	<b>0.1941</b>	<b>0.0169</b>	<b>4,894.2086</b>

**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	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963
Energy	0.0604	0.5163	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417		659.0867	659.0867	0.0126	0.0121	663.0978
Mobile	2.1463	4.8990	23.6955	0.0485	3.5882	0.0642	3.6524	0.9585	0.0592	1.0177		3,949.3455	3,949.3455	0.1634		3,952.7760
<b>Total</b>	<b>6.4122</b>	<b>5.5011</b>	<b>31.3097</b>	<b>0.0522</b>	<b>3.5882</b>	<b>0.1463</b>	<b>3.7345</b>	<b>0.9585</b>	<b>0.1413</b>	<b>1.0998</b>	<b>0.0000</b>	<b>4,621.6534</b>	<b>4,621.6534</b>	<b>0.1891</b>	<b>0.0121</b>	<b>4,629.3701</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.37	3.61	0.28	2.45	0.00	10.23	0.44	0.00	10.56	1.49	0.00	5.39	5.39	2.60	28.56	5.41

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2017	6/30/2017	5	22	
2	Grading	Grading	7/31/2017	8/29/2017	5	22	
3	Paving	Paving	8/1/2017	8/29/2017	5	21	
4	Building Construction	Building Construction	8/30/2017	10/31/2018	5	306	
5	Architectural Coating	Architectural Coating	9/13/2017	11/14/2018	5	306	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 324,405; Residential Outdoor: 108,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

**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	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	32.00	10.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**



### 3.2 Site Preparation - 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
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>		<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

#### 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	0.0556	0.0719	0.6965	1.5400e-003	0.1369	9.7000e-004	0.1379	0.0363	9.0000e-004	0.0372		121.3376	121.3376	6.3400e-003		121.4708
<b>Total</b>	<b>0.0556</b>	<b>0.0719</b>	<b>0.6965</b>	<b>1.5400e-003</b>	<b>0.1369</b>	<b>9.7000e-004</b>	<b>0.1379</b>	<b>0.0363</b>	<b>9.0000e-004</b>	<b>0.0372</b>		<b>121.3376</b>	<b>121.3376</b>	<b>6.3400e-003</b>		<b>121.4708</b>

### 3.2 Site Preparation - 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
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>	<b>0.0000</b>	<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

#### 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	0.0556	0.0719	0.6965	1.5400e-003	0.1369	9.7000e-004	0.1379	0.0363	9.0000e-004	0.0372		121.3376	121.3376	6.3400e-003		121.4708
<b>Total</b>	<b>0.0556</b>	<b>0.0719</b>	<b>0.6965</b>	<b>1.5400e-003</b>	<b>0.1369</b>	<b>9.7000e-004</b>	<b>0.1379</b>	<b>0.0363</b>	<b>9.0000e-004</b>	<b>0.0372</b>		<b>121.3376</b>	<b>121.3376</b>	<b>6.3400e-003</b>		<b>121.4708</b>

### 3.3 Grading - 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					6.5041	0.0000	6.5041	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.5041</b>	<b>2.0388</b>	<b>8.5429</b>	<b>3.3623</b>	<b>1.8757</b>	<b>5.2380</b>		<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### 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	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.3 Grading - 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					6.5041	0.0000	6.5041	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.5041</b>	<b>2.0388</b>	<b>8.5429</b>	<b>3.3623</b>	<b>1.8757</b>	<b>5.2380</b>	<b>0.0000</b>	<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### 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	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.4 Paving - 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.9074</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>		<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### 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	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.4 Paving - 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.9074</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>	<b>0.0000</b>	<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### 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	0.0463	0.0599	0.5804	1.2800e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		101.1147	101.1147	5.2800e-003		101.2257
<b>Total</b>	<b>0.0463</b>	<b>0.0599</b>	<b>0.5804</b>	<b>1.2800e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>101.1147</b>	<b>101.1147</b>	<b>5.2800e-003</b>		<b>101.2257</b>

### 3.5 Building Construction - 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
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>		<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

#### 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	0.1359	0.7621	1.9073	2.0800e-003	0.0588	0.0113	0.0700	0.0167	0.0103	0.0271		203.4743	203.4743	1.5800e-003		203.5075
Worker	0.0988	0.1278	1.2382	2.7300e-003	0.2434	1.7300e-003	0.2452	0.0646	1.5900e-003	0.0662		215.7114	215.7114	0.0113		215.9481
<b>Total</b>	<b>0.2346</b>	<b>0.8899</b>	<b>3.1455</b>	<b>4.8100e-003</b>	<b>0.3022</b>	<b>0.0130</b>	<b>0.3152</b>	<b>0.0813</b>	<b>0.0119</b>	<b>0.0932</b>		<b>419.1857</b>	<b>419.1857</b>	<b>0.0129</b>		<b>419.4556</b>

### 3.5 Building Construction - 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
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>	<b>0.0000</b>	<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

#### 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	0.1359	0.7621	1.9073	2.0800e-003	0.0588	0.0113	0.0700	0.0167	0.0103	0.0271		203.4743	203.4743	1.5800e-003		203.5075
Worker	0.0988	0.1278	1.2382	2.7300e-003	0.2434	1.7300e-003	0.2452	0.0646	1.5900e-003	0.0662		215.7114	215.7114	0.0113		215.9481
<b>Total</b>	<b>0.2346</b>	<b>0.8899</b>	<b>3.1455</b>	<b>4.8100e-003</b>	<b>0.3022</b>	<b>0.0130</b>	<b>0.3152</b>	<b>0.0813</b>	<b>0.0119</b>	<b>0.0932</b>		<b>419.1857</b>	<b>419.1857</b>	<b>0.0129</b>		<b>419.4556</b>



### 3.5 Building Construction - 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
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.9390</b>	<b>2,609.9390</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### 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	0.1107	0.6865	1.7567	2.0700e-003	0.0587	0.0103	0.0691	0.0167	9.5100e-003	0.0262		199.7117	199.7117	1.5400e-003		199.7441
Worker	0.0878	0.1151	1.1078	2.7300e-003	0.2434	1.6900e-003	0.2451	0.0646	1.5700e-003	0.0661		207.5524	207.5524	0.0104		207.7703
<b>Total</b>	<b>0.1984</b>	<b>0.8015</b>	<b>2.8645</b>	<b>4.8000e-003</b>	<b>0.3022</b>	<b>0.0120</b>	<b>0.3142</b>	<b>0.0813</b>	<b>0.0111</b>	<b>0.0924</b>		<b>407.2641</b>	<b>407.2641</b>	<b>0.0119</b>		<b>407.5144</b>

### 3.5 Building Construction - 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
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>	<b>0.0000</b>	<b>2,609.9389</b>	<b>2,609.9389</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### 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	0.1107	0.6865	1.7567	2.0700e-003	0.0587	0.0103	0.0691	0.0167	9.5100e-003	0.0262		199.7117	199.7117	1.5400e-003		199.7441
Worker	0.0878	0.1151	1.1078	2.7300e-003	0.2434	1.6900e-003	0.2451	0.0646	1.5700e-003	0.0661		207.5524	207.5524	0.0104		207.7703
<b>Total</b>	<b>0.1984</b>	<b>0.8015</b>	<b>2.8645</b>	<b>4.8000e-003</b>	<b>0.3022</b>	<b>0.0120</b>	<b>0.3142</b>	<b>0.0813</b>	<b>0.0111</b>	<b>0.0924</b>		<b>407.2641</b>	<b>407.2641</b>	<b>0.0119</b>		<b>407.5144</b>

### 3.6 Architectural Coating - 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						
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721
<b>Total</b>	<b>6.8840</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>			<b>282.0721</b>

#### 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	0.0185	0.0240	0.2322	5.1000e-004	0.0456	3.2000e-004	0.0460	0.0121	3.0000e-004	0.0124		40.4459	40.4459	2.1100e-003			40.4903
<b>Total</b>	<b>0.0185</b>	<b>0.0240</b>	<b>0.2322</b>	<b>5.1000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>3.0000e-004</b>	<b>0.0124</b>		<b>40.4459</b>	<b>40.4459</b>	<b>2.1100e-003</b>			<b>40.4903</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>6.8840</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

#### 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	0.0185	0.0240	0.2322	5.1000e-004	0.0456	3.2000e-004	0.0460	0.0121	3.0000e-004	0.0124		40.4459	40.4459	2.1100e-003		40.4903
<b>Total</b>	<b>0.0185</b>	<b>0.0240</b>	<b>0.2322</b>	<b>5.1000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>3.0000e-004</b>	<b>0.0124</b>		<b>40.4459</b>	<b>40.4459</b>	<b>2.1100e-003</b>		<b>40.4903</b>

### 3.6 Architectural Coating - 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						
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267			282.0102
<b>Total</b>	<b>6.8503</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>			<b>282.0102</b>

#### 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	0.0165	0.0216	0.2077	5.1000e-004	0.0456	3.2000e-004	0.0460	0.0121	2.9000e-004	0.0124		38.9161	38.9161	1.9500e-003			38.9569
<b>Total</b>	<b>0.0165</b>	<b>0.0216</b>	<b>0.2077</b>	<b>5.1000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>2.9000e-004</b>	<b>0.0124</b>		<b>38.9161</b>	<b>38.9161</b>	<b>1.9500e-003</b>			<b>38.9569</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
<b>Total</b>	<b>6.8503</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.0102</b>

#### 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	0.0165	0.0216	0.2077	5.1000e-004	0.0456	3.2000e-004	0.0460	0.0121	2.9000e-004	0.0124		38.9161	38.9161	1.9500e-003		38.9569
<b>Total</b>	<b>0.0165</b>	<b>0.0216</b>	<b>0.2077</b>	<b>5.1000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>2.9000e-004</b>	<b>0.0124</b>		<b>38.9161</b>	<b>38.9161</b>	<b>1.9500e-003</b>		<b>38.9569</b>

### 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	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	2.1463	4.8990	23.6955	0.0485	3.5882	0.0642	3.6524	0.9585	0.0592	1.0177		3,949.3455	3,949.3455	0.1634		3,952.7760
Unmitigated	2.1463	4.8990	23.6955	0.0485	3.5882	0.0642	3.6524	0.9585	0.0592	1.0177		3,949.3455	3,949.3455	0.1634		3,952.7760

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	660.38	660.38	660.38	1,694,607	1,694,607
Total	660.38	660.38	660.38	1,694,607	1,694,607

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504263	0.068212	0.178684	0.146863	0.044671	0.006294	0.020946	0.016568	0.002299	0.002275	0.006187	0.000564	0.002174

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	0.0604	0.5163	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417		659.0867	659.0867	0.0126	0.0121	663.0978
NaturalGas Unmitigated	0.0846	0.7225	0.3074	4.6100e-003		0.0584	0.0584		0.0584	0.0584		922.3231	922.3231	0.0177	0.0169	927.9362

### 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	7839.75	0.0846	0.7225	0.3074	4.6100e-003		0.0584	0.0584		0.0584	0.0584		922.3231	922.3231	0.0177	0.0169	927.9362
<b>Total</b>		<b>0.0846</b>	<b>0.7225</b>	<b>0.3074</b>	<b>4.6100e-003</b>		<b>0.0584</b>	<b>0.0584</b>		<b>0.0584</b>	<b>0.0584</b>		<b>922.3231</b>	<b>922.3231</b>	<b>0.0177</b>	<b>0.0169</b>	<b>927.9362</b>



### 5.2 Energy by Land Use - NaturalGas

#### 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	5.60224	0.0604	0.5163	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417		659.0867	659.0867	0.0126	0.0121	663.0978
<b>Total</b>		<b>0.0604</b>	<b>0.5163</b>	<b>0.2197</b>	<b>3.3000e-003</b>		<b>0.0417</b>	<b>0.0417</b>		<b>0.0417</b>	<b>0.0417</b>		<b>659.0867</b>	<b>659.0867</b>	<b>0.0126</b>	<b>0.0121</b>	<b>663.0978</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	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	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963
Unmitigated	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963

## 6.2 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	0.5493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2279	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404		13.2212	13.2212	0.0131		13.4963
<b>Total</b>	<b>4.2055</b>	<b>0.0858</b>	<b>7.3945</b>	<b>3.9000e-004</b>		<b>0.0404</b>	<b>0.0404</b>		<b>0.0404</b>	<b>0.0404</b>	<b>0.0000</b>	<b>13.2212</b>	<b>13.2212</b>	<b>0.0131</b>	<b>0.0000</b>	<b>13.4963</b>

## 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	0.5493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2279	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404		13.2212	13.2212	0.0131		13.4963
<b>Total</b>	<b>4.2055</b>	<b>0.0858</b>	<b>7.3945</b>	<b>3.9000e-004</b>		<b>0.0404</b>	<b>0.0404</b>		<b>0.0404</b>	<b>0.0404</b>	<b>0.0000</b>	<b>13.2212</b>	<b>13.2212</b>	<b>0.0131</b>	<b>0.0000</b>	<b>13.4963</b>

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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**Bruceville Terrace**  
**Sacramento County, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	89.00	Dwelling Unit	9.68	160,200.00	238

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2018
<b>Utility Company</b>	Sacramento Municipal Utility District				
<b>CO2 Intensity (lb/MWhr)</b>	479.09	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - CO2 Intensity Factor updated per SMUD progress towards RPS

Land Use - Based on site plans

Construction Phase - Information from Applicant

Vehicle Trips - Traffic information provided by City

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	306.00
tblConstructionPhase	NumDays	230.00	306.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	PhaseEndDate	1/2/2020	11/14/2018
tblConstructionPhase	PhaseEndDate	8/1/2017	8/29/2017
tblConstructionPhase	PhaseEndDate	9/27/2017	8/29/2017
tblConstructionPhase	PhaseStartDate	11/1/2018	9/13/2017
tblConstructionPhase	PhaseStartDate	7/1/2017	7/31/2017
tblConstructionPhase	PhaseStartDate	8/30/2017	8/1/2017
tblGrading	AcresOfGrading	11.00	10.00
tblLandUse	LotAcreage	28.90	9.68
tblProjectCharacteristics	CO2IntensityFactor	590.31	479.09
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	10.08	7.42
tblVehicleTrips	SU_TR	8.77	7.42
tblVehicleTrips	WD_TR	9.57	7.42

## 2.0 Emissions Summary

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**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	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963
Energy	0.0846	0.7225	0.3074	4.6100e-003		0.0584	0.0584		0.0584	0.0584		922.3231	922.3231	0.0177	0.0169	927.9362
Mobile	2.3167	4.3002	22.8958	0.0538	3.5882	0.0638	3.6520	0.9585	0.0588	1.0173		4,360.7047	4,360.7047	0.1632		4,364.1325
<b>Total</b>	<b>6.6068</b>	<b>5.1085</b>	<b>30.5978</b>	<b>0.0588</b>	<b>3.5882</b>	<b>0.1626</b>	<b>3.7508</b>	<b>0.9585</b>	<b>0.1576</b>	<b>1.1161</b>	<b>0.0000</b>	<b>5,296.2490</b>	<b>5,296.2490</b>	<b>0.1940</b>	<b>0.0169</b>	<b>5,305.5651</b>

**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	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963
Energy	0.0604	0.5163	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417		659.0867	659.0867	0.0126	0.0121	663.0978
Mobile	2.3167	4.3002	22.8958	0.0538	3.5882	0.0638	3.6520	0.9585	0.0588	1.0173		4,360.7047	4,360.7047	0.1632		4,364.1325
<b>Total</b>	<b>6.5827</b>	<b>4.9023</b>	<b>30.5101</b>	<b>0.0575</b>	<b>3.5882</b>	<b>0.1459</b>	<b>3.7341</b>	<b>0.9585</b>	<b>0.1409</b>	<b>1.0994</b>	<b>0.0000</b>	<b>5,033.0126</b>	<b>5,033.0126</b>	<b>0.1890</b>	<b>0.0121</b>	<b>5,040.7266</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.37	4.04	0.29	2.23	0.00	10.25	0.44	0.00	10.58	1.49	0.00	4.97	4.97	2.60	28.56	4.99

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2017	6/30/2017	5	22	
2	Grading	Grading	7/31/2017	8/29/2017	5	22	
3	Paving	Paving	8/1/2017	8/29/2017	5	21	
4	Building Construction	Building Construction	8/30/2017	10/31/2018	5	306	
5	Architectural Coating	Architectural Coating	9/13/2017	11/14/2018	5	306	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 324,405; Residential Outdoor: 108,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment



Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

**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	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	32.00	10.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

### 3.2 Site Preparation - 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
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>		<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

#### 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	0.0643	0.0580	0.7776	1.7500e-003	0.1369	9.7000e-004	0.1379	0.0363	9.0000e-004	0.0372		138.2218	138.2218	6.3400e-003		138.3550
<b>Total</b>	<b>0.0643</b>	<b>0.0580</b>	<b>0.7776</b>	<b>1.7500e-003</b>	<b>0.1369</b>	<b>9.7000e-004</b>	<b>0.1379</b>	<b>0.0363</b>	<b>9.0000e-004</b>	<b>0.0372</b>		<b>138.2218</b>	<b>138.2218</b>	<b>6.3400e-003</b>		<b>138.3550</b>

### 3.2 Site Preparation - 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
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>18.0663</b>	<b>2.7542</b>	<b>20.8205</b>	<b>9.9307</b>	<b>2.5339</b>	<b>12.4646</b>	<b>0.0000</b>	<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

#### 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	0.0643	0.0580	0.7776	1.7500e-003	0.1369	9.7000e-004	0.1379	0.0363	9.0000e-004	0.0372		138.2218	138.2218	6.3400e-003		138.3550
<b>Total</b>	<b>0.0643</b>	<b>0.0580</b>	<b>0.7776</b>	<b>1.7500e-003</b>	<b>0.1369</b>	<b>9.7000e-004</b>	<b>0.1379</b>	<b>0.0363</b>	<b>9.0000e-004</b>	<b>0.0372</b>		<b>138.2218</b>	<b>138.2218</b>	<b>6.3400e-003</b>		<b>138.3550</b>

### 3.3 Grading - 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					6.5041	0.0000	6.5041	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.5041</b>	<b>2.0388</b>	<b>8.5429</b>	<b>3.3623</b>	<b>1.8757</b>	<b>5.2380</b>		<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### 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	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.3 Grading - 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					6.5041	0.0000	6.5041	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
<b>Total</b>	<b>3.4555</b>	<b>35.9825</b>	<b>25.3812</b>	<b>0.0297</b>	<b>6.5041</b>	<b>2.0388</b>	<b>8.5429</b>	<b>3.3623</b>	<b>1.8757</b>	<b>5.2380</b>	<b>0.0000</b>	<b>3,043.6667</b>	<b>3,043.6667</b>	<b>0.9326</b>		<b>3,063.2507</b>

#### 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	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.4 Paving - 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.9074</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>		<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### 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	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.4 Paving - 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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.9074</b>	<b>20.2964</b>	<b>14.7270</b>	<b>0.0223</b>		<b>1.1384</b>	<b>1.1384</b>		<b>1.0473</b>	<b>1.0473</b>	<b>0.0000</b>	<b>2,281.0588</b>	<b>2,281.0588</b>	<b>0.6989</b>		<b>2,295.7360</b>

#### 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	0.0536	0.0483	0.6480	1.4600e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		115.1849	115.1849	5.2800e-003		115.2959
<b>Total</b>	<b>0.0536</b>	<b>0.0483</b>	<b>0.6480</b>	<b>1.4600e-003</b>	<b>0.1141</b>	<b>8.1000e-004</b>	<b>0.1149</b>	<b>0.0303</b>	<b>7.5000e-004</b>	<b>0.0310</b>		<b>115.1849</b>	<b>115.1849</b>	<b>5.2800e-003</b>		<b>115.2959</b>

### 3.5 Building Construction - 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
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>		<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

#### 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	0.1042	0.7113	1.2619	2.0900e-003	0.0588	0.0111	0.0699	0.0167	0.0102	0.0269		205.2699	205.2699	1.5300e-003		205.3020
Worker	0.1143	0.1031	1.3824	3.1100e-003	0.2434	1.7300e-003	0.2452	0.0646	1.5900e-003	0.0662		245.7277	245.7277	0.0113		245.9645
<b>Total</b>	<b>0.2185</b>	<b>0.8144</b>	<b>2.6444</b>	<b>5.2000e-003</b>	<b>0.3022</b>	<b>0.0128</b>	<b>0.3150</b>	<b>0.0813</b>	<b>0.0118</b>	<b>0.0931</b>		<b>450.9976</b>	<b>450.9976</b>	<b>0.0128</b>		<b>451.2665</b>



### 3.5 Building Construction - 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
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>	<b>0.0000</b>	<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

#### 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	0.1042	0.7113	1.2619	2.0900e-003	0.0588	0.0111	0.0699	0.0167	0.0102	0.0269		205.2699	205.2699	1.5300e-003		205.3020
Worker	0.1143	0.1031	1.3824	3.1100e-003	0.2434	1.7300e-003	0.2452	0.0646	1.5900e-003	0.0662		245.7277	245.7277	0.0113		245.9645
<b>Total</b>	<b>0.2185</b>	<b>0.8144</b>	<b>2.6444</b>	<b>5.2000e-003</b>	<b>0.3022</b>	<b>0.0128</b>	<b>0.3150</b>	<b>0.0813</b>	<b>0.0118</b>	<b>0.0931</b>		<b>450.9976</b>	<b>450.9976</b>	<b>0.0128</b>		<b>451.2665</b>

### 3.5 Building Construction - 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
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.9390</b>	<b>2,609.9390</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### 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	0.0866	0.6412	1.1012	2.0800e-003	0.0587	0.0102	0.0689	0.0167	9.3700e-003	0.0261		201.4812	201.4812	1.4900e-003		201.5126
Worker	0.1026	0.0929	1.2469	3.1100e-003	0.2434	1.6900e-003	0.2451	0.0646	1.5700e-003	0.0661		236.4560	236.4560	0.0104		236.6738
<b>Total</b>	<b>0.1892</b>	<b>0.7341</b>	<b>2.3481</b>	<b>5.1900e-003</b>	<b>0.3022</b>	<b>0.0119</b>	<b>0.3141</b>	<b>0.0813</b>	<b>0.0109</b>	<b>0.0922</b>		<b>437.9372</b>	<b>437.9372</b>	<b>0.0119</b>		<b>438.1864</b>

### 3.5 Building Construction - 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
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>	<b>0.0000</b>	<b>2,609.9389</b>	<b>2,609.9389</b>	<b>0.6387</b>		<b>2,623.3517</b>

#### 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	0.0866	0.6412	1.1012	2.0800e-003	0.0587	0.0102	0.0689	0.0167	9.3700e-003	0.0261		201.4812	201.4812	1.4900e-003		201.5126
Worker	0.1026	0.0929	1.2469	3.1100e-003	0.2434	1.6900e-003	0.2451	0.0646	1.5700e-003	0.0661		236.4560	236.4560	0.0104		236.6738
<b>Total</b>	<b>0.1892</b>	<b>0.7341</b>	<b>2.3481</b>	<b>5.1900e-003</b>	<b>0.3022</b>	<b>0.0119</b>	<b>0.3141</b>	<b>0.0813</b>	<b>0.0109</b>	<b>0.0922</b>		<b>437.9372</b>	<b>437.9372</b>	<b>0.0119</b>		<b>438.1864</b>

### 3.6 Architectural Coating - 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						
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721
<b>Total</b>	<b>6.8840</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>			<b>282.0721</b>

#### 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	0.0214	0.0193	0.2592	5.8000e-004	0.0456	3.2000e-004	0.0460	0.0121	3.0000e-004	0.0124		46.0740	46.0740	2.1100e-003			46.1183
<b>Total</b>	<b>0.0214</b>	<b>0.0193</b>	<b>0.2592</b>	<b>5.8000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>3.0000e-004</b>	<b>0.0124</b>		<b>46.0740</b>	<b>46.0740</b>	<b>2.1100e-003</b>			<b>46.1183</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>6.8840</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

#### 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	0.0214	0.0193	0.2592	5.8000e-004	0.0456	3.2000e-004	0.0460	0.0121	3.0000e-004	0.0124		46.0740	46.0740	2.1100e-003		46.1183
<b>Total</b>	<b>0.0214</b>	<b>0.0193</b>	<b>0.2592</b>	<b>5.8000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>3.0000e-004</b>	<b>0.0124</b>		<b>46.0740</b>	<b>46.0740</b>	<b>2.1100e-003</b>		<b>46.1183</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
<b>Total</b>	<b>6.8503</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.0102</b>

#### 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	0.0192	0.0174	0.2338	5.8000e-004	0.0456	3.2000e-004	0.0460	0.0121	2.9000e-004	0.0124		44.3355	44.3355	1.9500e-003		44.3763
<b>Total</b>	<b>0.0192</b>	<b>0.0174</b>	<b>0.2338</b>	<b>5.8000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>2.9000e-004</b>	<b>0.0124</b>		<b>44.3355</b>	<b>44.3355</b>	<b>1.9500e-003</b>		<b>44.3763</b>

### 3.6 Architectural Coating - 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					
Archit. Coating	6.5517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
<b>Total</b>	<b>6.8503</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.0102</b>

#### 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	0.0192	0.0174	0.2338	5.8000e-004	0.0456	3.2000e-004	0.0460	0.0121	2.9000e-004	0.0124		44.3355	44.3355	1.9500e-003		44.3763
<b>Total</b>	<b>0.0192</b>	<b>0.0174</b>	<b>0.2338</b>	<b>5.8000e-004</b>	<b>0.0456</b>	<b>3.2000e-004</b>	<b>0.0460</b>	<b>0.0121</b>	<b>2.9000e-004</b>	<b>0.0124</b>		<b>44.3355</b>	<b>44.3355</b>	<b>1.9500e-003</b>		<b>44.3763</b>

### 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	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	2.3167	4.3002	22.8958	0.0538	3.5882	0.0638	3.6520	0.9585	0.0588	1.0173		4,360.7047	4,360.7047	0.1632		4,364.1325
Unmitigated	2.3167	4.3002	22.8958	0.0538	3.5882	0.0638	3.6520	0.9585	0.0588	1.0173		4,360.7047	4,360.7047	0.1632		4,364.1325

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	660.38	660.38	660.38	1,694,607	1,694,607
Total	660.38	660.38	660.38	1,694,607	1,694,607

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.504263	0.068212	0.178684	0.146863	0.044671	0.006294	0.020946	0.016568	0.002299	0.002275	0.006187	0.000564	0.002174

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N



### 5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	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	0.0604	0.5163	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417		659.0867	659.0867	0.0126	0.0121	663.0978
NaturalGas Unmitigated	0.0846	0.7225	0.3074	4.6100e-003		0.0584	0.0584		0.0584	0.0584		922.3231	922.3231	0.0177	0.0169	927.9362

### 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	7839.75	0.0846	0.7225	0.3074	4.6100e-003		0.0584	0.0584		0.0584	0.0584		922.3231	922.3231	0.0177	0.0169	927.9362
<b>Total</b>		<b>0.0846</b>	<b>0.7225</b>	<b>0.3074</b>	<b>4.6100e-003</b>		<b>0.0584</b>	<b>0.0584</b>		<b>0.0584</b>	<b>0.0584</b>		<b>922.3231</b>	<b>922.3231</b>	<b>0.0177</b>	<b>0.0169</b>	<b>927.9362</b>

### 5.2 Energy by Land Use - NaturalGas

#### 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	5.60224	0.0604	0.5163	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417		659.0867	659.0867	0.0126	0.0121	663.0978
<b>Total</b>		<b>0.0604</b>	<b>0.5163</b>	<b>0.2197</b>	<b>3.3000e-003</b>		<b>0.0417</b>	<b>0.0417</b>		<b>0.0417</b>	<b>0.0417</b>		<b>659.0867</b>	<b>659.0867</b>	<b>0.0126</b>	<b>0.0121</b>	<b>663.0978</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	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	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963
Unmitigated	4.2055	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404	0.0000	13.2212	13.2212	0.0131	0.0000	13.4963

## 6.2 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	0.5493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2279	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404		13.2212	13.2212	0.0131		13.4963
<b>Total</b>	<b>4.2055</b>	<b>0.0858</b>	<b>7.3945</b>	<b>3.9000e-004</b>		<b>0.0404</b>	<b>0.0404</b>		<b>0.0404</b>	<b>0.0404</b>	<b>0.0000</b>	<b>13.2212</b>	<b>13.2212</b>	<b>0.0131</b>	<b>0.0000</b>	<b>13.4963</b>

## 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	0.5493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2279	0.0858	7.3945	3.9000e-004		0.0404	0.0404		0.0404	0.0404		13.2212	13.2212	0.0131		13.4963
<b>Total</b>	<b>4.2055</b>	<b>0.0858</b>	<b>7.3945</b>	<b>3.9000e-004</b>		<b>0.0404</b>	<b>0.0404</b>		<b>0.0404</b>	<b>0.0404</b>	<b>0.0000</b>	<b>13.2212</b>	<b>13.2212</b>	<b>0.0131</b>	<b>0.0000</b>	<b>13.4963</b>

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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**Bruceville Terrace**  
**Sacramento County, Mitigation Report**

**Construction Mitigation Summary**

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**OFFROAD Equipment Mitigation**

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	10	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	4.70000E-002	3.13870E-001	2.84230E-001	4.50000E-004	2.39200E-002	2.39200E-002	0.00000E+000	3.90648E+001	3.90648E+001	3.82000E-003	0.00000E+000	3.91450E+001
Cranes	7.82000E-002	9.32630E-001	3.41430E-001	7.60000E-004	4.07500E-002	3.74900E-002	0.00000E+000	6.93086E+001	6.93086E+001	2.14800E-002	0.00000E+000	6.97596E+001
Excavators	3.98000E-003	4.41900E-002	3.76300E-002	6.00000E-005	2.17000E-003	2.00000E-003	0.00000E+000	5.40127E+000	5.40127E+000	1.65000E-003	0.00000E+000	5.43602E+000
Forklifts	8.61000E-002	7.55950E-001	5.60950E-001	7.00000E-004	6.09800E-002	5.61000E-002	0.00000E+000	6.43323E+001	6.43323E+001	1.99400E-002	0.00000E+000	6.47509E+001
Generator Sets	8.01700E-002	6.44780E-001	5.74480E-001	1.01000E-003	4.17800E-002	4.17800E-002	0.00000E+000	8.64767E+001	8.64767E+001	6.46000E-003	0.00000E+000	8.66124E+001
Graders	1.04800E-002	1.06050E-001	5.32200E-002	7.00000E-005	5.96000E-003	5.48000E-003	0.00000E+000	6.36264E+000	6.36264E+000	1.95000E-003	0.00000E+000	6.40358E+000
Pavers	7.56000E-003	8.46500E-002	5.95600E-002	9.00000E-005	4.17000E-003	3.83000E-003	0.00000E+000	8.80178E+000	8.80178E+000	2.70000E-003	0.00000E+000	8.85841E+000
Paving Equipment	5.94000E-003	6.75400E-002	5.32700E-002	8.00000E-005	3.37000E-003	3.10000E-003	0.00000E+000	7.81755E+000	7.81755E+000	2.40000E-003	0.00000E+000	7.86785E+000
Rollers	6.53000E-003	6.09300E-002	4.18100E-002	6.00000E-005	4.41000E-003	4.06000E-003	0.00000E+000	5.10876E+000	5.10876E+000	1.57000E-003	0.00000E+000	5.14163E+000
Rubber Tired Dozers	5.23800E-002	5.80480E-001	4.37380E-001	3.90000E-004	2.69700E-002	2.48100E-002	0.00000E+000	3.63240E+001	3.63240E+001	1.11300E-002	0.00000E+000	3.65578E+001
Tractors/Loaders/Backhoes	1.37120E-001	1.33837E+000	1.12941E+000	1.49000E-003	9.73700E-002	8.95800E-002	0.00000E+000	1.36766E+002	1.36766E+002	4.23000E-002	0.00000E+000	1.37655E+002
Welders	7.01900E-002	2.59920E-001	2.86790E-001	3.90000E-004	1.80000E-002	1.80000E-002	0.00000E+000	2.87978E+001	2.87978E+001	5.73000E-003	0.00000E+000	2.89180E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	4.70000E-002	3.13870E-001	2.84230E-001	4.50000E-004	2.39200E-002	2.39200E-002	0.00000E+000	3.90648E+001	3.90648E+001	3.82000E-003	0.00000E+000	3.91450E+001
Cranes	7.82000E-002	9.32630E-001	3.41430E-001	7.60000E-004	4.07500E-002	3.74900E-002	0.00000E+000	6.93085E+001	6.93085E+001	2.14800E-002	0.00000E+000	6.97595E+001
Excavators	3.98000E-003	4.41900E-002	3.76300E-002	6.00000E-005	2.17000E-003	2.00000E-003	0.00000E+000	5.40126E+000	5.40126E+000	1.65000E-003	0.00000E+000	5.43602E+000
Forklifts	8.61000E-002	7.55940E-001	5.60950E-001	7.00000E-004	6.09800E-002	5.61000E-002	0.00000E+000	6.43322E+001	6.43322E+001	1.99400E-002	0.00000E+000	6.47508E+001
Generator Sets	8.01700E-002	6.44780E-001	5.74480E-001	1.01000E-003	4.17800E-002	4.17800E-002	0.00000E+000	8.64766E+001	8.64766E+001	6.46000E-003	0.00000E+000	8.66123E+001
Graders	1.04800E-002	1.06050E-001	5.32200E-002	7.00000E-005	5.96000E-003	5.48000E-003	0.00000E+000	6.36264E+000	6.36264E+000	1.95000E-003	0.00000E+000	6.40358E+000
Pavers	7.56000E-003	8.46500E-002	5.95600E-002	9.00000E-005	4.17000E-003	3.83000E-003	0.00000E+000	8.80177E+000	8.80177E+000	2.70000E-003	0.00000E+000	8.85840E+000
Paving Equipment	5.94000E-003	6.75400E-002	5.32700E-002	8.00000E-005	3.37000E-003	3.10000E-003	0.00000E+000	7.81754E+000	7.81754E+000	2.40000E-003	0.00000E+000	7.86784E+000
Rollers	6.53000E-003	6.09300E-002	4.18100E-002	6.00000E-005	4.41000E-003	4.06000E-003	0.00000E+000	5.10875E+000	5.10875E+000	1.57000E-003	0.00000E+000	5.14162E+000
Rubber Tired Dozers	5.23800E-002	5.80480E-001	4.37380E-001	3.90000E-004	2.69700E-002	2.48100E-002	0.00000E+000	3.63240E+001	3.63240E+001	1.11300E-002	0.00000E+000	3.65577E+001
Tractors/Loaders/Balckhoes	1.37120E-001	1.33837E+000	1.12941E+000	1.49000E-003	9.73700E-002	8.95800E-002	0.00000E+000	1.36766E+002	1.36766E+002	4.23000E-002	0.00000E+000	1.37655E+002
Welders	7.01900E-002	2.59920E-001	2.86790E-001	3.90000E-004	1.80000E-002	1.80000E-002	0.00000E+000	2.87977E+001	2.87977E+001	5.73000E-003	0.00000E+000	2.89180E+001



Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.02394E-006	1.02394E-006	0.00000E+000	0.00000E+000	1.02184E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.15426E-006	1.15426E-006	0.00000E+000	0.00000E+000	1.29015E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.85142E-006	1.85142E-006	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	0.00000E+000	1.32284E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.08810E-006	1.08810E-006	0.00000E+000	0.00000E+000	1.23550E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.15638E-006	1.15638E-006	0.00000E+000	0.00000E+000	1.15457E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13613E-006	1.13613E-006	0.00000E+000	0.00000E+000	1.12887E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.27917E-006	1.27917E-006	0.00000E+000	0.00000E+000	1.27100E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.95742E-006	1.95742E-006	0.00000E+000	0.00000E+000	1.94491E-006
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10120E-006	1.10120E-006	0.00000E+000	0.00000E+000	1.36770E-006
Tractors/Loaders/Balckhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.16988E-006	1.16988E-006	0.00000E+000	0.00000E+000	1.23497E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.38900E-006	1.38900E-006	0.00000E+000	0.00000E+000	1.03742E-006

**Fugitive Dust Mitigation**

Yes/No Mitigation Measure Mitigation Input Mitigation Input Mitigation Input

No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction		
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)		

No	Clean Paved Road	% PM Reduction	0.00				
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Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.04	0.01	0.04	0.01	0.00	0.00
Grading	Fugitive Dust	0.07	0.04	0.07	0.04	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.20	0.11	0.20	0.11	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Percent Reduction Summary**

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.43	3.43	3.44	3.33	3.43
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	28.52	28.54	28.55	28.57	28.52	28.52	0.00	28.54	28.54	28.67	28.57	28.54
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.39	-0.22	-0.02
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network			
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.00		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.00		

**Area Mitigation**

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

**Energy Mitigation Measures**

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	35.00	
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

**Water Mitigation Measures**

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

**Solid Waste Mitigation**

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	