

# KLOTZ RANCH APARTMENTS PROJECT

Draft Environmental Impact Report  
SCH # 2020039059

Prepared for  
City of Sacramento  
Community Development Department

October 2020





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# SUMMARY

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## Klotz Ranch Apartments Project Environmental Impact Report

### Introduction

This Environmental Impact Report (EIR) is intended to inform the public and decision-makers about the environmental consequences of the Klotz Ranch Apartments project. The EIR considers the environmental impacts of the proposed project as well as the additive effects of growth throughout the Sacramento area and the region. These latter impacts are referred to as cumulative impacts. The EIR has been prepared by the City of Sacramento pursuant to the requirements of the California Environmental Quality Act (CEQA).

The EIR describes the existing environmental conditions in the vicinity of the project site, located south of Pocket Road between Interstate 5 and Freeport Boulevard, analyzes potential impacts on environmental resources due to the proposed project, and identifies mitigation measures that could avoid or reduce the magnitude of those significant impacts. The environmental resource topics evaluated in the EIR include land use, population and employment; aesthetics, light and glare; air quality; cultural resources; global climate change; noise; and transportation, as well as potential for growth and urban decay effects. The EIR evaluates a range of alternatives for the proposed project.

This Draft EIR is subject to review and comment by the public, as well as responsible agencies and other interested jurisdictions, agencies, and organizations for a minimum of forty-five (45) days. The public may comment on the EIR by submitting written comments at any time during the public review period. The City will complete a Final EIR, which will include the written comments received regarding the Draft EIR, responses to substantial environmental issues raised in the comments, and any changes to the Draft EIR that are required by the responses to written comments, or that are initiated by staff.

Upon publication, the environmental documents described above are available online at <http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>, and may be viewed in printed form at the City's Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811. Hearings regarding the project will occur at various times, and the City posts agendas at kiosks at City Hall and on its website at [www.cityofsacramento.org](http://www.cityofsacramento.org).

City staff responsible for the drafting of the environmental document may be contacted with questions:

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The Final EIR will be submitted to the City of Sacramento Planning and Design Commission (PDC) for their consideration. As part of the project review and consideration, the PDC, prior to approving the project, is required under CEQA to certify that the EIR has been prepared in compliance with CEQA, and would also consider adoption of Findings of Fact pertaining to this EIR, specific mitigation measures, a Statement of Overriding Considerations relating to any identified significant and unavoidable effects, and a Mitigation Monitoring Plan.

## **Project Description**

### **Project Location**

The project site is located in Sacramento, California, approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe. Sacramento is a major transportation hub, the point of intersection of transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada mountains and Nevada to the east, Los Angeles to the south, and Oregon and the Pacific Northwest to the north. The City is bisected by major freeways including Interstate 5 (I-5) that traverses the state from north to south; Interstate 80 (I-80), which provides an east-west connection between San Francisco and Reno; and U.S. Highway 50 which provides an east-west connection between Sacramento and South Lake Tahoe. Two railroads, the Union Pacific Railroad (UPRR) and the BNSF Railway, transect Sacramento.

The project site is 12.7 acres in size and is generally located south of Pocket Road between I-5 and Freeport Boulevard. The project site is bounded by three commercial buildings adjacent to Pocket Road to the north, and vacant parcels to the east, south, and west. In addition, I-5 is adjacent to the vacant area to the west and Freeport Boulevard is adjacent to the vacant area to the east. The project site was previously graded and is currently vacant with the exception of a telecommunications facility (cell phone tower), which is located in the southeastern corner of the site, and a gravel road providing access to the cell phone tower, which runs along the northern and eastern boundaries of the site.

Primary access to the project site is provided by Klotz Ranch Court, which intersects with Pocket Road located approximately 300 feet to the north. Pocket Road runs east/west and provides access to I-5 and connectivity between residential neighborhoods and retail uses in the Meadowview Community area to the east and the Pocket Community area to the west.

## Proposed Project

The proposed project would develop a multifamily residential project on the approximately 12.7-acre site. The 266-unit apartment complex would consist of six apartment buildings and recreation/amenity areas.

### Apartment Buildings

The proposed project includes 266 rental apartment units and would have an overall density of approximately 21 dwelling units per acre. The apartment units would range from 506 square feet to 1,251 square feet in size, with a mix of 128 studio/one-bedroom units, 120 two-bedroom units, and 18 three-bedroom units (see **Table S-1**).

**TABLE S-1**  
**RESIDENTIAL UNIT MIX SUMMARY**

| Housing Type       | Number of Units | Unit Size (sf) | Mix (Percent) |
|--------------------|-----------------|----------------|---------------|
| Studio/One-Bedroom | 128             | 506 to 676     | 48            |
| Two-Bedroom        | 120             | 746 to 971     | 45            |
| Three-Bedroom      | 18              | 1,251          | 7             |
| <b>Total</b>       | <b>266</b>      | <b>--</b>      | <b>100</b>    |

SOURCE: The Spanos Corporation, 2019.

The apartment units would be located in six residential buildings – four buildings with 42 units each (Building Type 1) and two buildings with 49 units each (Building Type 2). Building Type 1 structures would provide 45,706 square feet of building space each and include 20 one-bedroom units, 19 two-bedroom units, and three three-bedroom units while Building Type 2 structures would provide 54,554 square feet of building space each and include 24 one-bedroom units, 22 two-bedroom units, and three three-bedroom units. Each of the structures would be 42 feet tall with architectural details (i.e., parapets) reaching a height of 48 feet.

### Recreation/Amenity Areas

The proposed project would include 32,680 square feet of amenity space, which would include clubhouse/pool area and outdoor amenities, as further described below.

#### **Clubhouse/Pool Area**

The clubhouse/pool area would be located on the northwestern portion of the site, northwest of Building 1. The clubhouse would include a leasing office, a fitness and yoga studio, a great room with kitchen and sitting area, mail package room, game room, cyber/conference center, and an outdoor amenity deck; the structure would be approximately 32 feet in height. The entry to the pool area would be from the clubhouse area. Amenities within the pool area would include a pool, spa, outdoor kitchen, television and fire place lounges, hammock area, yoga lawn, two bocce ball courts, and a passive recreation lawn lounge area.

## ***Outdoor Amenities***

Other amenities on the project site include a tot lot on the northeastern corner of the site and a dog run and sports court on the southwest corner of the site.

## **Parking**

Parking for the proposed project would be provided in covered carports, private garages, driveways, and surface lots adjacent to the apartment buildings. The proposed project would be subject to the parking requirements as described in the City of Sacramento Planning and Development Code. A total of 525 parking spaces would be provided, including 353 parking spaces for residents and 172 parking spaces for visitors, providing more spaces than the minimum 1-space-per-unit required. A total of 165 bicycle parking spaces would also be provided consisting of 28 exterior spaces and 137 interior spaces. Bicycle racks and interior storage would be provided for each building. In addition, bicycle racks and a bicycle locker would be provided in front of the clubhouse.

## **Circulation**

### ***Vehicle and Emergency Access***

The main vehicle access point would be from Klotz Ranch Drive, which provides access to I-5 via Pocket Road. An emergency vehicle access point from the parking lot of the adjacent car wash would also be provided in the northeastern corner of the project site. The proposed project would not alter off-site vehicular circulation patterns in the project area. However, the proposed project would realign the existing gravel road that provides access to the cell phone tower located in the southeastern corner of the site; gated access to the tower would be provided in the southwestern corner of the southern parking lot.

### ***Pedestrian Access***

Pedestrian paths would be provided on-site that lead to building entrance areas. These paths would connect to the existing sidewalks on Klotz Ranch Court.

The Del Rio Trail is a recently approved north-south trail located east of the project site. Construction of the trail will result in limited removal of existing railroad track only where necessary for safety, particularly at major arterial intersections or where the skew of the existing track against the alignment of the proposed multi-use trail will cause a safety hazard. Where it exists, the majority of the track will be retained, including its metal rails, wood ties, and gravel ballast. At locations where the trail crosses the existing railroad tracks, the rails will be encased, but visible, in concrete. Landscaping, such as drought-tolerant and native plantings, as well as park-like fixtures such as benches, and trash receptacles will be placed along the trail. Overgrown and excess vegetation will also be removed where necessary for safety.

The proposed project site would connect easterly to the Del Rio Trail, providing additional pedestrian and bicycle access in the neighborhood. As part of the proposed project, a gate along the eastern property boundary would be provided to allow access to the future Del Rio Trail. Such access, including landscape and hardscape improvements, will be provided by the City of Sacramento consistent with the specific design features described in the Del Rio Trail EIR.



## **Utilities**

### ***Water***

The City of Sacramento would provide water service to the proposed project via an existing 8-inch water supply main in Klotz Ranch Court. No off-site improvements to the existing water mains are needed to serve the proposed project.

### ***Wastewater***

Wastewater generated on the project site would be collected by the City of Sacramento's separate sewer system via an 8-inch main located in Klotz Ranch Court and conveyed to Sacramento Regional County Sanitation District's Wastewater Treatment Plant (WWTP) in Elk Grove for treatment. No off-site improvements to the existing sewer mains are needed to serve the proposed project.

### ***Storm Drainage***

Storm drainage facilities that are owned and maintained by the City of Sacramento would serve the project site. Storm water on the project site will be managed with a combination of Low Impact Development (LID), storm water quality treatment, and flood control measures. These measures include, but are not limited to, planting new trees, the provision of a disconnected roof system, vegetated swales, and placement of amended soils. Storm water on the project site would be directed to two on-site detention basins, one basin at the southern end of the project site and one basin along the western boundary of the project site; all storm water detained in the southern basin would be directed to the western basin. The storm water in the western basin would then be pumped to a drainage canal located along the western boundary of the project site via a lift station and an 18-inch storm drain outfall. No off-site improvements to the existing drainage infrastructure are needed to serve the proposed project.

### ***Electricity and Natural Gas***

#### **Electrical Service**

Electrical service to the project site would be provided by the Sacramento Municipal Utilities District (SMUD) via existing SMUD facilities in the project area, which include a 12-kV line along the west side of the project site and a 69-kV line along the east side of the project site. No off-site improvements to existing electrical infrastructure are needed to serve the proposed project.

#### **Natural Gas Service**

Natural gas service to the project site would be provided by the Pacific Gas and Electric Company (PG&E) via a 6-inch main located within Klotz Court. Natural gas connections would only be used to serve the central boilers and communal amenities such as the pool and spa heater. Water would be heated using natural gas boilers that have a Thermal Efficiency rating of 0.95, on a scale of 0.0-1.0, with 1.0 being the most efficient. This efficiency rating correlates to the effectiveness of heat exchange of the boiler. This efficiency rating is 13 percent more efficient than the standard Title 24 requirement of a 0.84 thermal efficiency boiler. Natural gas lines would not be extended to individual residential units. No off-site improvements to existing natural gas infrastructure are needed to serve the proposed project.

## Notice of Preparation Comments

During the public comment period on the Notice of Preparation (NOP), March 20, 2002 through April 20, 2020, the City of Sacramento received 14 written comment letters regarding the proposed project (see Appendix A for the NOP/Initial Study and Appendix B for the NOP Comment Letters). The comments requested that the EIR include analysis of issues such as:

- Potential impacts related to air quality emissions during construction and operation;
- The consistency of the proposed project with existing plans that reduce greenhouse gas emissions;
- Consideration of Native American outreach and consultation; and
- Potential transportation impacts to and interface with the multi-modal transportation network, including the pedestrian, bike, transit, and freeway systems.

These issues are discussed in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

## Environmental Effects

The following discussion provides an overview of the key environmental effects of the proposed project. At the end of this chapter, **Table S-2**, Summary Table, includes a complete summary of all impacts and mitigation measures described in Chapter 4 of the EIR.

### Aesthetics, Light and Glare

The approximately 12.7-acre project site is situated within the Pocket Community Plan area (Pocket area) of the city of Sacramento, which contains primarily residential neighborhoods with local employment and retail centers at key intersections. The Pocket area is characterized by tree-lined streets bordered by residences of various ages, heights, colors, materials, and architectural styles. Commercial corridors such as Pocket Road and Freeport Boulevard, as well as other distinct pockets of more typically urban uses, are interspersed among these residential neighborhoods, and include such uses as restaurants, shops, supermarkets, big box retail buildings, office buildings, medical buildings, and auto repair shops of various heights, styles, colors, materials, and ages.

The recently-graded project site is roughly triangular in shape and may be broadly characterized as a large, flat, vacant dirt field scattered with growing and mown weedy vegetation. A cell phone tower is located in the southeastern corner of the site, and a gravel road running along the northern and eastern boundaries of the site provides access to the tower. Implementation of the proposed project would result in physical changes to the project site in the form of a mid-rise multifamily residential development on a currently vacant site within an urban context. The proposed apartment complex would consist of six buildings in a variety of stucco colors, with darker colors used on the bases and sides of the buildings and lighter, more vibrant colors used along building entrances. Each building would be 42 feet tall, with architectural details reaching a height of 48 feet, and energy-efficient LED light fixtures would be used for both interior and

exterior lighting. The development would introduce a clubhouse/pool area consisting of a pool, spa, outdoor kitchen, recreation lawn lounge area, and other amenities located on the northwestern portion of the site. The proposed project would feature approximately 107,9872 square feet of landscaping and 81,921 square feet of additional green space represented by water detention basins and associated landscaping.

Substantial changes to the existing visual character of the project site and views of the site from adjacent areas would result from the proposed project. The new development would be visible to varying degrees along Pocket Road, Freeport Boulevard, and other local streets, as well as from adjacent residential and non-residential uses. Views which were previously unobstructed across the vacant site would be replaced with views of concrete, stucco, and glass exterior materials, and at night, both exterior and interior lighting from the complex would be visible from adjacent vantage points. However, the proposed project would be required to adhere to applicable policies of the Sacramento General Plan intended to ensure that new development is compatible and complementary to its surroundings. Furthermore, all development within the city is subject to site plan and design review to ensure high quality and compatibility with surrounding development. As a result, the effects of the proposed project on visual character and quality would be less than significant.

Construction of the proposed project would occur within standard daily construction windows during daylight hours; nighttime construction activities are not anticipated. As construction lighting would be focused within the project site and would be used only for security purposes, a less-than-significant impact to new sources of substantial light resulting from construction of the proposed project would occur. Operation of the proposed project would include a variety of signage and lighting on both the interior and exterior of the buildings, which could result in brightly illuminated surfaces that could be directly visible from adjacent or other light-sensitive uses. Additionally, while a detailed design of the proposed project has not yet been submitted to the City, development of the site could include reflective and polished building materials that could create glare and result in a substantial annoyance or public hazard to nearby receptors. However, Sacramento General Plan policies require that projects minimize obtrusive light by limiting misdirected, excessive, or unnecessary outdoor lighting, that light be directed downward to reduce spill-over and vertical glare, and that projects adhere to specific building material types and thresholds to reduce glare. Compliance with these policies would ensure that the proposed project would not create a substantial new source of light, resulting in a less-than-significant impact with respect to new sources of light and glare under project operation.

## Air Quality

The project site is situated within the Sacramento Valley Air Basin (SVAB); air pollutants within the SVAB include toxic air contaminants (TACs), as well as six criteria air pollutants encompassing ground-level ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM) in size fractions of 10 microns or less in diameter (PM<sub>10</sub>) and 2.5 microns or less in diameter (PM<sub>2.5</sub>), and lead. Criteria air pollutants of concern in the SVAB include ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, as concentrations of these pollutants exceed state and national ambient air quality standards.

The *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions)*, which addresses attainment of the federal eight-hour ozone standard, and the *2014 Triennial Report and Plan Revision* are the current plans required by the U.S. Environmental Protection Agency (US EPA) and the California Air Resources Board's (CARB) and issued by Sacramento Metropolitan Air Quality Management (SMAQMD), in conjunction with other regional air districts, to meet attainment. To demonstrate compliance with applicable air quality plans, SMAQMD recommends comparing the project's vehicle miles traveled (VMT) and population growth rate to the Sacramento Area Council of Governments (SACOG) growth projections issued in the *Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)*. The City of Sacramento's 2035 General Plan assumes the project site will be developed with a commercial land use, which would generate more vehicle trips and therefore a higher VMT than the residential use proposed by the project. Accordingly, the proposed project would not generate VMT that would exceed the projections of the 2035 General Plan. The population of 742 residents which would be introduced by the proposed project is not likely to contribute to the City of Sacramento's population such that the population growth projections anticipated in the 2035 General Plan would be exceeded. Furthermore, the project site is in designated Suburban Corridor on the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram, which allows multi-family residential uses. As SACOG is required to consider adopted local land use plans in generating the MTP/SCS and the project is not anticipated to exceed the VMT and population growth projections of the City's 2035 General Plan, the proposed project would not conflict with or obstruct implementation of applicable air quality plans, and the impact would be less than significant.

Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to project operation. Construction-related emissions would arise from a variety of activities, including operation of heavy equipment, employee vehicles, excavation for infrastructure and building foundations, architectural coatings, and paving. Construction of the proposed project would generate ozone precursors and affect local particulate concentrations primarily due to fugitive dust sources and diesel exhaust. Following construction, operation of the proposed project would result in an emissions increase primarily as a result of motor vehicle trips and on-site stationary sources, with other minor area sources such as the use of landscaping equipment and consumer products also contributing to an overall increase.

Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod version 2016.3.2) and then compared to SMAQMD's applicable regional significance thresholds. Maximum daily unmitigated construction NO<sub>x</sub> emissions would exceed the SMAQMD significance thresholds during the first year of construction activity in 2020, and unmitigated maximum daily and annual construction PM<sub>10</sub> and PM<sub>2.5</sub> emissions would exceed the SMAQMD significance thresholds for each year of construction. The primary sources associated with these emissions, which would result in a significant impact to unmitigated construction emissions, would be off-road diesel equipment and on-road haul trucks during construction of the proposed project. However, implementation of mitigation requiring the implementation of SMAQMD best management practices (BMPs), including fugitive dust control practices, idling restrictions, and equipment maintenance requirements, as well as the use of off-road construction

equipment meeting US EPA Tier 4 emissions standards on-site, would reduce this impact to a less-than-significant level.

Long-term operational emissions due to motor vehicle trips and on-site area and energy sources would not result in pounds per day emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> in excess of SMAQMD's significance thresholds with implementation of the proposed project's sustainable features that are consistent with the SMAQMD's best management practices. In addition, with all intersections affected by the project qualifying for CO hotspot First Tier screening, there would be no potential for the project to result in a violation of the NAAQS or CAAQS from operational CO emissions, and thus this impact would be less than significant.

Diesel particulate matter (DPM) emissions represent the primary TAC of concern resulting from construction activities. DPM emissions would be generated due to operation of internal combustion engines in construction equipment. Exposure to TACs like DPM would result in health risks to sensitive receptors as a function of concentration of the substance and extent of the exposure. The maximum cancer risk which would occur at the residential land uses located west of the project site would exceed the maximum individual cancer risk threshold of 10 in one million, resulting in a significant impact to exposure of sensitive receptors to substantial pollutant concentrations. However, mitigation requiring the equipping of all diesel-powered construction equipment with engines meeting Tier 4-final emissions standards would decrease the maximum incremental cancer risk for residents below the threshold, and thus reduce the impact to sensitive receptors proximate to the project site to a less-than-significant level. As the proposed project would result in only limited operation-period activities that would generate TAC emissions, negligible health risks associated with operation of the proposed project are anticipated to existing sensitive receptors in the area.

## Cultural Resources

The proposed project site is located on lands historically occupied and used by the Plains Miwok, who were part of the larger Eastern Miwok language group and who lived in the Central Valley along the Sacramento, Cosumnes, and Mokelumne Rivers. The documented Native American village located closest to the proposed project site was *Hulpumne*, which was located approximately 1.5 miles south of the project area. Many other village sites along the Sacramento River have been archaeologically and ethnographically identified within the vicinity of the project area. There are no architectural historical resources, known archaeological resources, or known tribal cultural resources in the project area. However, construction of the proposed project could potentially impact historical resources and unique archaeological resources.

Historical resources were analyzed based on a 2017 records search conducted at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) at California State University, Sacramento. This search included previous surveys, studies, and site records for the project area and a ¼-mile buffer, as well as a records review in the Historic Property Directory for Sacramento County. Three historic-era resources have been previously recorded within ¼-mile of the project area, including "Victory Tress" along State Route (SR) 160 (P-34-000639), a water tank tower (P-34-005012), and a branch of the Walnut Grove Branch Line Railroad (P-34-001497). The railroad branch is located approximately 115 feet from the southern

end of the project area. Although these resources were identified in the vicinity of the project area, no historical resources were identified on the project site following the records search, additional background research, and a field survey, and no architectural or structural resources on the site qualify as historical resources as defined in CEQA Guidelines Section 15064.5. The proposed project is therefore not anticipated to impact any historical resources.

One prehistoric cultural resource known as Klotz Mound (P-34-00071) is recorded within ¼-mile of the project site. The resource is a pre-contact village mound located along the Sacramento River south of the project site, and is recorded as completely leveled and destroyed. Four surveys and nine other cultural resource studies, including record searches, surveys, excavation reports, and technical studies, have been conducted in proximity to the project site and have yielded no results of archaeological resources within the vicinity. Additionally, no archaeological resources were identified during a 2017 field survey of the project site. The proposed project therefore has low potential to include buried archaeological resources as defined in CEQA Guidelines Section 15064.5. However, the identification of and classification of previously unrecorded archaeological resources as historical resources or unique archaeological resources during ground-disturbing activities of project construction could result in potentially-significant impact to historical or archaeological resources. Mitigation requiring pre-construction cultural sensitivity training for all project personnel and ensuring that appropriate and legal protocols would be followed in the event of an inadvertent discovery of cultural resources would reduce this impact to less-than-significant level.

A potentially significant impact to paleontological resources could occur as a result of ground-disturbing activities during project construction, as the project site is situated within the Riverbank Formation, which has a high paleontological sensitivity. However, this potential impact would be reduced to a less-than-significant level through the implementation of mitigation that requires the presence of a paleontological monitor to observe ground-disturbing activities and the adherence to appropriate and legal protocol in the event of a paleontological discovery.

Although there is no indication that the project site contains human remains, the possibility of an impact with respect to human remains resulting from construction of the proposed project cannot be discounted. However, with the implementation of mitigation that would ensure that appropriate and legal protocols be followed in the event of inadvertent discovery of human remains, this impact could be reduced to a less-than-significant level.

Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing on the national, state, or local register of historic resources. A 2019 search of the Sacred Lands File from California State Native American Heritage Commission (NAHC) did not yield results of any sacred sites within the project area. A 2017 records search at the CHRIS NCIC also yielded negative results for known tribal cultural resources meeting the aforementioned criteria, and to date. Native American representatives have not identified potential tribal cultural resources on the project site, although, the City continues to consult with the representatives with regard to potential tribal cultural resources. However, any impact to inadvertently discovered tribal cultural resources as a result of project-related ground-disturbing

activities could be potentially significant. Implementation of the previously-mentioned mitigation requiring cultural sensitivity training for project personnel and mandating adherence to appropriate and legal protocols would reduce this impact to a less-than-significant level.

## Global Climate Change

The project site is currently vacant, and does not generate direct or indirect greenhouse gas (GHG) emissions. Project-related GHG emissions are assessed as both short-term emissions due to construction and long-term, ongoing emissions due to operation of the proposed project. Estimates for project-related GHG emissions were created using the CalEEMod version 20163.3.2.

The City of Sacramento's 2012 Climate Action Plan (CAP) was adopted prior to the passing of Senate Bill (SB) 32's statewide emissions reduction goal for 2030. The City's CAP is therefore not qualified to present a 2030 community GHG target and cannot be used to tier CEQA analysis for projects completed after 2020. As such, the City of Sacramento has developed an interim GHG significance threshold by deriving a City-wide GHG target and efficiency metric consistent with the 2030 GHG reduction goal identified in SB 32. This efficiency metric is an intensity value defined as total GHG emissions divided by the projected total service population (represented by residential population plus employment) for the year 2030, and is used to determine the significance of the proposed project's GHG emissions. The 2030 efficiency threshold for the City of Sacramento was calculated to be 1.6 million metric tons (MT) of carbon dioxide equivalent (CO<sub>2e</sub>) per service population per year; if the estimated efficiency metric for the proposed project exceeds this threshold, it is reasonable to conclude that the project would result in a significant impact.

Construction life of the proposed project is expected to last two years. Total construction-related GHG emissions have been amortized over 40 years, which represent the expected long-term operation life of a new residential building. Analyzed thusly, emissions resulting from construction of the proposed project would total approximately 20.4 MT CO<sub>2e</sub> per year, while the project's operational emissions would total approximately 1,978.6 MT CO<sub>2e</sub> per year. The total project GHG emission rate would therefore be approximately 1,999 MT CO<sub>2e</sub> per year. Since the project is anticipated to add seven jobs to the area and to introduce a population of 742 residents for a service population of 749 residents, the annual project GHG emissions would result in an efficiency metric of 2.7 MT CO<sub>2e</sub> per service population. This metric exceeds the efficiency significance threshold of 1.6 MT CO<sub>2e</sub> per service population, and would result in a significant impact with respect to GHG emissions. However, with the implementation of mitigation requiring the proposed project to either comply with the City of Sacramento's 2040 CAP, which has yet to be adopted, or implement measures to reduce the project's efficiency metric below the 1.6 MT CO<sub>2e</sub> per service population threshold, should construction occur prior to the adoption of the 2040 CAP, this impact would be reduced to a less-than-significant level.

The proposed project has also been evaluated for consistency with currently adopted State and local regulations intended to reduce GHG emissions, including the following: 2017 Scoping Plan Update; the California Integrated Waste Management Act; California Assembly Bill 1826; policies and programs as presented in Appendix B of the 2035 General Plan and Climate Action

Plan; the Mayors' Commission on Climate Change's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report; the City of Sacramento Pedestrian Master Plan; the City of Sacramento Bicycle Master Plan; and the City of Sacramento Zoning Requirements for Bicycle Parking. The analysis concluded the proposed project would not conflict with these regulations.

## Noise and Vibration

Under current baseline conditions, the previously graded and vacant project site generates no noise and is exposed to an ambient noise environment primarily influenced by vehicle traffic along I-5 and Pocket Road. Sensitive land uses located near the project site include single-family and multi-family residences and a church located within 800 feet of the project site.

Construction of the proposed project would comply with the requirements pertaining to construction equipment combustion engine silencers and permitted construction activity time windows. Therefore, project-related construction activities would not conflict with the Sacramento City Code and potential conflicts with the City's noise standards would result in a less-than-significant impact.

Noise levels from construction activities at sensitive receptors would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Construction-related noise exposure which could occur at the nearest sensitive receptors was calculated under the assumption that the two loudest pieces of construction equipment would operate at the location on the project site closest to the nearest off-site sensitive receptors. Operating under this assumption, although project construction-related noise may be audible at the nearest sensitive receptors, these noise levels would still fall below those suggested by the threshold identified by the FTA's *Transit Noise and Vibration Impact Manual*. Construction-related noise would also be masked at sensitive receptors to the southwest by traffic along I-5 and at sensitive receptors to the north by intervening structures. Therefore, the worst-case temporary increase in ambient noise levels from construction would cause a less-than-significant impact.

Long-term noise occurring due to implementation of the proposed project would result primarily from vehicle traffic on local roadways. The proposed project would contribute to an increase in local traffic volumes, resulting in a subsequent increase in noise levels along local roadways. Roadside noise level increases associated with project operational traffic were calculated for street segments near sensitive land uses within the project vicinity based on peak hour traffic information. The street segments considered are those nearest the project site which also experience the highest traffic volumes; these streets are those anticipated to be most directly impacted by project-related traffic. Traffic noise levels for these segments have been calculated using the FHWA's *Traffic Noise Model Technical Manual*. None of the sensitive land uses along roadway segments in the vicinity of the proposed project would be exposed to an increase in traffic noise that would exceed the allowable noise increases delineated in the City of Sacramento General Plan. The impact to existing sensitive land uses resulting from increased vehicular traffic along local roadways would therefore be less than significant.



Other operational noise sources at the project site would include operation of heating, ventilation, and air-conditioning (HVAC) systems units. Referenced sound power levels that would be generated from operation of these units were used to calculate the energy-equivalent sound level which describes noise over a specified period of time ( $L_{eq}$ ) at the nearest sensitive receptor. This  $L_{eq}$  was then compared to the City of Sacramento's nighttime noise standard. At the distance anticipated between the location of the HVAC systems and the sensitive land uses nearest the site, the noise levels from HVAC units would not exceed this standard and expose nearby sensitive receptors to substantial noise levels. The impact resulting from HVAC systems units would therefore be less than significant.

Operational traffic as a result of the proposed project would increase traffic noise levels at existing land uses in the projects' vicinity, as described above. A typical building can reduce noise levels by approximately 25 dB with the windows closed. Assuming an outdoor to indoor attenuation of 25 dB, residential buildings exposed to an exterior noise level of 70 dBA  $L_{dn}$  would result in interior noise levels of 45 dBA  $L_{eq}$ . The total roadway noise under baseline plus project conditions would not exceed the 70 dBA  $L_{dn}$  standard at existing residential uses along Pocket Road, Greenhaven Drive, or the I-5 northbound onramp. Therefore, operation of the project would not generate traffic volumes along roadways within the area that would exceed the City of Sacramento's exterior noise standard to the extent that interior noise levels at existing residential uses adjacent to these roadway segments would increase above 45 dBA  $L_{dn}$ , and this impact would be less than significant.

Construction of the proposed project would require the use of equipment and vehicles which could expose nearby sensitive receptors to vibration levels that may result in human annoyance or building damage. Given the distance of the nearest residence and the nearest building from the project site, attenuated vibration levels at these receptors due to ground-borne vibration from on-site equipment would be substantially less than the vibration thresholds which cause a "severe" human response or building damage, according to the Caltrans' *Transportation and Construction Vibration Guidance Manual*. The impact of vibration exposure resulting from construction of the proposed project would therefore be less than significant.

## Transportation

Transportation impacts are measured by using a vehicle miles traveled (VMT) metric, which measures the number of miles future users of any project will drive to work, shop, and play. Two key factors that influence a project's VMT are the density of the development and accessibility to these work/shop/play destinations. VMT accounts for two-way (round trip) travel and is estimated for a typical weekday to measure transportation impacts. The project's VMT analysis is based on the California Air Pollution Control Officers Association's *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Green Gas Mitigation Measures* report (CAPCOA Report) to quantify the reduction in VMT associated with the proposed project. The SACOG travel demand model, known as SACSIM, organizes the SACOG regional maps into hexagonal shaped geographic areas (HEX) to establish a VMT per capita for a particular area by tallying all household VMTs generated by the

residents living the HEX and dividing by the total population in the HEX. Each HEX is assigned an associated ID number.

Klotz Ranch Apartments site and project characteristics; such as the proposed land use—multi-family residential of higher density and located close to freeway and transit match that of Hexagon Obj. ID 2704. In addition, the Caltrans Statewide Travel Demand Model, as well as the Big Data Analytics for the census tracts, which includes the project site further supports the VMT per capita associated with Hexagon Obj. ID 2704. Consequently, the project's analysis is based on Hexagon Obj. ID 2704 as the appropriate hexagon for the project VMT analysis.

The VMT threshold for residential projects in 15.22 miles per capita, 15 percent below the average regional VMT of 17.91 miles per capita. The project site, located in Hexagon Obj. ID 2704, has a residential VMT per capita of 15.74. Uses within Hexagon Obj. ID 2704 have several VMT-reducing characteristics including direct proximity to transit, close proximity to the freeway, significant diversity of land uses, good walkability and opportunities for alternate modes of transportation.

Two key factors that can affect VMT analysis are the project density and accessibility to destinations. The proposed project's average residential density is 20.94 dwelling units per acre and the average residential density of Hexagon Obj. ID 2704 is 9.29. The project is located approximately 8.7 miles from Downtown Sacramento, while the average distance from dwelling units in Hexagon Obj. ID 2704 to Downtown Sacramento is of 9.2 miles. This places the project site 0.5 mile closer to Downtown Sacramento than other homes in Hexagon Obj. ID 2704.

The project's analysis, with application of two CAPCOA measures; namely, LUT-1-Increase Density and LUT-4 - Increase Destination Accessibility results in a VMT adjustment/reduction of 11.4 percent and a final VMT reduction of 5 percent. The total VMT reduction is 11.4 percent, greater than the cap of 5 percent established for the land use/location subcategory. Using the final reduction and the residential VMT per capita for Hexagon Obj. ID 2704, the proposed project's residential VMT per capita is 14.953 which is less than 85 percent of the existing average for the SACOG region (15.22 VMT per capita threshold). As a result, the proposed project's VMT does not exceed 85 percent of the existing average of the SACOG region and the impact would be less-than-significant.

The project site is currently vacant, and does not generate any VMT. Existing Class II and Class III bicycle lanes on Pocket Road, Greenhaven Drive are planned to be further developed with a separated bikeway along Pocket Road between Greenhaven Drive and Freeport Boulevard and a bike trail just west of and parallel to Freeport Boulevard. Sacramento Regional Transit District (SacRT) provides local and express bus services for the Sacramento region; with Bus Route 56 local service to the project site, services with bus stops on Pocket Road east of Greenhaven Drive and east of Klotz Ranch Court and another bus stop on Greenhaven Drive north of Pocket Road.

Existing and planned bicycle facilities in the vicinity of the project site include the Del Rio Multi-Use Trail to the east of the project site. The project will not result in removal of any existing or planned pedestrian facility or bikeway/bike lane. Klotz Ranch Apartments project would provide pedestrian paths that connect to the existing sidewalks on Klotz Ranch Court and lead to building

entrance areas. There will also be a future pedestrian connection to the Del Rio Trail on the east side of the project site. The proposed project's impacts to bicycle and pedestrian facilities are considered to be less-than-significant.

Implementation of the proposed project will have additional demand on transit, however, that demand is anticipated to be adequately accommodated by the existing and/or planned transit system. Project residents and visitors would be provided adequate access to transit including the Bus route 56 that have stops along Pocket Road. Therefore, the proposed project's impacts on transit are less-than-significant.

Construction-related activities may potentially disrupt the existing transportation network in the surrounding project area. Possible temporary lane closures, street closures, sidewalk closures, and bikeway closures may temporarily impact pedestrian, bicycle, and transit accessibility. Heavy vehicles will access the site and may need to be staged for construction. As a result of these activities, existing roadway operation conditions may be temporarily degraded during project construction. Therefore, the construction-related impacts are considered *potentially significant*.

Implementation of Mitigation Measure 4.6-4, development of a traffic control plan, would result in the local roadways and freeway facilities continuing to operate acceptably and there will not be increased frequency of potential multimodal conflicts. Thus, the impact of the project would be less-than-significant.

Project's impacts to cumulative increases in the regional VMT are less-than-significant as the regional population is expected to increase with growth in the Sacramento region, with concurrent increase in compact development and access to jobs with the overall effect of improvements in average travel miles per capita. Cumulative impacts to bicycle, pedestrian networks and transit are also less-than-significant for the proposed project.

Construction-related cumulative impacts would be potentially significant, and with implementation of traffic control plan (Mitigation Measure 4.6-4), the proposed project's contribution to the cumulative impact would be less than significant.

## Significant and Unavoidable Environmental Effects

Pursuant to CEQA Guidelines Section 15123(b)(1), an EIR must summarize the impacts and mitigation measures associated with a proposed project, as well as any significant impacts following mitigation. This information is detailed in this EIR in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, and is summarized in **Table S-2** at the end of this chapter.

Throughout this EIR, many significant environmental impacts are identified, and mitigation measures are described that would eliminate the impacts or decrease them to a less-than-significant level. Similarly, many impacts are identified that would be less than significant without the need for additional mitigation measures. When impacts are identified which cannot be eliminated or decreased to a level of insignificance even with the implementation of feasible mitigation measures, those impacts are identified as significant and unavoidable environmental

impacts. As noted in Chapter 4, the proposed project does not have any project-specific or cumulative significant and unavoidable impacts. All environmental impacts identified for the proposed project are mitigated to a less-than-significant level through the implementation of mitigation.

## **Alternatives to the Proposed Project**

CEQA Guidelines Section 15126.6 requires that an EIR must present and consider a reasonable range of alternatives to the proposed project. These alternatives should be able to feasibly achieve the majority of the basic objectives of the project while avoiding or substantially lessening one or more of the significant effects of the project. The feasibility of an alternative is determined by the lead agency and is evaluated based on a variety of factors, which may include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site acquisition and control.

The alternatives considered within this EIR are summarized below. Of the alternatives considered for the Klotz Ranch Apartments project, the use of an alternative site was considered but rejected, as no other parcel of sufficient size to accommodate the proposed project is controlled by the project applicant or the City. Therefore, the ability of the applicant to purchase and develop the project at another site is considered speculative. No other alternatives were found to be facially infeasible or worthy of dismissal prior to further consideration.

As discussed in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, no environmental impacts would result from the Klotz Ranch Apartments project which could not be eliminated or mitigated to less-than-significant levels. Therefore, the range of alternatives considered within this EIR evaluates how specific environmental impacts would differ in severity compared to those associated with the proposed project. The alternatives considered in this EIR include:

- Alternative 1: No Project/No Development Alternative
- Alternative 2: No Project/Existing PUD Alternative
- Alternative 3: Reduced Density Alternative

### **Alternative 1: No Project/No Build Alternative**

State CEQA guidelines require consideration of the “No Project” alternative, which evaluates the impacts associated with not moving forward with the proposed project. Under the No Project/No Build Alternative (Alternative 1), as required by CEQA Guidelines Section 15126.6(e), the Klotz Ranch Apartments project would not be developed, and the project site would remain undeveloped.

### **Alternative 2: No Project/Existing PUD Alternative**

Under the No Project/Existing PUD Alternative (Alternative 2), the proposed project would not be developed on the project site and the project site would be developed in a manner consistent with the schematic plan for the Klotz Ranch Commercial Center Planned Unit Development

(PUD). Approved land uses for the project site under the Klotz Ranch Commercial Center PUD include 40,000 square feet of office space, a 200 room hotel/motel, 14,500 square feet of sit-down restaurant space, and 15,000 square feet of fast food restaurant space. According to the PUD, the maximum height for multi-tenant buildings and hotels/motels is 35 feet, with architectural details such as entry gables not to exceed a maximum height of 50 feet. For single-tenant buildings, the maximum height is 25 feet, with architectural details such as entry gables not to exceed a maximum height of 35 feet.

The No Project/Existing PUD Alternative would generate 9,758 daily trips with 870 trips in the AM peak hour and 724 trips during the PM peak hour. This represents over a 600 percent increase in daily trips compared to the proposed project; AM peak hour trips would increase by approximately 900 percent and PM peak trips would increase by about 600 percent.

### Alternative 3: Reduced Density Alternative

Under the Reduced Density Alternative (Alternative 3), the proposed project would be developed with half as many residential units than the proposed project by reducing the number of buildings onsite and/or reducing building heights. Overall, the proposed project would have 50 percent fewer units than the proposed project, with a total of 133 units. Likewise, the Reduced Density Alternative would include 50 percent fewer vehicle parking spaces than would be included in the proposed project, with a total of 263 vehicle spaces.

Construction activities under the Reduced Density Alternative would have the same amount of site preparation. If the number of buildings is reduced to achieve 50 percent fewer units, the same amount of land disturbance would occur as the project would add more open space areas for residents. However, with the elimination of building levels or constructing fewer buildings, less building space would be constructed, thus shortening the overall construction timeline relative to the proposed project.

Under the Reduced Density Alternative, there would be fewer residents living on the project site relative to the proposed project. As a result, there would be fewer vehicle trips to and from the project site. The Reduced Density Alternative would generate 724 daily trips with 48 trips in the AM peak hour and 58 trips during the PM peak hour. This represents an approximately 50 percent decrease in daily and peak hour trips compared to the proposed project.

### Environmentally Superior Alternative

Pursuant to State CEQA Guidelines Section 15126.6, an EIR must identify the environmentally superior alternative from among the range of alternatives that are evaluated. Per Section 15126.6(e)(2) of the State CEQA Guidelines, if the designated environmentally superior alternative is the No Project alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives evaluated.

Of the alternatives considered within Chapter 6, Project Alternatives, the environmentally superior alternative for the Klotz Ranch Apartments project would be Alternative 1, the No Project/No Development Alternative. This alternative would avoid all potentially significant

impacts and required mitigation associated with the proposed project. Among the other alternatives, Alternative 3, the Reduced Density Alternative, could be expected to have the fewest adverse impacts because it would require a shorter construction duration, would consume fewer resources and raw materials, and have less substantial construction and operational impacts.

## Summary Table

Table S-2 (Summary of Impacts and Mitigation Measures) is structured to correspond with the environmental issues discussed in Chapter 4. The table is arranged in four columns:

1. Environmental impacts (“Impact”)
2. Level of significance without mitigation (“Significance Before Mitigation”)
3. Mitigation measures (“Mitigation Measure”)
4. Level of significance following implementation of mitigation measures (“Significance After Mitigation”)

If an impact is determined to be significant or potentially significant, mitigation measures are identified to reduce the effects of that impact, where appropriate. Multiple mitigation measures may be required to reduce the impact to a less-than-significant level. This EIR assumes compliance with all plans, policies, guidelines, and regulations relevant and applicable to the proposed project. These actions and the plans, policies, guidelines, and laws upon which they are based are discussed within the Regulatory Setting and applicable impact analysis of each issue area.

**TABLE S-2**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| <b>Impact</b>   | <b>Significance<br/>Before<br/>Mitigation</b> | <b>Mitigation Measure</b> | <b>Significance<br/>After Mitigation</b> |
|---|---|---------------------------|--|
| <b>4.1 Aesthetics, Light, and Glare</b>   |   |                           |  |
| <b>Impact 4.1-1:</b> The proposed project could substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality. | LTS   | None required.            | NA                                       |
| <b>Impact 4.1-2:</b> The proposed project could create a new source of substantial light.   | LTS   | None required.            | NA                                       |
| <b>Impact 4.1-3:</b> The proposed project could create a new source of glare.   | LTS   | None required.            | NA                                       |
| <b>Impact 4.1-4:</b> The proposed project, in combination with other cumulative development, could contribute to substantial cumulative degradation of the existing visual character or quality in the vicinity.                                    | LTS   | None required.            | NA                                       |
| <b>Impact 4.1-5:</b> The proposed project, in combination with other cumulative development, could contribute to cumulative sources of substantial light in the area.   | LTS   | None required.            | NA                                       |
| <b>Impact 4.1-6:</b> The proposed project, in combination with other cumulative development, could contribute to cumulative sources of glare.   | LTS   | None required.            | NA                                       |
| <b>4.2 Air Quality</b>  |   |                           |  |
| <b>Impact 4.2-1:</b> Implementation of the proposed project could conflict with or obstruct implementation of an applicable air quality plan.   | LTS   | None required.            | NA                                       |

LTS = less than significant; NA = Not applicable; NI = no impact; PS = potentially significant; SU = significant and unavoidable.

**TABLE S-2**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| <b>Impact</b>   | <b>Significance Before Mitigation</b> | <b>Mitigation Measure</b>  | <b>Significance After Mitigation</b> |
|---|---------------------------------------|--|--------------------------------------|
| <b>Impact 4.2-2:</b> Implementation of the proposed project would result in a net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. | PS                                    | <p><b>Mitigation Measure 4.2-2(a):</b></p> <p>The applicant shall require all construction plans to include the following SMAQMD best management practices:</p> <ul style="list-style-type: none"> <li>• Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.</li> <li>• Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.</li> <li>• Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.</li> <li>• Limit vehicle speeds on unpaved roads to 15 miles per hour.</li> <li>• Pave all roadways, driveways, sidewalks, parking lots as soon as possible. In addition, building pads shall be laid immediately after grading unless seeding or soil binders are used.</li> <li>• Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.</li> <li>• Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment shall be checked by a certified mechanic and determine to be running in proper condition before it is operated.</li> </ul> <p><b>Mitigation Measure 4.2-2(b):</b></p> <p>All diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB. This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by the air district as necessary. The Certification Statement must state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.</p> <p>The Lead Agency may waive the equipment requirement above only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the equipment would not produce desired emissions reduction</p> | LTS                                  |

LTS = less than significant; NA = Not applicable; NI = no impact; PS = potentially significant; S = Significant; SU = significant and unavoidable.



**TABLE S-2  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Significance Before Mitigation | Mitigation Measure   | Significance After Mitigation |                           |                   |   |                |     |   |        |                   |   |      |                   |  |
|---|--------------------------------|--|-------------------------------|---------------------------|-------------------|---|----------------|-----|---|--------|-------------------|---|------|-------------------|--|
|   |                                | <p>due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. If the Lead Agency grants the waiver, the contractor shall use the next cleanest piece of off-road equipment available, as detailed in Table M-AIR-1A below</p> <p>For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the region occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction for the project and (ii) geographic proximity to the project site of Tier 4 Final equipment.</p> <p>The Contractor shall maintain records concerning its efforts to comply with this requirement.</p> <p>Table M-AIR-1A describes the Off Road Compliance Step Down approach. If engines that comply with Tier 4 Final off-road emission standards are not commercially available, then the Contractor shall meet Compliance Alternative 1. If off-road equipment meeting Compliance Alternative 1 are not commercially available, then the Project sponsor shall meet Compliance Alternative 2. If off-road equipment meeting Compliance Alternative 2 are not commercially available, then the Project sponsor shall meet Compliance Alternative 3 as demonstrated below.</p> <p style="text-align: center;"><b>TABLE M-AIR-1A</b><br/><b>OFF ROAD EQUIPMENT COMPLIANCE STEP DOWN APPROACH</b></p> <table><tr><th>Compliance Alternative</th><th>Engine Emissions Standard</th><th>Emissions Control</th></tr><tr><td>1</td><td>Tier 4 Interim</td><td>N/A</td></tr><tr><td>2</td><td>Tier 3</td><td>ARB Level 3 VDECS</td></tr><tr><td>3</td><td>Tier</td><td>ARB Level 3 VDCES</td></tr></table> <p>If seeking a waiver from this requirement it must be demonstrated, to the satisfaction of the Lead Agency, that the emissions do not exceed significance thresholds as stated in <b>Table 4.2-7 in Air Quality Analysis</b>.</p> | Compliance Alternative        | Engine Emissions Standard | Emissions Control | 1 | Tier 4 Interim | N/A | 2 | Tier 3 | ARB Level 3 VDECS | 3 | Tier | ARB Level 3 VDCES |  |
| Compliance Alternative  | Engine Emissions Standard      | Emissions Control  |                               |                           |                   |   |                |     |   |        |                   |   |      |                   |  |
| 1   | Tier 4 Interim                 | N/A  |                               |                           |                   |   |                |     |   |        |                   |   |      |                   |  |
| 2   | Tier 3                         | ARB Level 3 VDECS  |                               |                           |                   |   |                |     |   |        |                   |   |      |                   |  |
| 3   | Tier                           | ARB Level 3 VDCES  |                               |                           |                   |   |                |     |   |        |                   |   |      |                   |  |
| <b>Impact 4.2-3:</b> Implementation of the proposed project could expose sensitive receptors to substantial pollutant concentrations. | PS                             | <b>Mitigation Measure 4.2-3:</b><br>Implement Mitigation Measure 4.2-2(b)  | LTS                           |                           |                   |   |                |     |   |        |                   |   |      |                   |  |

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**TABLE S-2**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| <b>Impact</b>   | <b>Significance Before Mitigation</b> | <b>Mitigation Measure</b>   | <b>Significance After Mitigation</b> |
|---|---------------------------------------|---|--------------------------------------|
| <b>Impact 4.2-4:</b> Implementation of the proposed project, in conjunction with other planned projects, could result in a cumulative net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. | LTS                                   | None required.  | NA                                   |
| <b>Impact 4.2-5:</b> Implementation of the proposed project, in conjunction with other planned projects, could cumulatively expose sensitive receptors to substantial pollutant concentrations.   | LTS                                   | <b>Mitigation Measure 4.2-5:</b><br>Implement Mitigation Measure 4.2-2(b)   | NA                                   |
| <b>4.3 Cultural and Tribal Resources</b>  |                                       |   |                                      |
| <b>Impact 4.3-1:</b> Construction of the proposed project could impact Historical Resources and Unique Archaeological Resources.  | PS                                    | <b>Mitigation Measure 4.3-1(a): Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities.</b><br><br>The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, as well as culturally affiliated Native American tribes. The City may invite a Native American representative from interested culturally affiliated Native American tribes to participate. The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values. | LTS                                  |

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| Impact | Significance<br>Before<br>Mitigation | Mitigation Measure  | Significance<br>After Mitigation |
|--------|--------------------------------------|---|----------------------------------|
|        |                                      | <p><b>Mitigation Measure 4.3-1(b): Archaeological and Native American Monitoring and the Discovery of Cultural Materials and/or Human Remains.</b></p> <p>Prior to authorization to proceed, the applicant shall employ a Secretary of the Interior-qualified archaeologist, with input from consulting tribes, to prepare a Cultural Resources Monitoring Plan. Monitoring shall be required during initial ground-disturbing activities unless the area is determined to require monitoring of deeper sediments, according to a schedule outlined in the Cultural Resources Monitoring Plan. The plan shall include (but not be limited to) the following components:</p> <ul style="list-style-type: none"> <li>• Person(s) responsible for conducting monitoring activities, including an archaeological monitor and a Native American Tribal monitor;</li> <li>• Person(s) responsible for overseeing and directing the monitors;</li> <li>• How the monitoring shall be conducted and the required format and content of monitoring reports, including schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;</li> <li>• Protocol for notifications in case of encountering cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, patriation);</li> <li>• Methods to ensure security of cultural resources sites, including protocol for notifying local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction.</li> </ul> <p>During the course of the monitoring, the archaeologist and Native American Tribal monitor may adjust the frequency—from continuous to intermittent—based on the conditions and professional judgment regarding the potential to impact cultural and tribal cultural resources.</p> |                                  |
|        |                                      | <p><b>Mitigation Measure 4.3-1(c): In the Event that Cultural Resources or Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.</b></p> <p>If cultural resources or tribal cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or human remains) are encountered at the project site during construction, work shall be temporarily suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City representative. Avoidance and preservation in place is the preferred manner of mitigating impacts to cultural resources and tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:</p> <ul style="list-style-type: none"> <li>• Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or</li> </ul>   |                                  |

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| Impact | Significance<br>Before<br>Mitigation | Mitigation Measure  | Significance<br>After Mitigation |
|--------|--------------------------------------|---|----------------------------------|
|        |                                      | <p>other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity.</p> <ul style="list-style-type: none"> <li>Recommendations for avoidance of cultural resources and tribal cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives.</li> <li>Native American representatives from interested culturally affiliated Native American tribes will be invited to review and comment on these analyses and shall have the opportunity to meet with the City representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.</li> <li>If the discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a cultural resource or a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and a designated Native American Tribal representative will be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with a Native American Tribal representative.</li> <li>The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area."</li> </ul> <p>If a cultural resource or a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources or tribal cultural resources:</p> <ul style="list-style-type: none"> <li>Each resource will be evaluated for California Register of Historical Resources- (California Register) eligibility through application of established eligibility criteria, in consultation with consulting Native American Tribes, as applicable.</li> </ul> <p>If a cultural resource or a tribal cultural resource is determined to be eligible for listing in the California Register, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City's invitation within two weeks of receiving the invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment,</p> |                                  |

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| Impact   | Significance<br>Before<br>Mitigation | Mitigation Measure   | Significance<br>After Mitigation |
|--|--------------------------------------|--|----------------------------------|
|  |                                      | <p>coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.</p> <p>Native American representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long-term management of any discovered tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property.</p> <p>If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:</p> <ul style="list-style-type: none"> <li>Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.</li> <li>Treat the resource with culturally appropriate dignity taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following: <ul style="list-style-type: none"> <li>Protect the cultural character and integrity of the resource.</li> <li>Protect the traditional use of the resource.</li> <li>Protect the confidentiality of the resource.</li> <li>Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.</li> <li>Protect the resource.</li> </ul> </li> </ul> |                                  |
| <b>Impact 4.3-2:</b> Construction of the proposed project could directly or indirectly destroy a unique paleontological resource | PS                                   | <p><b>Mitigation Measure 4.3-2: In the Event that Paleontological Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.</b></p> <p>If paleontological resources are encountered during project subsurface construction, all ground-disturbing activities shall be redirected within 100 feet of the find until a qualified paleontologist can be contacted to evaluate the find and make recommendations. If found to be significant and proposed project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring</p>  | LTS                              |

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| <b>Impact</b>  | <b>Significance Before Mitigation</b> | <b>Mitigation Measure</b>  | <b>Significance After Mitigation</b> |
|--|---------------------------------------|--|--------------------------------------|
|  |                                       | plan shall be implemented. Adverse impacts to paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the accession of all fossil material to a paleontological repository. Upon completion of project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.  |                                      |
| <b>Impact 4.3-3:</b> Construction of the proposed project could impact human remains.  | PS                                    | <p><b>Mitigation Measure 4.3-3: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains.</b> If an inadvertent discovery of human remains is made at any time during project-related construction activities or project planning, the City shall meet the following performance standards prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]).</p> <p>If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.</p> <p>If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.</p> | LTS                                  |
| <b>Impact 4.3-4:</b> Construction of development allowed under the proposed project could impact tribal cultural resources.  | PS                                    | <p><b>Mitigation Measure 4.4-4</b></p> <p>Implement Mitigation Measures 4.3-1(a), 4.3-1(b), and 4.3-1(c) and/or Mitigation Measure 4.3-3, as applicable.</p>   | LTS                                  |
| <b>Impact 4.3-5:</b> Construction of the proposed project, in combination with other development, could contribute to the cumulative loss or alteration of historic-era and indigenous archaeological resources, and human remains in archaeological contexts. | PS                                    | <p><b>Mitigation Measure 4.4-5</b></p> <p>Implement Mitigation Measures 4.3-1(a), 4.3-1(b), and 4.3-1(c) and/or Mitigation Measure 4.3-3, as applicable.</p>   | LTS                                  |

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|--|---------------------------------------|--|--------------------------------------|
| <b>Impact 4.3-6:</b> Construction of the proposed project, in combination with other development, could contribute to the cumulative loss of paleontological resources.                                  | PS                                    | <b>Mitigation Measures 4.4-6</b><br>Implement Mitigation Measures 4.3-2 as applicable. | LTS                                  |
| <b>4.4 Global Climate Change</b>   |                                       |  |                                      |
| <b>Impact 4.4-1:</b> Implementation of the proposed project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.               | LTS                                   | None required.   | LTS                                  |
| <b>Impact 4.4-2:</b> Implementation of the proposed project could conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.          | LTS                                   | None required.   | LTS                                  |
| <b>Impact 4.4-3:</b> Implementation of the proposed project, in combination with other development, would contribute to cumulative impacts associated with climate change and GHG emissions.             | LTS                                   | None required.   | LTS                                  |
| <b>4.5 Noise and Vibration</b>   |                                       |  |                                      |
| <b>Impact 4.5-1:</b> Construction of the project would generate noise that could conflict with City of Sacramento's noise standards.   | LTS                                   | None required.   | NA                                   |
| <b>Impact 4.5-2:</b> Construction of the project could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. | LTS                                   | None required.   | NA                                   |

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|--|---|---------------------------|--|
| <b>Impact 4.5-3:</b> : Operation of the project could increase local traffic that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity or conflict with the City of Sacramento noise standards. | LTS   | None required.            | NA                                       |
| <b>Impact 4.5-4:</b> Operation of the project could introduce new stationary noise sources that could conflict with the City of Sacramento noise standards.  | LTS   | None required.            | NA                                       |
| <b>Impact 4.5-5:</b> Operation of the project could result in interior noise levels of 45 dBA $L_{dn}$ or greater at nearby residential uses.  | LTS   | None required.            | NA                                       |
| <b>Impact 4.5-6:</b> Construction of the proposed project could expose existing and/or planned buildings, and persons within, to vibration that could disturb people and damage buildings.   | LTS   | None required.            | NA                                       |
| <b>Impact 4.5-7:</b> The project could result in exposure of people to cumulative increases in construction noise levels.  | LTS   | None required.            | NA                                       |
| <b>Impact 4.5-8:</b> The proposed project could contribute to cumulative increases in traffic noise levels.  | LTS   | None required.            | NA                                       |

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|---|---|---|--|
| <b>4.6 Transportation</b>   |   |   |  |
| The proposed project could cause inconveniences to motorists due to prolonged road closures and could result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists due to construction-related traffic impacts. | PS  | <p><b>Mitigation Measure 4.6-4</b></p> <p>The City Code (City Code 12.20.030) requires that a construction traffic control plan is prepared and approved prior to the beginning of project construction, to the satisfaction of the City Traffic Engineer and subject to review by all affected agencies. All work performed during construction must conform to the conditions and requirements of the approved plan. The plan shall ensure that safe and efficient movement of traffic through the construction work zone(s) is maintained. At a minimum, the plan shall include the following:</p> <ul style="list-style-type: none"> <li>• Time and day of street closures;</li> <li>• Proper advance warning and posted signage regarding street closures;</li> <li>• Provision of driveway access plan to ensure safe vehicular, pedestrian, and bicycle movements;</li> <li>• Safe and efficient access routes for emergency vehicles;</li> <li>• Provisions for pedestrian safety;</li> <li>• Use of manual traffic control when necessary;</li> <li>• Number of anticipated truck trips, and time of day of arrival and departure of trucks; and</li> <li>• Provision of a truck circulation pattern and staging area with a limitation on the number of trucks that can be waiting and any limitations on the size and type of trucks appropriate for the surrounding transportation network.</li> </ul> <p>The traffic control plan must be available at the site for inspection by the City representative during all work.</p> |  |

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|--|--------------------------------|--|-------------------------------|
| <b>Biological Resources</b>  |                                |  |                               |
| The proposed project could 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. | PS                             | <p><b>Mitigation Measure BIO-1:</b></p> <p><b>Conduct Preconstruction Nesting Bird Survey.</b> If construction (including equipment staging and tree removal) will occur during the breeding season for migratory birds and raptors (between February 1 and August 31), the applicant/developer shall retain a qualified biologist to conduct a preconstruction nesting bird and raptor survey before the onset of construction activities. The preconstruction nesting bird and raptor survey shall be conducted within 14 days prior to commencement of construction activities between February 1 and August 31. Surveys for raptors nests shall extend 500 feet from the project site. A report shall be prepared and submitted to the City following the preconstruction survey to document the results. If no active nests are found during the pre-construction survey, no additional mitigation measures are required. If construction does not commence within 14 days of the pre-construction survey, or halts for more than 14 days, an additional pre-construction survey is required.</p> <p>If an active nest is located on or adjacent to the construction footprint, an appropriate buffer zone shall be established around the nest, as determined by the qualified biologist, to avoid disturbance of the nest area and to avoid take. Buffer zones are typically 50-100 feet for migratory bird nests and 250-500 feet for bird of prey nests. The buffer shall be maintained around the nest area until the end of the breeding season or until a qualified biologist determines that the young have fledged and are foraging on their own, unless the biologist determines that a reduced buffer is acceptable. The extent of these reduced buffers shall depend on the species identified, level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers.</p> | LTS                           |

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|--------|--------------------------------|---|-------------------------------|
|        |                                | <p><b>Mitigation Measure BIO-2</b></p> <p><b>Conduct Protocol Surveys for Swainson's Hawk, including White-Tailed Kite.</b> If construction activities are anticipated to commence during the Swainson's hawk nesting season (March 1 to September 15), a qualified biologist shall conduct Swainson's hawk surveys in accordance with the <i>Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley</i>. All potential nest trees within 0.5 mile of the project footprint shall be visually examined for potential Swainson's hawk nests, as accessible. Additionally, trees within 0.25 mile of the project footprint shall be visually examined for potential white-tailed kite nests, as accessible. If no active Swainson's hawk or white-tailed kite nests are identified on or within 0.5 mile or 0.25 mile, respectively, of the project site, no additional mitigation measures are required.</p> <p>If an active Swainson's hawk nest is found within 0.5 mile of the project site, or an active white-tailed kite nest is found within 0.25 mile of the project site, CDFW shall be consulted and a qualified biologist shall establish a fenced exclusion buffer zone and work will be scheduled to avoid impacting the nest during critical periods. To the extent feasible, no work will occur within 500 feet of the nest while it is in active use. If work will occur within 500 feet of the nest, then construction will be monitored daily by a qualified biologist to ensure no disturbance occurs to the nest. A biological monitor will conduct weekly monitoring of the nest during construction activities outside the 500-foot buffer. The biologist may halt construction activities if s/he determines that the construction activities are disturbing the nest. CDFW will be consulted prior to re-initiation of activities that may disturb the nest. If it is determined during surveys or project implementation that project activities may impact white-tailed kite, project personnel shall fully avoid any impacts and immediately notify CDFW if white-tailed kite is observed to be utilizing the project area or adjacent area.</p> |                               |
|        |                                | <p><b>Mitigation Measure BIO-3:</b></p> <p><b>Purchase Swainson's Hawk Foraging Habitat Credits.</b> To compensate for the loss of Swainson's hawk foraging habitat, mitigation credits will be purchased from a CDFW-approved mitigation or conservation bank, or CDFW-approved conservation site prior to the start of construction. For every one acre of habitat authorized for disturbance, 0.75 acre of mitigation credits will be purchased (0.75:1 ratio) in accordance with the <i>Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California</i> for projects occurring greater than one and less than five miles from an active Swainson's hawk nest. Proof of purchase will be provided to the City prior to the start of construction.</p>  |                               |

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|--|--------------------------------|--|-------------------------------|
|  | PS                             | <p><b>Mitigation Measure BIO-4:</b></p> <p><b>Conduct Preconstruction Bat Survey.</b> Prior to the start of construction a qualified biologist will conduct a pre-construction roost survey. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing maternity roosts but before pregnant females give birth (April through early May). If no roosting bats are found, then no further mitigation is required.</p> <p>If a bat maternity roost is found, then disturbance of the roost shall be avoided by establishing a minimum 250-foot avoidance buffer around the roost until it is no longer occupied, as determined by the qualified biologist. The avoidance buffer may be reduced if a qualified biologist monitors the construction activities and determines that the roost is not being disturbed. Reduction of the buffer depends on the species of bat, the location of the roost relative to project activities, activities during the time the roost is active, and other project-specific conditions. No work shall occur in the buffer until it is determined that the bats have left on their own, or until the end of the maternity season. Alternatively, a qualified bat biologist may exclude the roosting bats in consultation with the California Department of Fish and Wildlife, thereby allowing construction to continue after successful exclusion activities.</p>  | LTS                           |
|  |                                | <p><b>Mitigation Measure BIO-5:</b></p> <p><b>Conduct Take Avoidance Surveys for Burrowing Owl.</b> Before project initiation, a qualified biologist shall conduct preconstruction take avoidance surveys in accordance with Appendix D of the CDFW Staff Report on Burrowing Owl Mitigation. One survey shall be conducted no less than 14 days before the initiation of ground disturbance activities. A second survey shall be conducted within 24 hours before ground disturbance. If no burrowing owls are identified in or in the vicinity of the work area, no additional mitigation measures for burrowing owl are required.</p> <p>If burrowing owls are discovered on the project site or in the vicinity of the project site, a qualified biologist shall establish a fenced exclusion zone around each occupied burrow. No construction activities shall be allowed within the exclusion buffer zone until such time that the burrows are determined to be unoccupied by a qualified biologist. The buffer zones shall be a minimum of 160 feet from an occupied burrow during the non-breeding season (September 1 through January 31), and a minimum of 500 feet from an occupied burrow during the breeding season (February 1 through August 31). If work will occur within the buffer zones, construction will be monitored daily by a qualified biologist to ensure no disturbance occurs to the burrowing owl.</p> <p>A biologist will conduct weekly monitoring of the burrowing owl during construction activities occurring outside the buffer zone. If complete avoidance is not feasible, the CDFW shall be consulted regarding the implementation of avoidance or passive relocation methods. All activities that will result in a disturbance to occupied burrows shall be approved by the CDFW prior to implementation.</p> |                               |
| The proposed project could affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands). |                                | <p><b>Mitigation Measure BIO-6:</b></p> <p><b>Obtain Wetland Permits.</b> Prior to the issuance of grading permits by the City for any work in wetlands or waters within the project site, the applicant shall acquire all applicable permits. These permits may include, but would not be limited to, a CWA Section 404 permit from the USACE and a CWA Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board.</p>   |                               |

LTS = less than significant; NA = Not applicable; NI = no impact; PS = potentially significant; S = Significant; SU = significant and unavoidable.

**TABLE S-2**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact   | Significance Before Mitigation | Mitigation Measure  | Significance After Mitigation |
|--|--------------------------------|---|-------------------------------|
|  |                                | <p><b>Mitigation Measure BIO-7:</b></p> <p><b>No Net Loss of Wetlands.</b> The applicant shall demonstrate that there is no net loss of wetlands and other waters of the U.S. and state-protected waters/wetlands. To ensure this, mitigation shall be developed as a part of the permitting process as described above. Mitigation shall be provided prior to construction related impacts on any wetlands or waters. The exact mitigation ratio will be determined in consultation with the USACE, based on the type and value of the wetlands affected by the project, but the project shall compensate for impacted wetlands at a ratio no less than 1:1. Compensation shall take the form of wetland preservation, creation, or restoration in accordance with USACE mitigation requirements, as required under project permits. Preservation, creation, and restoration will occur off-site through purchasing credits at a USACE-approved mitigation bank. Prior to purchase of credits at a mitigation bank and/or acquisition of mitigation land, the location of the mitigation shall be subject to the approval of USACE.</p>  |                               |
|  |                                | <p><b>Mitigation Measure BIO-8:</b></p> <p><b>Wetlands Protection Measures.</b> Prior to the start of construction, silt fencing shall be placed around the edges of avoided wetlands and other waters of the U.S. and State jurisdiction waters/wetlands. Trucks and other vehicles will not be allowed to park beyond, nor shall equipment be stored beyond the fencing. No vegetation removal or ground disturbing activities will be permitted beyond the fencing. During construction, best management practices (BMPs) will be implemented to protect water quality:</p> <ul style="list-style-type: none"> <li>• All fueling and maintenance of vehicles and other equipment and staging areas shall occur in designated areas away from any water body.</li> <li>• Diesel fuel and oil shall be used, stored, and disposed of in accordance with standard protocols for handling of hazardous materials.</li> <li>• All personnel involved in the use of hazardous materials shall be trained in emergency response and spill control.</li> <li>• All concrete washing and spoils dumping shall occur in a designated location.</li> <li>• Construction stockpiles shall be covered within 24 hours of a weather event to prevent blow off or runoff during weather events.</li> <li>• Temporarily disturbed areas shall be reseeded with an appropriate seed mix or otherwise treated to reduce erosion and/or siltation.</li> </ul> |                               |
| <b>Geology, Soils, and Seismicity</b>  |                                |   |                               |
| The proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic hazards. | PS                             | <p><b>Mitigation Measure GEO-1:</b></p> <p><b>Geotechnical Investigation.</b> Prior to issuance of a building permit, the project applicant shall conduct a geotechnical investigation of the project site to determine the potential for ground rupture, earth shaking, and liquefaction due to seismic events, as well as expansive soils problems. As required by the City, recommendations identified in the geotechnical report for the proposed development shall be implemented.</p>   | LTS                           |

LTS = less than significant; NA = Not applicable; NI = no impact; PS = potentially significant; SU = significant and unavoidable.

**TABLE S-2  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Significance<br>Before<br>Mitigation | Mitigation Measure   | Significance<br>After Mitigation |
|---|--------------------------------------|--|----------------------------------|
| <b>Hazards</b>  |                                      |  |                                  |
| The proposed project could expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities. | PS                                   | <p><b>Mitigation Measure HAZ-1:</b></p> <p>If unidentified or suspected contaminated soil or groundwater evidenced by stained soil, noxious odors, or other factors, is encountered during site preparation or construction activities work shall stop in the area of potential contamination, and the type and extent of contamination shall be identified by a qualified professional. The qualified professional shall prepare a report that includes, but is not limited to, activities performed for the assessment, summary of anticipated contaminants and contaminant concentrations, and recommendations for appropriate handling and disposal. Site preparation or construction activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency.</p> | LTS                              |

LTS = less than significant; NA = Not applicable; NI = no impact; PS = potentially significant; S = Significant; SU = significant and unavoidable.

# CHAPTER 1

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## Introduction

The Spanos Corporation (applicant) proposes to develop the Klotz Ranch Apartments project, a multi-family development located on a vacant 12.7-acre parcel within the Pocket community of the City of Sacramento. This Environmental Impact Report (EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State CEQA Guidelines in order to disclose the potential environmental consequences of implementing the proposed project. As required under CEQA, the EIR evaluates and describes potentially significant environmental impacts, identifies mitigation measures to avoid or reduce the significance of potential impacts, and evaluates the comparative effects of potentially feasible alternatives to the proposed project.

### 1.1 Background

In December 1997, the City of Sacramento approved the Klotz Ranch Commercial Center Planned Unit Development (PUD) for a 18.6-acre site located south of Pocket Road roughly between Interstate 5 and Freeport Boulevard in the Pocket Community area in South Sacramento. The Klotz Ranch Commercial Center PUD consisted of a schematic plan and design guidelines to govern the development of retail/commercial and office space on the site. Specifically, the Klotz Ranch Commercial Center PUD would guide the development of one twelve pump gas/service station; a 200 room hotel/motel; and 95,000 gross square feet of retail/commercial/office uses on nine parcels. Since approval of the Klotz Ranch Commercial Center PUD only one parcel has been developed: a car wash on Parcel 1 with frontage on Pocket Road.

### 1.2 Purpose and Use of this EIR

CEQA requires that before a decision can be made to approve a project that would pose potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document that identifies and evaluates potential environmental impacts of a project, recommends mitigation measures to lessen or eliminate significant adverse impacts, and examines feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the City and by any responsible agencies (as defined in CEQA) prior to a decision to approve, disapprove, or modify the proposed project. This EIR has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811. The staff contact for this document is Scott Johnson, Senior Planner, (916) 808-5842, email: [srjohnson@cityofsacramento.org](mailto:srjohnson@cityofsacramento.org).

## 1.3 CEQA Environmental Review

### 1.3.1 Preliminary Project Evaluation

The State CEQA Guidelines define the role and standards of adequacy of an EIR as follows:

- **Informational Document.** An EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (State CEQA Guidelines section 15121[a]).
- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make an informed decision that takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (State CEQA Guidelines section 15151).

State CEQA Guidelines section 15382 defines a significant effect on the environment as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project...” Therefore, in identifying the significant impacts of the project this EIR describes the potential for the proposed project to result in substantial physical effects within the area affected by the project, and identifies mitigation measures that would avoid or reduce the magnitude of those effects. See Section 4.0, Introduction to the Analysis, for further description of the approach to analyzing environmental impacts and identifying mitigation measures presented in this EIR.

To determine the need for an EIR, the City prepared an Initial Study Checklist, which is included with this EIR as **Appendix A**. The Initial Study Checklist evaluates potential environmental impacts from the proposed project, and identifies potentially significant impacts that should be reviewed in the EIR. The Initial Study Checklist also identifies potential project impacts that would be less than significant or impacts for which the application of feasible mitigation would reduce the severity of those impacts to less-than-significant levels.

### 1.3.2 EIR Scoping

On March 3, 2020, the City issued a Notice of Preparation (NOP) of the EIR with an attached initial study to governmental agencies and organizations and persons interested in the project (included in **Appendix A**). The NOP review period ended on April 20, 2020. The NOP was distributed to governmental agencies, organizations, and persons interested in the proposed project along with notice to the general public. The City sent the NOP to agencies with statutory responsibilities in connection with the proposed project with the request for their input on the scope and content of the environmental information that should be addressed in the EIR.



The City of Sacramento received 14 written comment letters regarding the proposed project (included in **Appendix B**). Although many specific issues were mentioned in the NOP comment letters, the comments generally tended toward larger themes such as:

- Potential impacts related to air quality emissions during construction and operation;
- The consistency of the proposed project with existing plans that reduce greenhouse gas emissions;
- Consideration of Native American outreach and consultation; and
- Potential transportation impacts to and interface with the multi-modal transportation network, including the pedestrian, bike, transit, and freeway systems.

The scope of this EIR includes environmental issues determined to be potentially significant as determined through preparation of the Initial Study, included as Appendix A, the NOP, responses to the NOP, and discussions among the public, consulting staff, and the City of Sacramento. This process identified potentially significant impacts associated with the construction and/or operation of the proposed project in the following issue areas:

- Aesthetics, Light, and Glare;
- Air Quality;
- Cultural and Tribal Cultural Resources;
- Global Climate Change;
- Noise and Vibration; and
- Transportation and Circulation.

In accordance with CEQA this EIR evaluates the direct, indirect, and cumulative physical environmental impacts on the environment resulting from construction and operation of the proposed project in these issue areas.

The focus in the EIR is on the impacts of the proposed project on the physical environment. Recently the California Supreme Court found that “agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project’s future users or residents.” In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore typically concerned with a project’s impact on the environment, rather than with the environment’s impact on a project and its users or residents.

Thus, with respect to such issues as geologic and seismic hazards, exposure to existing levels of air pollution and noise, and exposure to existing hazardous materials, this EIR does not address the effects of bringing a new population into an area where such hazards exist, because the project itself would not increase or otherwise affect the existing conditions that create those risks.

### 1.3.3 Public Review

The Draft EIR will be available for public review and comment as set forth in the Notice of Availability. During the review and comment period written comments (including email) regarding the Draft EIR may be submitted to the City at the address below:

Scott Johnson, Environmental Planning Services  
City of Sacramento, Community Development Department  
300 Richards Boulevard, Third Floor  
Sacramento, CA 95811  
Email: [srjohnson@cityofsacramento.org](mailto:sjohnson@cityofsacramento.org)  
Telephone: (916) 808-5842

The Draft EIR, Notice of Availability and other supporting documents, such as technical studies prepared by the City as part of the EIR process, are available for public review on the City's website at <http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>.

### 1.3.4 Final EIR and EIR Certification

Following the public review and comment period for the Draft EIR, the City will prepare responses that address all substantive written and oral comments on environmental issues addressed in the Draft EIR that are received within the specified review period. The responses and other revisions to the Draft EIR will be provided as a Final EIR. The Draft EIR and its Appendices, together with the Final EIR, will collectively constitute the EIR for the proposed project.

### 1.3.5 Mitigation Monitoring Plan

Throughout this EIR (including the initial study), mitigation measures have been identified and presented in language that will facilitate preparation of a mitigation monitoring plan (MMP). As required under CEQA, an MMP will be implemented following certification of the Final EIR for the proposed project and will identify the specific timing and roles and responsibilities for implementation of adopted mitigation measures.<sup>1</sup>

## 1.4 Subsequent Project Approvals

This EIR discloses the environmental effects of construction and operation of the proposed project pursuant to the requirements of the State CEQA Guidelines, as described in Chapter 2, Project Description. Discretionary approvals related to the proposed project may be considered at the same time as action to certify this EIR, or may take place incrementally over a period of time.

Use of this EIR to cover later project-related actions by the City or responsible agencies is addressed in PRC section 21166 and State CEQA Guidelines section 15162(a). Under those sections, if the proposed future actions are consistent with the proposed project as analyzed in this EIR, and would not create new significant or substantially more severe significant impacts that

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<sup>1</sup> See State CEQA Guidelines, section 15097.

were not examined in this EIR, the later actions would be considered to be within the scope of the EIR and no further review under CEQA would be required. More specifically, State CEQA Guidelines section 15162(a) states:

*When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:*

1. *Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
2. *Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*
3. *New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:*
  - a. *The project will have one or more significant effects not discussed in the previous EIR or negative declaration;*
  - b. *Significant effects previously examined will be substantially more severe than shown in the previous EIR;*
  - c. *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or*
  - d. *Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.*

To the extent appropriate and consistent with the requirements of CEQA and the State CEQA Guidelines, the City and responsible agencies would rely on this EIR in conjunction with consideration of subsequent project-related actions.

## 1.5 Document Organization

This Draft EIR document is organized as follows:

**Summary** – This section summarizes the proposed project and the conclusions of the Draft EIR. A summary table is included and organized to allow the reader to easily identify potentially significant effects, proposed mitigation measures, and any residual environmental impacts after implementation of mitigation measures. A summary of the alternatives to the proposed project

and the environmentally superior alternatives are also provided. The Summary also describes areas of controversy regarding the proposed project that are known to the City as of publication of this Draft EIR.

**Chapter 1, Introduction** – This chapter describes the purpose and organization of the EIR.

**Chapter 2, Project Description** – This chapter describes the proposed project. The description includes, with text and graphics, the location and boundaries of the proposed project, statements of objectives from the project applicant and the City, and a description of the proposed project's components and characteristics.

**Chapter 3, Land Use, Population, Employment, and Housing** – This chapter provides an overview of the land use and planning issues that may arise in connection with development of the proposed project. In addition, it describes employment conditions and trends in the City of Sacramento.

**Chapter 4, Environmental Setting, Impacts, and Mitigation Measures** – For each environmental issue, this chapter discusses the environmental and regulatory setting, the methodology used, the detailed analysis of potential impacts (including direct, indirect, and cumulative impacts), and, if necessary, a discussion of potentially feasible mitigation measures.

**Chapter 5, Other CEQA Required Considerations** – This chapter discusses several issues required to be included in an EIR, including effects not found to be significant, significant and unavoidable impacts, significant irreversible environmental changes, the potential for the proposed project to cause urban decay, and the potential for the proposed project to induce urban growth and development.

**Chapter 6, Project Alternatives** – This chapter describes potentially feasible alternatives to the proposed project that may avoid or substantially reduce one or more significant impacts while attaining most of the basic objectives of the project, and evaluates the comparative environmental effects of the alternatives.

**Chapter 7, List of Preparers and Persons Consulted** – This chapter identifies the agency staff and consultants who prepared the EIR, and agencies or individuals consulted during preparation of the EIR.

**Chapter 8, Acronyms and Abbreviations** – This chapter lists the acronyms used in this Draft EIR in alphabetical order.

**Chapter 9, References** – This chapter lists all citations used throughout the Draft EIR.

**Appendices** – The appendices include environmental scoping information and technical reports and data used in the preparation of the Draft EIR. These documents are included on CD at the back of the Draft EIR.

# CHAPTER 2

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## Project Description

### 2.1 Introduction

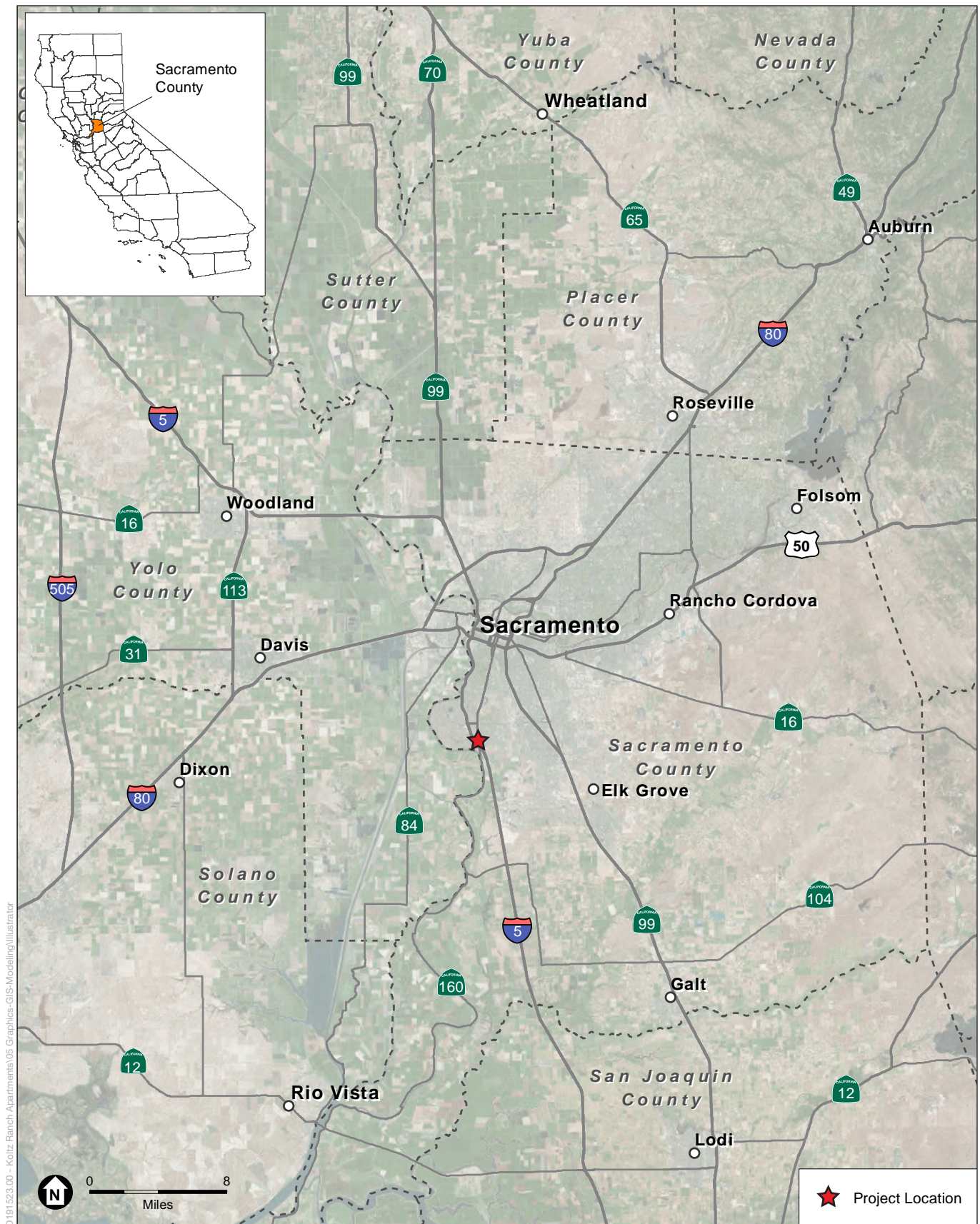
This chapter presents the project description for the Klotz Ranch Apartments project and presents the details of the proposed project in terms of project's location and setting, project objectives and characteristics, construction schedule and activities, and anticipated discretionary approvals by the City and other agencies.

### 2.2 Project Location

The project site is located in Sacramento, California, approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe. Sacramento is a major transportation hub, the point of intersection of transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada mountains and Nevada to the east, Los Angeles to the south, and Oregon and the Pacific Northwest to the north. The City is bisected by major freeways including Interstate 5 (I-5) that traverses the state from north to south; Interstate 80 (I-80), which provides an east-west connection between San Francisco and Reno; and U.S. Highway 50 which provides an east-west connection between Sacramento and South Lake Tahoe. Two railroads, the Union Pacific Railroad (UPRR) and the BNSF Railway transect Sacramento. **Figure 2-1** shows the location of the project site in the Sacramento region.

The project site is 12.7 acres in size and is generally located south of Pocket Road between I-5 and Freeport Boulevard. The site is bounded by three commercial buildings adjacent to Pocket Road to the north, and vacant parcels to the east, south, and west. In addition, I-5 is adjacent to the vacant area to the west and Freeport Boulevard is adjacent to the vacant area to the east.

**Figure 2-2** shows the location of the project site within south Sacramento. The project site was previously graded and is currently vacant with the exception of a telecommunications facility (cell phone tower), which is located in the southeastern corner of the site, and a gravel road providing access to the cell phone tower, which runs along the northern and eastern boundaries of the site (see **Figure 2-3**).



SOURCE: Esri, 2015; ESA, 2020

Klotz Ranch Apartments

**Figure 2-1**  
Regional Location





SOURCE: Google Earth, 2019

Klotz Ranch Apartments

**Figure 2-2**  
Project Vicinity





SOURCE: Google Earth, 2019

Klotz Ranch Apartments

**Figure 2-3**  
Project Site



Primary access to the project site is provided by Klotz Ranch Court, which intersects with Pocket Road located approximately 300 feet to the north. Pocket Road runs east/west and provides access to I-5 and connectivity between residential neighborhoods and retail uses in the Meadowview Community area to the east and the Pocket Community area to the west.

## 2.3 Project Objectives

CEQA Guidelines section 15124(b) requires that an EIR include a statement of the objectives intended to be achieved by the project. The objectives describe the purpose of the project and are intended to assist the lead agency in developing a reasonable range of alternatives for consideration in the EIR, as well as assisting the decision makers in assessing the feasibility of mitigation measures and alternatives.

The objectives of the proposed project are to:

1. Create a diverse community that provides housing for multiple generations and lifestyles that is consistent with the City's General Plan planning goals, policies, objectives, and provisions
2. Activate an underutilized property to meet housing needs for a wide spectrum of community members;
3. Develop a well-designed, economically feasible residential community that consists of a variety of residential products and unit types;
4. Create a development of a scale and character that complements and is supportive of the surrounding uses;
5. Develop a smart-growth community that incorporates sustainable site design and efficient use of land; and
6. Provide convenient alternatives to auto travel by providing access to the future Del Rio trail located directly to the east of the project site.

## 2.4 Existing Conditions

### General Plan and Zoning

The project site is within the Pocket Community Plan area and is currently designated as Suburban Corridor on the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram (see **Figure 2-4**). The Suburban Corridor land use designation allows for a density range of 15 to 36 dwelling units per acre and a floor-area-ratio (FAR) ranging from 0.15 to 2.0. Allowable building heights in the Suburban Corridor land use designation range from 1 to 4 stories. The Suburban Corridor land use designation is described in the 2035 General Plan (page 2-88) as providing "auto-oriented, moderate-density retail, office, and residential corridors that support surrounding suburban neighborhoods."

The project site is zoned SC (Shopping Center), which is intended to provide a wide range of goods and services to the community (see **Figure 2-5**). Multi-family dwelling units are permitted with a Conditional Use Permit (CUP). The maximum height for buildings within the zone is 35

feet; architectural details, such as pitched roofs or mechanical penthouses, are permitted up to a height of 42 feet. The maximum density is 30 dwelling units per net acre.

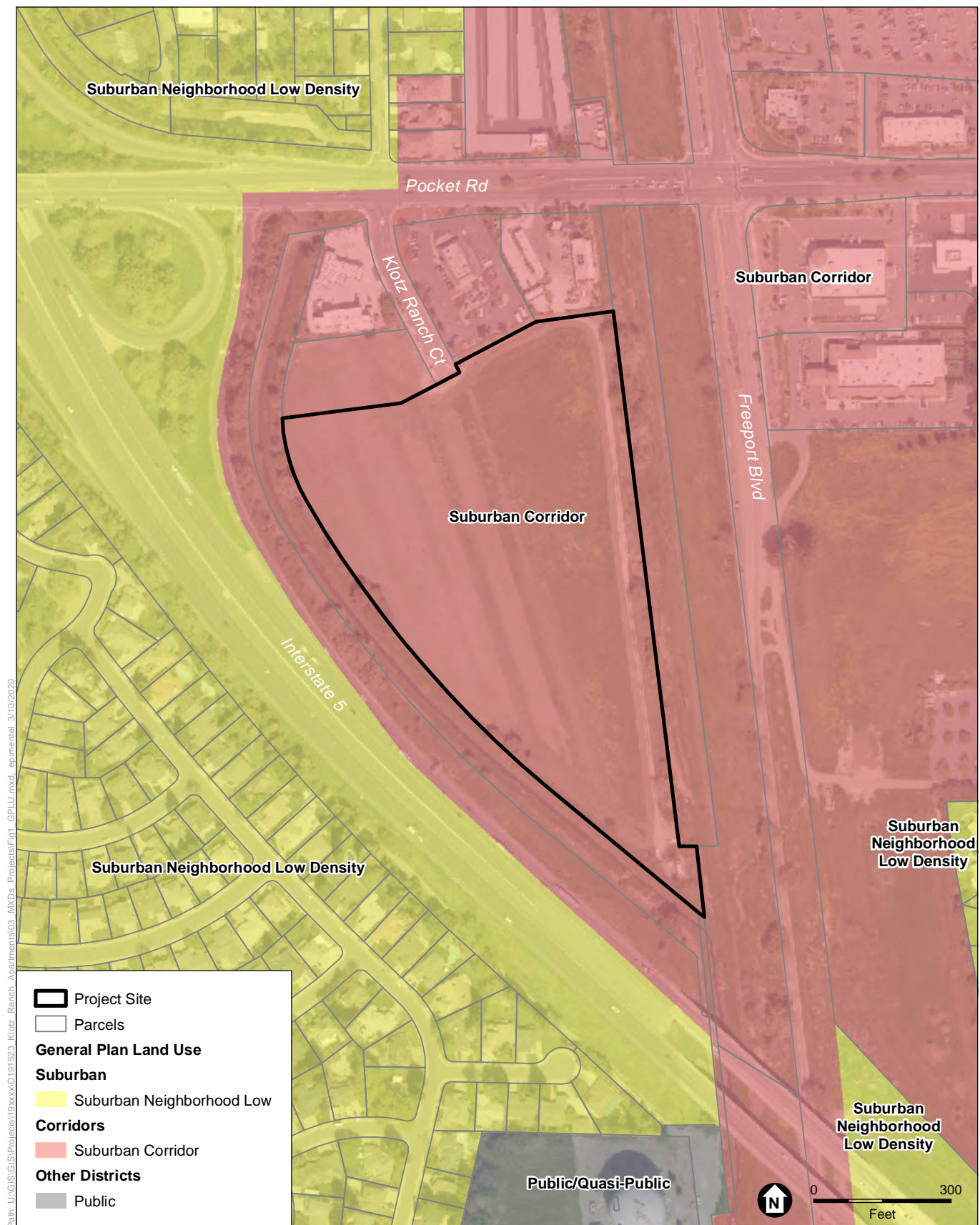
Development on the project site is governed by the Klotz Ranch Commercial Center Planned Unit Development (PUD) guidelines and schematic plan. The guidelines include development criteria that govern all future development on the project site. Specifically, the guidelines list permitted uses, include environmental and building standards, and establish sign criteria and regulations. Klotz Ranch Commercial Center encompasses approximately 14.4 acres and is divided into nine parcels (see **Figure 2-6**). The schematic plan indicates the land use for each parcel along the location and size of each building.

Parcel 1 (1.0 acre) is designated for auto service and is located in the northeastern portion of the PUD; this parcel is presently developed with a car wash. Parcel 2 (2.5 acres) is designated for office and is located on the central eastern portion of the PUD while Parcel 3 (4.4 acres) is designated for a hotel/motel and is located in the southeastern portion of the PUD. The remaining parcels are located in along the western portion of the site. Parcel 4 (1.0 acre) and Parcel 5 (1.3 acre) are designated for sit-down restaurants while Parcel 6 (1.0 acre), Parcel 7 (1.2 acres), and Parcel 8 (1.0 acre) are designated for fast food restaurants with drive-thru windows. Finally, Parcel 9 (1.0 acre) is designated for a gas station. Parcels 2 thru 9 are presently vacant and the proposed project consists of Parcels 2 thru 8.

## Existing and Adjacent Uses

The project site was previously graded and is currently vacant with the exception of the cell phone tower, which is located in the southeastern corner of the site, and the gravel road providing access to tower, which runs along the northern and eastern boundaries of the site. The project site is relatively flat and contains minimal vegetation. Scattered valley oaks (*Quercus lobata*) occur within and overhang the eastern, western, and southern edge of the project site. Vegetation primarily consists of non-native grasses.

Land uses directly adjacent to the project site include three commercial buildings to the north which front Pocket Road, and vacant parcels to the east, south, and west. The commercial buildings include a gas station (Shell Oil), located to the west of Klotz Ranch Court, a fast food restaurant (McDonalds), and a car wash (Kelly's Express Car Wash) located to the east of Klotz Ranch Court. The vacant parcels to the east are controlled by the City of Sacramento and the Sacramento Regional Transit District (SacRT); the lot controlled by SacRT is set aside for the future Del Rio Trail, a proposed 4.8-mile pedestrian and bicycle trail that runs through the Land Park, South Land Park, Freeport Manor, Z'Berg, Pocket, and Meadowview neighborhoods between Interstate 5 and Freeport Boulevard. The vacant parcels to the south and west include a drainage canal and right-of-way controlled by the California Department of Transportation (Caltrans).

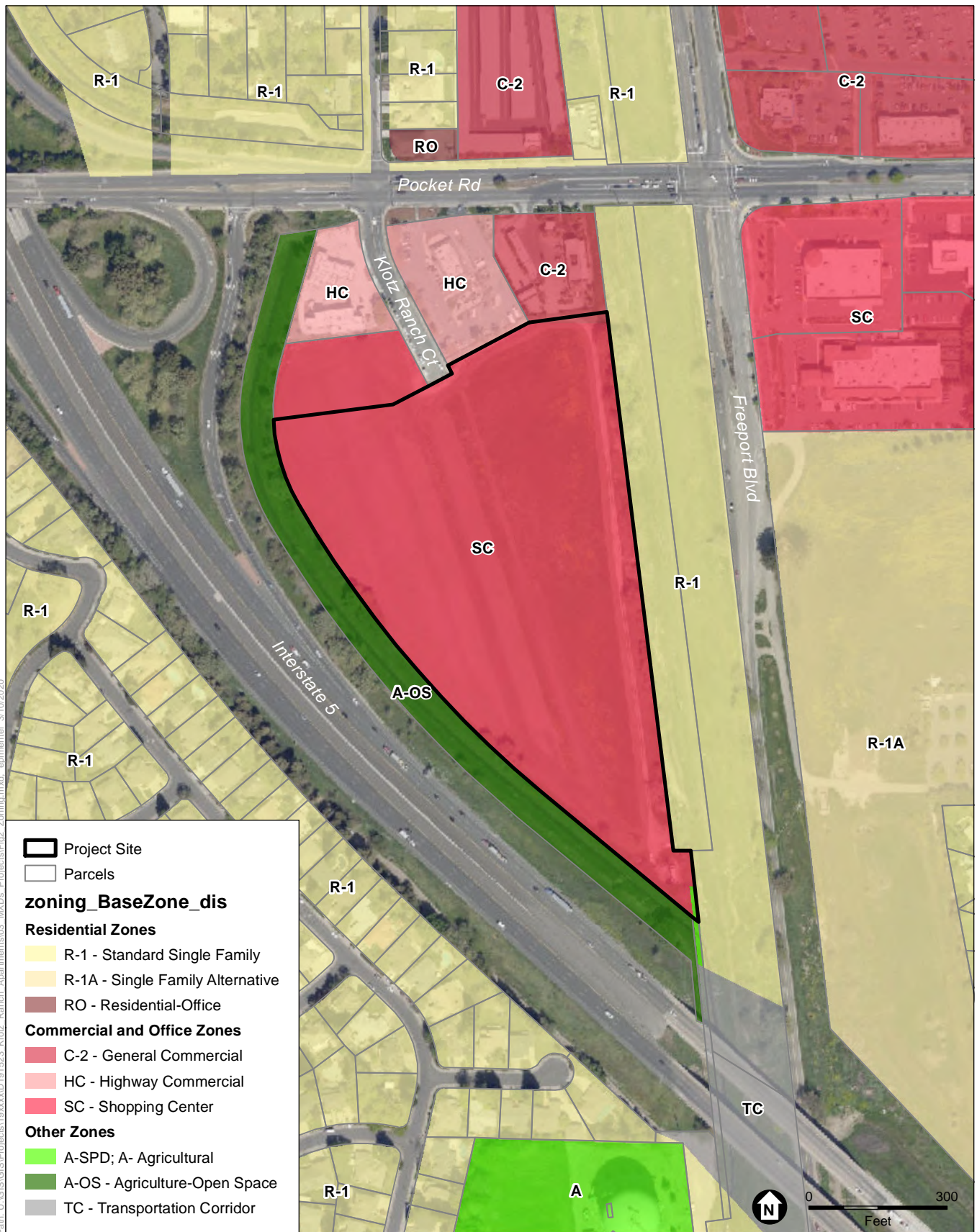


SOURCE: Esri, 2018; City of Sacramento, 2018; ESA, 2020.

Klotz Ranch Apartments Project

**Figure 2-4**  
General Plan Land Use

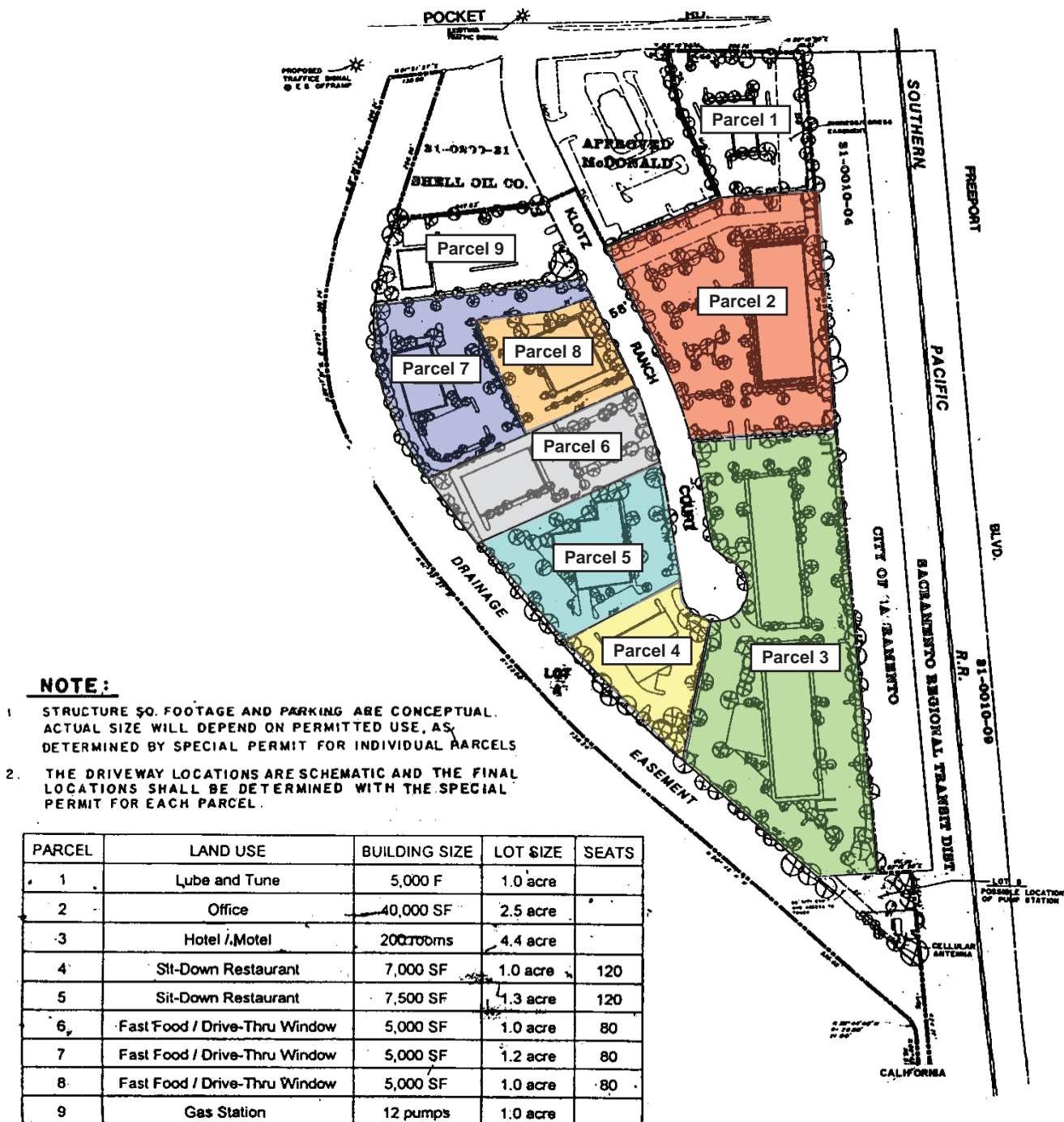




SOURCE: Esri, 2018; City of Sacramento, 2018; ESA, 2020.

Klotz Ranch Apartments Project

**Figure 2-5**  
Zoning



Not to scale

SOURCE: Morton & Pitalo, Inc., 1997

Klotz Ranch Apartments

Figure 2-6

Klotz Ranch Commercial Center P.U.D. Schematic Site Plan

Other land uses in the area include; a single-family neighborhood and self-storage facility (Public Storage) to the north across Pocket Road; a shopping center anchored by a big box retailer (Home Depot) to the northeast; a commercial shopping center, vacant parcels, and a church to the east across Freeport Boulevard; a 130-foot-tall City-owned water tower and the Freeport Regional Water Facility to the south across I-5; and a single-family neighborhood to the west across I-5.

## 2.5 Project Characteristics

### Project Components

The proposed project would develop a multifamily residential project on the approximately 12.7-acre site. The 266-unit apartment complex would consist of six apartment buildings and recreation/amenity areas. The project components are shown in **Figure 2-7**.

### Apartment Buildings

The proposed project includes 266 rental apartment units and would have an overall density of approximately 21 dwelling units per acre. The apartment units would range from 506 square feet to 1,251 square feet in size, with a mix of 128 studio/one-bedroom units, 120 two-bedroom units, and 18 three-bedroom units (see **Table 2-1**).

**TABLE 2-1  
RESIDENTIAL UNIT MIX SUMMARY**

| Housing Type       | Number of Units | Unit Size (sf) | Mix (Percent) |
|--------------------|-----------------|----------------|---------------|
| Studio/One-Bedroom | 128             | 506 to 676     | 48            |
| Two-Bedroom        | 120             | 746 to 971     | 45            |
| Three-Bedroom      | 18              | 1,251          | 7             |
| <b>Total</b>       | <b>266</b>      | <b>--</b>      | <b>100</b>    |

SOURCE: The Spanos Corporation, 2019.

The apartment units would be located in six residential buildings – four buildings with 42 units each (Building Type 1) and two buildings with 49 units each (Building Type 2). Building Type 1 structures would provide 45,706 square feet of building space each and include 20 one-bedroom units, 19 two-bedroom units, and three three-bedroom units while Building Type 2 structures would provide 54,554 square feet of building space each and include 24 one-bedroom units, 22 two-bedroom units, and three three-bedroom units. Each of the structures would be 42 feet tall with architectural details (i.e., parapets) reaching a height of 48 feet.





## **Recreation/Amenity Areas**

The proposed project would include 32,680 square feet of amenity space, which would include clubhouse/pool area and outdoor amenities, as further described below (see **Figure 2-8**).

### ***Clubhouse/Pool Area***

The clubhouse/pool area would be located on the northwestern portion of the site, northwest of Building 1. The clubhouse would include a leasing office, a fitness and yoga studio, a great room with kitchen and sitting area, mail package room, game room, cyber/conference center, and an outdoor amenity deck; the structure would be approximately 32 feet in height. The entry to the pool area would be from the clubhouse area. Amenities within the pool area would include a pool, spa, outdoor kitchen, television and fireplace lounges, hammock area, yoga lawn, two bocce ball courts, and a passive recreation lawn lounge area.

### ***Outdoor Amenities***

Other amenities on the project site include a tot lot on the northeastern corner of the site and a dog run and sports court on the southwest corner of the site.

## **Landscaping**

Landscaping consisting of deciduous, conifer, evergreen, flowering, and native trees would be located along the perimeter of the project site and between the buildings. Overall, the proposed project would include 107,982 square feet of landscaping, which encompasses approximately 20 percent of the project site. Water detention basins and landscaping surrounding the basins, which would be fenced off from the main project, and thus are inaccessible, would provide another 81,921 square feet of green space.

## **Building Design**

The design of the proposed structures is modern. A variety of stucco colors would be employed to accentuate the architecture. Darker colors will be used at the base and sides of the building to provide a strong visual base while lighter and more vibrant colors will be used to signify building entry and provide visual points of reference. Exterior elevations for each type of building are provided in **Figures 2-9** and **2-10**.





SOURCE: GHD, 2016

Klotz Ranch Apartments

**Figure 2-8**  
Preliminary Landscape Plan







1 FRONT ELEVATION - BUILDING 1  
3/32" = 1'-0"



2 REAR ELEVATION - BUILDING 1  
3/32" = 1'-0"



3 LEFT ELEVATION - BUILDING 1  
3/32" = 1'-0"



4 RIGHT ELEVATION - BUILDING 1  
3/32" = 1'-0"

| MATERIAL LEGEND |  |
|-----------------|--|
|                 | STUCCO COLOR A (SW 7004 SNOWBOUND)       |
|                 | STUCCO COLOR B (SW 7064 PASSIVE)         |
|                 | STUCCO COLOR C (SW 7062 ROCK BOTTOM)     |
|                 | STUCCO COLOR D (SW 6336 COPPER MOUNTAIN) |
|                 | STUCCO COLOR E (SW 6409 EDDY GOLD)       |
|                 | STUCCO COLOR F (SW 6485 GREAT FALLS)     |

SOURCE: Kephart; Morton & Pitalo; GHD

Klotz Ranch Apartments

**Figure 2-9**  
Preliminary Elevations Building Type 1



SOURCE: Kephart; Morton & Pitalo; GHD

Klotz Ranch Apartments

**Figure 2-10**  
Preliminary Elevations Building Type 2

## **2.6 Parking, Circulation, and Emergency Access**

### **Parking**

Parking for the proposed project would be provided in covered carports, private garages, driveways, and surface lots adjacent to the apartment buildings. The proposed project would be subject to the parking requirements as described in the City of Sacramento Planning and Development Code. A total of 525 parking spaces would be provided, including 353 parking spaces for residents and 172 parking spaces for visitors. A total of 165 bicycle parking spaces would also be provided consisting of 28 exterior spaces and 137 interior spaces. Bicycle racks and interior storage would be provided for each building. In addition, bicycle racks and a bicycle locker would be provided in front of the clubhouse.

### **Circulation**

#### **Vehicle and Emergency Access**

The main vehicle access point would be from Klotz Ranch Drive, which provides access to I-5 via Pocket Road. An emergency vehicle access point from the parking lot of the adjacent car wash would also be provided in the northeastern corner of the project site. The proposed project would not alter off-site vehicular circulation patterns in the project area. However, the proposed project would realign the existing gravel road that provides access to the cell phone tower located in the southeastern corner of the site; gated access to the tower would be provided in the southwestern corner of the southern parking lot.

#### **Pedestrian Access**

Pedestrian paths would be provided on-site that lead to building entrance areas. These paths would connect to the existing sidewalks on Klotz Ranch Court.

The Del Rio Trail is a recently approved north-south trail located east of the project site. Construction of the trail will result in limited removal of existing railroad track only where necessary for safety, particularly at major arterial intersections or where the skew of the existing track against the alignment of the proposed multi-use trail will cause a safety hazard. Where it exists, the majority of the track will be retained, including its metal rails, wood ties, and gravel ballast. At locations where the trail crosses the existing railroad tracks, the rails will be encased, but visible, in concrete. Landscaping, such as drought-tolerant and native plantings, as well as park-like fixtures such as benches, and trash receptacles will be placed along the trail. Overgrown and excess vegetation will also be removed where necessary for safety.

The proposed project site would connect easterly to the Del Rio Trail, providing additional pedestrian and bicycle access in the neighborhood. As part of the proposed project, a gate along the eastern property boundary would be provided to allow access to the future Del Rio Trail. Such access, including landscape and hardscape improvements, will be provided by the City of Sacramento consistent with the specific design features described in the Del Rio Trail EIR.

## 2.7 Utilities

### Water

The City of Sacramento would provide water service to the proposed project via an existing 8-inch water supply main in Klotz Ranch Court. No off-site improvements to the existing water mains are needed to serve the proposed project.

### Wastewater

Wastewater generated on the project site would be collected by the City of Sacramento's separate sewer system via an 8-inch main located in Klotz Ranch Court and conveyed to Sacramento Regional County Sanitation District's Wastewater Treatment Plant (WWTP) in Elk Grove for treatment. No off-site improvements to the existing sewer mains are needed to serve the proposed project.

### Storm Drainage

Storm drainage facilities that are owned and maintained by the City of Sacramento would serve the project site. Storm water on the project site would be managed with a combination of Low Impact Development (LID), storm water quality treatment, and flood control measures. These measures include, but are not limited to, planting new trees, the provision of a disconnected roof system, vegetated swales, and placement of amended soils. Storm water on the project site would be directed to two on-site detention basins, one basin at the southern end of the project site and one basin along the western boundary of the project site; all storm water detained in the southern basin would be directed to the western basin. The storm water in the western basin would then be pumped to a drainage canal located along the western boundary of the project site via a lift station and an 18-inch storm drain outfall. No off-site improvements to the existing drainage infrastructure are needed to serve the proposed project.

## Electricity and Natural Gas

### Electrical Service

Electrical service to the project site would be provided by the Sacramento Municipal Utility District (SMUD) via existing SMUD facilities in the project area, which include a 12-kV line along the west side of the project site and a 69-kV line along the east side of the project site. No off-site improvements to existing electrical infrastructure are needed to serve the proposed project.

### Natural Gas Service

Natural gas service to the project site would be provided by the Pacific Gas and Electric Company (PG&E) via a 6-inch main located within Klotz Court. Natural gas connections would only be used to serve the central boilers and communal amenities such as the pool and spa heater. Water would be heated using natural gas boilers that have a Thermal Efficiency rating of 0.95, on a scale of 0.0-1.0, with 1.0 being the most efficient. This efficiency rating correlates to the effectiveness of heat exchange of the boiler. This efficiency rating is 13 percent more efficient

than the standard Title 24 requirement of a 0.84 thermal efficiency boiler. Natural gas lines would not be extended to individual residential units. No off-site improvements to existing natural gas infrastructure are needed to serve the proposed project.

## 2.8 Sustainable Development Features

The proposed project proposes high-density residential on an infill site in close proximity to commercial retail development. The project proposes to incorporate the following measures to: minimize energy and water consumption; improve indoor environmental quality; minimize waste disposed in landfills; and minimize vehicular traffic and associated air pollutant emissions

### Water

- New landscape plants will be drought tolerant, native to California or other Mediterranean climates, or other low water use species.
- High efficiency irrigation systems with water-efficient sprinkler heads, and smart controllers that use satellite weather data will be used.
- All water fixtures (faucets, showerheads, and toilets) will be low flow and/or WaterSense certified for low water use.
- All units will be equipped with Energy Star certified dishwashers for low water use.
- High-efficiency hot water boiler systems will be used for efficient hot water distribution.

### Energy

- All buildings will meet or exceed Title 24 energy requirements.
- All apartments will be equipped with Energy Star certified appliances (dishwashers and refrigerators).
- Energy efficient LED light fixtures will be installed within the apartment buildings and for exterior lighting.
- All residential units will incorporate energy efficient Low-E windows.
- Infrastructure (conduit, structural elements, etc.) will be provided to facilitate a future PV solar installation.
- Each of the 84 garages will be equipped with 110-volt outlets capable of EV slow charging.
- The parking lot will have 6 EV rapid charging stations, serving 12 parking spaces.
- Underground electrical conduits will be installed in the parking lot allowing for the seamless future installation of another 20+ rapid charging stations, serving 40 parking spaces.
- Temperature controllers will be installed for pool and spa heaters.
- Electrical occupancy sensors to be utilized in clubhouse and common areas.

## Materials

- More than 55 percent of all demolition materials and construction debris will be recycled.
- Durable, non-combustible materials, and fire resistant roofing will be used.
- Low/no VOC paints and coatings will be used in project construction and maintenance.
- Low VOC caulks, construction adhesives, and sealants will be used in project construction and maintenance.

## Site Planning & Design

- The proposed project will be equipped with secure bike lockers for residents, as well as “bicycle cafés” with storage and repair station in each building.
- C3 wastewater treatment basins throughout the exteriors of the project site.

## 2.9 Construction Activities and Schedule

Site clearing would be followed by excavation and grading. Site construction will include finish grading to establish necessary pads and foundations, construction of retaining walls and site encroachment, and installation of underground utility lines (e.g., water, recycled water, sewer, storm-drainage, and fire hydrants). Subsequent phases would include building construction, completion of exterior and interior improvements, and installation of landscaping. During excavation, approximately 20,100 cubic yards of soil would be hauled off site.

The applicant would implement numerous Best Management Practices (BMPs) to minimize construction impacts from noise, vibration, light, dust, sedimentation and erosion, and general disturbances to sensitive receptors and sensitive resources, in addition to City Code requirements. Construction activities would be scheduled during normally acceptable hours in accordance with the City’s noise ordinance.

The exact type and numbers of construction equipment would be based on what equipment is reasonably necessary to complete the project using industry standard means and methods. Typical vehicles that are expected to be used include but are not limited to: scrapers, backhoes, skip loaders, water trucks, generators, and other miscellaneous equipment.

Project construction would occur over a period of 24 months. Construction would begin in fall 2021, with site grading and utility infrastructure work completed by early spring 2022. Construction of the structures is expected to commence in spring 2022 with completion by fall 2023.

## 2.10 Project Approvals and Entitlements

### City of Sacramento

Adoption of the proposed project is anticipated to require, but may not be limited to, the following City actions:

- Certification of the EIR to determine that the EIR was completed in compliance with the requirements of CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgement of the City of Sacramento;
- Adoption of a Mitigation Monitoring Plan (MMP), which specifies the methods for monitoring mitigation measures required to eliminate or reduce the project's significant effects on the environment;
- Adoption of Findings of Fact;
- Amendment to the Klotz Ranch Commercial Center Planned Unit Development Guidelines and Schematic Plan;
- Conditional Use Permit for multi-family residential use in a Shopping Center zone;
- Approval of a tree removal permit; and
- Approval of a Site Plan and Design Review.

### Other Local, Regional, State, or Federal Agencies

The proposed project would be anticipated to include, but may not be limited to, the following actions by entities other than the City:

- Approval of a construction activity stormwater permit, including a Stormwater Pollution Prevention Plan, from the Central Valley Regional Water Quality Control Board (CVRWQCB); and
- Approval of a water quality certification under Section 401 of the Clean Water Act by CVRWQCB.

## 2.11 Responsible Agencies

This EIR is intended to be used by responsible and trustee agencies (as defined by sections 15381 and 15386 of the CEQA Guidelines) that may have review or discretionary authority over the proposed project. Agencies in addition to the Lead Agency that also may use this EIR in their review of the proposed project or that may have responsibility over approval of certain project elements may include, but are not limited to, the following:

- Central Valley Regional Water Quality Control Board (CVRWQCB);
- Sacramento Metropolitan Air Quality Management District (SMAQMD);
- Sacramento Municipal Utility District (SMUD);
- Sacramento Regional County Sanitation District (RegionalSan); and
- Sacramento Regional Transit (SacRT).



# CHAPTER 3

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## Land Use, Population, and Housing

### 3.1. Introduction

This chapter describes existing and planned land uses in and adjacent to the proposed project, including current land uses, land use designations, and zoning. Section 15125 of the State CEQA Guidelines states that an “EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans.” Potential inconsistencies between the proposed project and the Sacramento 2035 General Plan, the Pocket Community Plan, the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), and the City’s Planning and Development Code are discussed in this chapter. Notwithstanding the conclusions reflected in this document, the final determination of project consistency with the 2035 General Plan, the Pocket Community Plan, the SACOG MTP/SCS, and the City’s Planning and Development Code is within the authority of the City Council. The information provided in this chapter is intended to inform that determination.

The City does not consider inconsistency with plan policies or codes to necessarily be indicative of significant environmental impacts. To the extent that significant environmental impacts would occur as a result of policy inconsistencies, they are disclosed in the environmental impact sections of Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, of this EIR. Thus, the reader is referred to the various environmental resource evaluations presented in Chapter 4 for a discussion of potential physical/environmental effects and potential incompatibilities that may be considered in the determination of physical environmental impacts.

This chapter also describes existing levels of and trends in population and housing in the City of Sacramento. It identifies the development assumptions upon which the proposed project is based and analyzes projected population and housing growth in relation to City projections.

While an EIR may provide information regarding land use, socioeconomic, population, employment, or housing issues, CEQA does not recognize these issues as direct physical effects on the environment. Therefore, this chapter does not identify environmental impacts and mitigation measures. Adverse physical effects on the environment that could result from implementation of the project, including the changes to land use addressed in this chapter, are evaluated and disclosed in the appropriate technical sections of this EIR.

## **3.2. Land Use Consistency and Compatibility**

The evaluation included in this section was developed based on information provided in the City of Sacramento 2035 General Plan, the Pocket Community Plan, the City of Sacramento 2035 General Plan Master EIR, and the SACOG MTP/SCS.

### **3.2.1 Notice of Preparation Comments**

A Notice of Preparation (NOP) for this EIR was circulated for public review from March 20 to April 20, 2020. No comments pertaining to land use were submitted in response to the NOP.

### **3.2.2 Environmental Setting**

#### **Regional Context**

The City of Sacramento is located approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe in the northern portion of the great Central Valley, at the northern end of the Sacramento/San Joaquin river delta and at the confluence of the Sacramento and American Rivers. Sacramento is the seat of government for the State of California and also serves as the county seat of Sacramento County. The City of Sacramento is the largest incorporated city in Sacramento County.

Sacramento is a major transportation hub, the point of intersection of major transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada mountains and Nevada to the east, the City of Los Angeles to the south, and Oregon to the north. The City is bisected by a number of major freeways, including Interstate 5 (I-5), which traverses the state from north to south; Interstate 80 (I-80) and the Capital City Freeway (Business 80), which provide an east-west connection between San Francisco and Reno; and Highway 50, which provides an east-west connection between Sacramento and South Lake Tahoe. In addition, the Union Pacific Railroad (UPRR) and BNSF Railway transect the City.

#### **Pocket Community Plan Area**

The Pocket Community Plan area is located southwest of Sacramento's downtown and adjacent to a large bend of the Sacramento River which has been known for many years as the "Pocket Area." Historically, most of the area was used for agriculture with a few scattered homes and a park along Pocket Road. The Pocket Area was annexed to the city of Sacramento in 1959 when there were only a few scattered farmhouses, truck farms, and a large clay pit that served as a brick-making operation.

The Pocket Community Plan area today contains mostly residential neighborhoods with local employment and retail centers at key intersections. Residential areas consist of mostly single-family units with multi-family units integrated throughout the community. Health care, religious and educational institutions, and parks and recreation uses are scattered throughout the area. Neighborhood servicing retail and commercial centers are also scattered throughout the community. Pocket neighborhoods are linked by a network of parks and are served by several

schools and civic and neighborhood commercial uses. The area's proximity to the Sacramento River provides recreational opportunities in addition to the network of parks.

## Existing and Adjacent Uses

The project site is generally located south of Pocket Road between I-5 and Freeport Boulevard. The site is bounded by three commercial buildings adjacent to Pocket Road to the north, and vacant parcels to the east, south, and west. In addition, I-5 is adjacent to the vacant area to the west and Freeport Boulevard is adjacent to the vacant area to the east. The project site was previously graded and is currently vacant with the exception of a telecommunications facility (cell phone tower), which is located in the southeastern corner of the site, and a gravel road providing access to the cell phone tower, which runs along the northern and eastern boundaries of the site.

Primary access to the project site is provided by Klotz Ranch Court, which intersects with Pocket Road located approximately 300 feet to the north. Pocket Road runs east/west and provides access to I-5 and connectivity between residential neighborhoods and retail uses in the Meadowview Community area to the east and the Pocket Community area to the west.

Land uses directly adjacent to the project site include three commercial buildings to the north which front Pocket Road, and vacant parcels to the east, south, and west. The commercial buildings include a gas station (Shell Oil), located to the west of Klotz Ranch Court, a fast food restaurant (McDonalds) and a car wash (Kelly's Express Car Wash) located to the east of Klotz Ranch Court. The vacant parcels to the east are controlled by the City of Sacramento and the Sacramento Regional Transit District (SacRT); the lot controlled by SacRT is set aside for the future Del Rio Trail, a proposed 4.8-mile pedestrian and bicycle trail that runs through the Land Park, South Land Park, Freeport Manor, Z'Berg, Pocket, and Meadowview neighborhoods between Interstate 5 and Freeport Boulevard. The vacant parcels to the south and west include a drainage canal and right-of-way controlled by the California Department of Transportation (Caltrans).

Other land uses in the area include a single-family neighborhood and self-storage facility (Public Storage) to the north across Pocket Road; a shopping center anchored by a big box retailer (Home Depot) to the northeast; a commercial shopping center, vacant parcels, and a church to the east across Freeport Boulevard; a 130-foot-tall City-owned water tower and the Freeport Regional Water Facility to the south across I-5; and a single-family neighborhood to the west across I-5.

### 3.2.3 Regulatory Setting

#### Federal

There are no federal regulations that specifically regulate land use or land use compatibility on non-federal lands that would be applicable to the proposed project.

#### State

##### ***Planning and Zoning Law, Government Code Sections 65000 – 66035***

California Planning and Zoning Law requires each city to prepare and adopt "...a comprehensive, long term general plan for the physical development of the...city, and of any land outside its

boundaries...” (Cal. Government Code Section 65300.) Under Government Code Section 65302, each general plan must include the following seven elements: Land Use; Circulation; Housing; Conservation; Open Space; Noise; and Safety.

### ***Sustainable Communities and Climate Protection Act (SB 375)***

The Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill 375 or SB 375, supports the State’s climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, the California Air Resources Board (ARB) sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, ARB established these targets for 2020 and 2035 for each region covered by one of the State’s metropolitan planning organizations (MPO). ARB will periodically review and update the targets, as needed.

Each of California’s MPOs must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. ARB must review the adopted SCS to confirm and accept the MPO’s determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate “alternative planning strategy” (APS) to meet the targets. The APS is not a part of the RTP.

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers may streamline certain environmental review requirements under CEQA if new residential and mixed-use projects are consistent with a region’s SCS (or APS) targets (see California Public Resources Code sections 21155, 21155.1, 21155.2, 21159.28.).

## **Local**

### ***Sacramento Area Council of Governments Blueprint and Metropolitan Transportation Plan/Sustainable Communities Strategy***

SACOG is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, as well as 22 cities, including the City of Sacramento. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region’s long-range transportation plan, SACOG approves the distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air, and airport land uses.

SACOG, in partnership with the non-profit organization Valley Vision, undertook the Blueprint Project in 2004 to build a consensus around a single, coherent, long-term vision for the development of the Sacramento region. The Blueprint created a “smart growth” framework, incorporating density of both residential and commercial development, diversity of land uses

within a neighborhood, design of the neighborhood, and access to regional destinations. The framework is based on the principles of compact development, providing a variety of housing choices, promoting mixed use developments, development of infill sites and redevelopment of underutilized sites, providing transportation choices, providing well-designed building and spaces, and conserving natural resources.

Based on the principles of the Blueprint, SACOG adopted its 2020 MTP/SCS on November 19, 2019 (2020 MTP/SCS). The State is still considering the 2020 MTP/SCS and it is not, yet, final. However, the 2020 MTP/SCS lays out a transportation investment and land use strategy to support a prosperous region, with access to jobs and economic opportunity, transportation options, and affordable housing that works for all residents. The plan also lays out a path for improving our air quality, preserving open space and natural resources, and helping California achieve its goal to reduce greenhouse gas emissions that contribute to climate change.

While the 2020 MTP/SCS is not a land use plan, it does include assumptions for land use and development trends. The project site is included in the Established Community type in the 2020 MTP/SCS, which describes areas that are generally considered built out, meaning relatively little vacant land is available for new growth. For this reason, the 2020 MTP/SCS land use forecast projects only an 11 percent increase in housing in this community type, which will primarily occur through the build-out of existing subdivisions and empty infill lots. In the Established Community type, the 2020 MTP/SCS forecasts 81,365 new housing units and 146,053 new employees between 2016 and 2040.

### ***City of Sacramento 2035 General Plan***

State law requires each city and county to prepare and adopt a comprehensive and long-range general plan for its physical development (California Government Code Section 65300). A comprehensive general plan provides a jurisdiction with a consistent framework for land use decision-making. The general plan has been referred to as the “constitution” for land use development to emphasize its importance to land use decisions. The general plan and its maps, diagrams, and development policies form the basis for the City’s zoning, subdivision, and public works actions. Under California law, no specific plan, area plan, community plan, zoning, subdivision map, nor public works project may be approved unless the City finds that it is consistent with the adopted general plan. The Sacramento 2035 General Plan was adopted on March 3, 2015.

The 2035 General Plan, like its predecessors, is a long-term policy guide for the physical, economic, and environmental growth within the City. The 2035 General Plan’s goals, policies, and implementation programs define a roadmap to achieving Sacramento’s vision to be the most livable city in America. Underlying the vision and connecting it to the roadmap are six themes that thread throughout the General Plan:

- Making Great Places,
- Growing Smarter,
- Maintaining a Vibrant Economy,
- Creating a Healthy City,

- Living Lightly-Reducing Our “Carbon Footprint,” and
- Developing a Sustainable Future.

In implementing these themes, the 2035 General Plan includes a land use diagram that establishes land use designations for the entire City, as well as goals, policies, and implementation programs that provide a framework for future decisions intended to reflect the General Plan themes.

### **General Plan Land Use Designation**

The project site is under the Suburban Corridor land use designation. The Suburban Corridor land use designation allows for a density range of 15 to 36 dwelling units per acre and a floor-area-ratio (FAR) ranging from 0.15 to 2.0. Allowable building heights in the Suburban Corridor land use designation range from 1 to 4 stories. The Suburban Corridor land use designation is described in the 2035 General Plan (page 2-88) as providing “auto-oriented, moderate-density retail, office, and residential corridors that support surrounding suburban neighborhoods.” The relevant goals and policies from the 2035 General Plan applicable to the proposed project are discussed in **Table 3-1**, below.

### ***Pocket Community Plan***

The Pocket Community Plan is part of the City’s 2035 General Plan. The Pocket Community Plan land use designation for the project site is Suburban Corridor. Unless where specified otherwise, land use designations; standards and guidelines for allowed uses, population density, and building intensity; and urban form criteria for the Pocket Community Plan are contained in the applicable sections of the Land Use and Urban Design Element of the General Plan. In certain cases, the Pocket Community Plan provides a refinement of the goals and objectives of the General Plan to serve as a guideline for development specifically within the Pocket Community Plan area. However, there are no policies specific to the Pocket Community Plan area that are applicable to the proposed project or that supplement or modify applicable General Plan policies.

### ***Planning and Development Code***

The City of Sacramento’s Planning and Development Code (Sacramento City Code Title 17) is intended “[t]o implement the city’s general plan through the adoption and administration of zoning laws, ordinances, rules, and regulations (§17.100.010(B)). To achieve this outcome, the PDC:

- regulates the use of land, buildings, or other structures;
- regulates the location, height, and size of buildings or structures, yards, courts, and other open spaces, the amount of building coverage permitted in each zone, and population density; and
- regulates the physical characteristics of buildings, structures, and site development, including the location, height, and size of buildings and structures; yards, courts, and other open spaces; lot coverage; land use intensity through regulation of residential density and floor area ratios; and architectural and site design.

## **Zoning**

The project site is zoned SC (Shopping Center). The purpose of the SC zone is to provide a wide range of goods and services to the community. However, general commercial uses that are incompatible with a retail shopping center are prohibited.

Multi-family dwelling units are permitted with a Conditional Use Permit. The maximum density is 30 dwelling units per net acre. The maximum height for buildings within the zone is 35 feet; architectural details, such as pitched roofs or mechanical penthouses, are permitted up to a height of 42 feet.

### **Klotz Ranch Commercial Center Planned Unit Development Guidelines**

Development on the project site is also governed by the Klotz Ranch Commercial Center Planned Unit Development (PUD) guidelines and schematic plan. The guidelines include development criteria that govern all future development on the project site. Specifically, the guidelines list permitted uses, include environmental and building standards, and establish sign criteria and regulations. The Klotz Ranch Commercial Center PUD area encompasses approximately 14.4 acres and is divided into nine parcels (see Figure 2-6 in Chapter 2, Project Description). The schematic plan indicates the land use for each parcel along with the location and size of each building. Parcel 1 (1.0 acre) is designated for auto service and is located in the northeastern portion of the PUD; this parcel is presently developed with a car wash. Parcel 2 (2.5 acres) is designated for office and is located on the central eastern portion of the PUD while Parcel 3 (4.4 acres) is designated for a hotel/motel and is located in the southeastern portion of the PUD. The remaining parcels are located along the western portion of the site. Parcel 4 (1.0 acre) and Parcel 5 (1.3 acres) are designated for sit-down restaurants while Parcel 6 (1.0 acre), Parcel 7 (1.2 acres), and Parcel 8 (1.0 acre) are designated for fast food restaurants with drive-thru windows. Finally, Parcel 9 (1.0 acre) is designated for a gas station. Parcels 2 thru 9 are presently vacant and the proposed project consists of Parcels 2 thru 8. As part of the proposed project, the PUD Guidelines would be deleted.

**TABLE 3-1**  
**KLOTZ RANCH APARTMENTS PROJECT**  
**CITY OF SACRAMENTO 2035 GENERAL PLAN—RELEVANT GOALS AND POLICIES**

| Applicable 2035 General Plan Goal/Policy  | Discussion   |
|---|--|
| <b>Land Use and Urban Design</b>  |  |
| <p><b>Goal LU 1.1 Growth and Change.</b> Support sustainable growth and change through orderly and well-planned development that provides for the needs of existing and future residents and businesses, ensures the effective and equitable provision of public services, and makes efficient use of land and infrastructure.</p>  |  |
| <ul style="list-style-type: none"> <li>• <b>LU 1.1.4 Leading Infill Growth.</b> The City shall facilitate infill development through active leadership and the strategic provision of infrastructure and services and supporting land uses. (<i>MPSP</i>)</li> </ul>  | <p>The project proposes a multifamily residential development on an infill site in close proximity to services and commercial retail development. The proposed project provides convenient alternatives to auto travel by providing access to the future Del Rio trail located directly to the east of the project site. Local transit service for the project site is provided by the Sacramento Regional Transit District (SacRT), which operates local bus routes and light rail service within Sacramento County. The project site is served by SacRT Route 56 bus service on Pocket Road / Meadowview Road and is approximately two miles west of the Meadowview light rail station, which is serviced by the SacRT Blue Line.</p>  |
| <p><b>Goal LU 2.1 City of Neighborhoods.</b> Maintain a city of diverse, distinct, and well-structured neighborhoods that meet the community's needs for complete, sustainable, and high-quality living environments, from the historic downtown core to well-integrated new growth areas.</p>  |  |
| <ul style="list-style-type: none"> <li>• <b>LU 2.1.1 Neighborhoods as a Basic Unit.</b> Recognizing that Sacramento's neighborhoods are the basic living environments that make-up the city's urban fabric, the City shall strive through its planning and urban design to preserve and enhance their distinctiveness, identity, and livability from the downtown core to well integrated new growth areas. (<i>RDR/MPSP</i>)</li> </ul>  | <p>The project proposes a multifamily residential development on an infill site in close proximity to services and commercial retail development. The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations. Compliance with the Site Plan and Design Review process would ensure that development of the proposed project would support the distinctiveness, identity, and livability of the local neighborhood.</p>   |
| <ul style="list-style-type: none"> <li>• <b>LU 2.1.2 Protect Established Neighborhoods.</b> The City shall preserve, protect, and enhance established neighborhoods by providing sensitive transitions between these neighborhoods and adjoining areas, and by requiring new development, both private and public, to respect and respond to those existing physical characteristics, buildings, streetscapes, open spaces, and urban form that contribute to the overall character and livability of the neighborhood. (<i>RDR</i>)</li> </ul> | <p>The overall goal of the proposed project is to enhance the Pocket Community Plan area by developing a well-designed, economically feasible residential community that consists of a variety of residential unit types and incorporates smart growth elements. The proposed project includes an objective to create a development of a scale and character that complements and is supportive of the surrounding uses.</p> <p>The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations. Compliance with the Site Plan and Design Review process would ensure that the proposed project would respect and respond to those existing physical characteristics, buildings, streetscapes, open spaces, and urban form that contribute to the overall character and livability of the neighborhood.</p> |



**TABLE 3-1**  
**KLOTZ RANCH APARTMENTS PROJECT**  
**CITY OF SACRAMENTO 2035 GENERAL PLAN—RELEVANT GOALS AND POLICIES**

| Applicable 2035 General Plan Goal/Policy  | Discussion  |
|---|---|
| <ul style="list-style-type: none"> <li>• <b>LU 2.1.3 Complete and Well-Structured Neighborhoods.</b> The City shall promote the design of complete and well-structured neighborhoods whose physical layout and land use mix promote walking to services, biking, and transit use; foster community pride; enhance neighborhood identity; ensure public safety; are family-friendly and address the needs of all ages and abilities. (<i>RDR</i>)</li> </ul> | <p>The project proposes a multifamily residential development on an infill site in close proximity to services and commercial retail development. The proposed project provides convenient alternatives to auto travel by providing access to the future Del Rio trail located directly to the east of the project site. The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations and to ensure the project promotes public safety, is family-friendly, and addresses the needs of all ages and abilities.</p>  |
| <p><b>Goal LU 2.4 City of Distinctive and Memorable Places.</b> Promote community design that produces a distinctive, high-quality built environment whose forms and character reflect Sacramento's unique historic, environmental, and architectural context, and create memorable places that enrich community life.</p>  | <ul style="list-style-type: none"> <li>• <b>LU 2.4.2 Responsiveness to Context.</b> The City shall require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento's climate, and consideration of cultural and historic context of Sacramento's neighborhoods and centers. (<i>RDR</i>)</li> </ul> <p>The proposed project would create a development of a scale and character that complements and is supportive of the surrounding uses. The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations and would include a design that respects and responds to the local context.</p>   |
| <p><b>Goal LU 2.6 City Sustained and Renewed.</b> Promote sustainable development and land use practices in both new development, reuse, and reinvestment that provide for the transformation of Sacramento into a sustainable urban city while preserving choices (e.g., where to live, work, and recreate) for future generations.</p>  | <ul style="list-style-type: none"> <li>• <b>LU 2.6.1 Sustainable Development Patterns.</b> The City shall promote compact development patterns, mixed use, and higher-development intensities that use land efficiently; reduce pollution and automobile dependence and the expenditure of energy and other resources; and facilitate walking, bicycling, and transit use. (<i>RDR</i>)</li> <li>• <b>LU 2.6.2 Transit-Oriented Development.</b> The City shall actively support and facilitate mixed-use retail, employment, and residential development around existing and future transit stations. (<i>RDR</i>)</li> </ul> <p>The project proposes a multifamily residential development on an infill site in close proximity to services and commercial retail development. The proposed project provides convenient alternatives to auto travel by providing access to the future Del Rio trail located directly to the east of the project site. The project site is served by SacRT route 56 bus service on Pocket Road/Meadowview Road and is approximately two miles west of the Meadowview light rail station, which is serviced by the SacRT Blue Line.</p> <p>The proposed project proposes multifamily residential on an infill site in close proximity to services and commercial retail development. The proposed project provides convenient alternatives to auto travel by providing access to the future Del Rio trail located directly to the east of the project site. The project site is served by SacRT route 56 bus service on Pocket Road/Meadowview Road and is approximately two miles west of the Meadowview light rail station, which is serviced by the SacRT Blue Line.</p> |

**TABLE 3-1**  
**KLOTZ RANCH APARTMENTS PROJECT**  
**CITY OF SACRAMENTO 2035 GENERAL PLAN—RELEVANT GOALS AND POLICIES**

| Applicable 2035 General Plan Goal/Policy  | Discussion  |
|---|---|
| <p><b>Goal LU 2.7 City Form and Structure.</b> Require excellence in the design of the city's form and structure through development standards and clear design direction.</p>  | <p>The proposed project includes an objective to create a development of a scale and character that complements and is supportive of the surrounding uses. The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations. Compliance with the Site Plan and Design Review process would ensure that the scale and massing of the proposed project would provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights.</p> |
| <p><b>Goal LU 4.1 Neighborhoods.</b> Promote the development and preservation of neighborhoods that provide a variety of housing types, densities, and designs and a mix of uses and services that address the diverse needs of Sacramento residents of all ages, socio-economic groups, and abilities.</p>   | <p>The project proposes a multifamily residential development on an infill site in close proximity to services and commercial retail development. The proposed project provides convenient alternatives to auto travel by providing access to the future Del Rio trail located directly to the east of the project site. The proposed project would provide recreation/amenity areas, including a clubhouse/pool area, a tot lot on the northeastern corner of the site, and a sport court and dog run on the southwest corner of the site.</p>   |
| <ul style="list-style-type: none"> <li>• <b>LU 4.1.2 Neighborhood Amenities.</b> The City shall encourage appropriately scaled community-supportive facilities and services within all neighborhoods to enhance neighborhood identity and provide convenient access within walking and biking distance of city residents. (RDR/MPSP)</li> <li>• <b>LU 4.1.7 Neighborhood Transitions.</b> The City shall provide for appropriate transitions between different land use and urban form designations along the alignment of alleys or rear lot lines and along street centerlines, in order to maintain consistent scale, form, and character on both sides of public streetscapes. (RDR)</li> </ul> | <p>The proposed project includes an objective to create a development of a scale and character that complements and is supportive of the surrounding uses. The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations. Compliance with the Site Plan and Design Review process would ensure that the scale and massing of the proposed project would provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods.</p>  |

**TABLE 3-1**  
**KLOTZ RANCH APARTMENTS PROJECT**  
**CITY OF SACRAMENTO 2035 GENERAL PLAN—RELEVANT GOALS AND POLICIES**

| Applicable 2035 General Plan Goal/Policy  | Discussion  |
|---|---|
| <p><b>Goal LU 6.1 Corridors.</b> Support the development of major circulation corridors that balance their vehicular function with a vibrant mix of uses that contribute to meeting local and citywide needs for retail, services, and housing and provide pedestrian-friendly environments that serve as gathering places for adjacent neighborhoods.</p>  | <p>The proposed project includes an objective to create a development of a scale and character that complements and is supportive of the surrounding uses. The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations. Compliance with the Site Plan and Design Review process would ensure that the project would contribute to a safe and comfortable environment for walking and avoid encroachment upon adjacent residential areas.</p> |
| <ul style="list-style-type: none"> <li>• <b>LU 6.1.1 Mixed Used Corridors.</b> The City shall create or improve mixed-use corridors by requiring compact development patterns that are oriented to and frame the street, establish a safe and comfortable environment for walking, and avoid encroachment upon adjacent residential areas. (RDR)</li> <li>• <b>LU 6.1.6 Conversion to Residential.</b> The City shall support proposals to convert nonresidential properties along mixed-use corridors, between major intersections, to residential or mixed-use residential uses. (RDR)</li> </ul> | <p>The project proposes a multifamily residential development on an infill site along mixed-use corridors that is currently vacant.</p>   |

### 3.2.4 Land Use Evaluation

This section evaluates the proposed project for compatibility with existing and planned adjacent land uses and for consistency with adopted plans, policies, and zoning designations. Physical environmental impacts resulting from implementation of proposed project are discussed in the applicable environmental resource sections in this EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures. This discussion complies with section 15125(d) of the State CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans as part of the environmental setting.

#### **Compatibility with Existing and Planned Adjacent Land Uses**

As is described above and in Chapter 2, Project Description, the proposed project would develop a multifamily residential project on an approximately 12.7-acre site that is currently vacant. The 266-unit apartment complex would consist of six apartment buildings and recreation/amenity areas, including a clubhouse/pool area, a tot lot on the northeastern corner of the site, and a sports court and dog run on the southwest corner of the site.

As discussed above, land uses directly adjacent to the project site include three commercial buildings to the north which front Pocket Road, and vacant parcels to the east, south, and west. Other land uses in the area include a single-family neighborhood and self-storage facility (Public Storage) to the north across Pocket Road; a shopping center to the northeast; a commercial shopping center, vacant parcels, and a church to the east across Freeport Boulevard; a City-owned water tower and the Freeport Regional Water Facility to the south across I-5; and a single-family neighborhood to the west across I-5.

While implementation of the proposed project could result in physical environmental effects that could affect existing and planned adjacent land uses (and which are addressed in the environmental resource sections of this EIR), the proposed project would not allow for any new urban uses that would be anticipated to be incompatible with similar uses in adjacent urban neighborhoods and communities. The proposed project would be subject to the City's Site Plan and Design Review process to ensure that development under the proposed project would be consistent with applicable plans, ordinances, and development regulations and would include a design that respects and responds to the local context. New urban development that would result from implementation of the proposed project would tend to reinforce and support existing land use patterns and would not be incompatible with existing and planned adjacent land uses.

#### **Consistency with Adopted Plans, Policies, and Zoning**

##### ***Sacramento Area Council of Governments Blueprint and MTP/SCS***

As described above, the goals of the 2020 MTP/SCS are to link land use and transportation facilities and programs in a way to provide long-term environmental and social benefits, including shortened commute times, reduced traffic congestion, less dependence on automobiles, improved air quality, reduced greenhouse gas emissions, reduced distances traveled between jobs and housing, and housing choices more aligned with the changing demographic of the

Sacramento region. While not a land use plan, the success of the MTP/SCS is based upon certain assumptions about land use and development.

The project site is included in the Established Community type in the 2020 MTP/SCS, which describes areas that are generally considered built out, meaning relatively little vacant land is available for new growth. For this reason, the 2020 MTP/SCS land use forecast projects only an 11 percent increase in housing in this community type, which will primarily occur through the build-out of existing subdivisions and empty infill lots. In the Established Community type, the 2020 MTP/SCS forecasts 81,365 new housing units and 146,053 new employees between 2016 and 2040.

According to the 2020 MTP/SCS, land uses in Established Communities are typically made up of low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers. Development pursuant to the proposed project would be consistent with the type of development anticipated in the Established Community type under the 2020 MTP/SCS, and the land use designation in the proposed project would accommodate the 2020 MTP/SCS assumptions for the Established Community type. Although the MTP/SCS is a transportation plan, not a land use plan, based on the City's review of the MTP/SCS, the proposed project is consistent with the goals and policies set forth in the plan. Upon preliminary review, it appears that the proposed project would promote the ability of SACOG and the region to achieve the goals established in the 2020 MTP/SCS by providing infill residential uses near job centers. Following approval of the 2020 MTP/SCS by the State, the City will have the authority to determine whether the proposed project is consistent with the 2020 MTP/SCS.

### ***City of Sacramento 2035 General Plan***

The project site is under the Suburban Corridor land use designation in the 2035 General Plan. The Suburban Corridor land use designation allows for a density range of 15 to 36 dwelling units per acre and a FAR ranging from 0.15 to 2.0. Allowable building heights in the Suburban Corridor land use designation range from 1 to 4 stories. The Suburban Corridor land use designation is described in the 2035 General Plan (page 2-88) as providing "auto-oriented, moderate-density retail, office, and residential corridors that support surrounding suburban neighborhoods."

The proposed project includes 266 rental apartment units and would have an overall density of approximately 21 dwelling units per acre, which is within the allowable density range for the Suburban Corridor land use designation. Because FAR is a standard of building intensity for nonresidential uses such as mixed-use, commercial, and industrial development, and the project does not include non-residential uses, the Suburban Corridor FAR standard is not applicable to the proposed project.

The proposed apartment units would be located in six residential buildings that would be 42 feet tall with architectural details (i.e., parapets) reaching a height of 48 feet. The proposed project would not exceed the allowable building height of 4 stories in the Suburban Corridor land use designation.

Development allowed under the proposed project would be consistent with what is assumed to occur under the 2035 General Plan. The proposed project would not change the land use

designation of the project site and would not require any General Plan amendments in order to be approved by the City. As demonstrated in Table 3-1 above, the proposed project would be considered consistent with the goals and policies contained in the City's 2035 General Plan.

### ***Pocket Community Plan***

The Pocket Community Plan land use designation for the project site is Suburban Corridor. Unless where specified otherwise, land use designations; standards and guidelines for allowed uses, population density, and building intensity; and urban form criteria for the Pocket Community Plan are contained in the applicable sections of the Land Use and Urban Design Element of the General Plan. In certain cases, the Pocket Community Plan provides a refinement of the goals and objectives of the General Plan to serve as a guideline for development specifically within the Pocket Community Plan area. However, there are no policies specific to the Pocket Community Plan area that are applicable to the proposed project or that supplement or modify applicable General Plan policies. The proposed project would not change the land use designation of the project site and would not require any amendments to the Pocket Community Plan in order to be approved by the City. Consequently, the proposed project would be considered consistent with the Pocket Community Plan.

### ***Planning and Development Code***

As discussed above, the project site is zoned SC (Shopping Center). The purpose of the SC zone is to provide a wide range of goods and services to the community. The maximum height is 35 feet. The maximum density is 30 dwelling units per net acre. Multi-family dwelling units are permitted with a Conditional Use Permit. The maximum height for buildings within the zone is 35 feet; architectural details, such as pitched roofs or mechanical penthouses, are permitted up to a height of 42 feet. The SC zone sets the development standards that a project must comply with. In cases where a PUD exists, the project must follow the development standards of the PUD. If the PUD is silent on a specific development standard, the project is subject to City Code.

Development on the project site is also governed by the Klotz Ranch Commercial Center PUD guidelines and schematic plan. The guidelines include development criteria that govern all future development on the project site. Specifically, the guidelines list permitted uses, include environmental and building standards, and establish sign criteria and regulations. As discussed above and in Chapter 2, Project Description, the Klotz Ranch Commercial Center PUD area encompasses approximately 14.4 acres and is divided into nine parcels. The schematic plan indicates the land use for each parcel along the location and size of each building. The schematic plan currently designates non-residential uses for the PUD area, including auto service, office hotel/motel, restaurants, and gas station. However, the PUD itself is being eliminated as part of the proposed project.

The proposed project includes 266 rental apartment units and would have an overall density of approximately 21 dwelling units per acre, which is within the allowable density range for the SC zone.

The proposed apartment units would be located in six residential buildings that would be 42 feet tall with architectural details (i.e., parapets) reaching a height of 48 feet, which would exceed the

maximum 35-foot building height and 42-foot maximum height for architectural details in the SC zone, respectively.

The proposed project would require city issuance of a Conditional Use Permit for multi-family residential use in the SC zone and a site plan and design review (SPDR) deviation to exceed the height restrictions in the SC zone. The project would also require city approval of an amendment to the Klotz Ranch Commercial Center PUD Guidelines and Schematic Plan to permit the proposed multi-family residential use. In addition, the proposed project would be subject to the city's Site Plan and Design Review process that would ensure that development of the proposed project would be consistent with the goals, policies, objectives and other provisions of the proposed project, the project EIR and mitigation monitoring program, and applicable ordinances and development regulations. The Site Plan and Design Review process would also ensure that development allowed under the proposed project would be compatible with surrounding uses. Consequently, with issuance of the required Conditional Use Permit and approval of an amendment to the Klotz Ranch Commercial Center PUD Guidelines and Schematic Plan, the proposed project would be consistent with the provisions and requirements of the Planning and Development Code.

### 3.3. Population and Housing

This section evaluates the potential effects of the proposed project in relation to population, employment, and housing. This section compares the proposed project's predicted population to the planned population in the 2035 General Plan in order to determine if the proposed project would induce substantial growth that is inconsistent with the approved land use plan for the area. This section also describes existing employment levels and the existing jobs-housing relationship in the city and evaluates the potential for employment increases that would result from implementation of the proposed project to result in substantial changes to the jobs-housing relationship.

No comments pertaining to population, employment, and housing were submitted in response to the NOP.

#### Population

##### *Regional Population*

The counties that comprise the SACOG and the greater Sacramento region, El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties, have experienced steady growth over the past 19 years. The regional population increased a total of 29 percent between 2000 and 2019, from approximately 1,936,006 in 2000<sup>1</sup> to 2,532,700 in 2019.<sup>2</sup> SACOG predicts the regional population to increase to 2,472,567 by 2020 and 3,078,772 by 2036.<sup>3</sup>

<sup>1</sup> California Department of Finance, 2012. E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, with 2000 & 2010 Census Counts. Revised November 9, 2012.

<sup>2</sup> State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2019, with 2010 Census Benchmark. Sacramento, California, May 2019.

<sup>3</sup> Sacramento Area Council of Governments. 2016. Metropolitan Transportation Plan/Sustainable Communities Strategy. p. 22, Table 3.1. Adopted February 18, 2016.

### **City of Sacramento Population**

Between 2000 and 2019, the City of Sacramento experienced a 25 percent increase in population. According to the California Department of Finance, the City's population was 407,018 in 2000 and 508,172 in 2019.<sup>4</sup> The City's share of the total population in Sacramento County has decreased substantially during that period, from 46.1 percent of the County in 2000<sup>5</sup> to 32.9 percent in 2019.<sup>6</sup>

### **Employment**

The Sacramento region is a hub for state government and related industries, health services, financial services, and local/regional serving retail. According to the City's 2013-2021 Housing Element, in 2008 there were 299,732 jobs in the Sacramento. In 2020 the number of jobs is expected to increase by 8 percent to 324,027, and by 2035 the number of jobs is expected to increase by another 20 percent to 390,112, for a total increase of 30 percent from 2008 to 2035. Sacramento is projected to add over 90,000 jobs from 2008 to 2035.

The Housing Element anticipates modest growth in employment in the Pocket area between 2008 and 2035. In 2020 the Pocket area is projected to experience a minor increase in employment, adding approximately 50 jobs from 2008 to 2020.<sup>7</sup> From 2020 to 2035, the Pocket area is projected to experience a moderate increase in employment, adding 788 jobs (for a total of 5,815 jobs).<sup>8</sup>

### **Housing**

While the economic recession of 2008 caused a downturn in housing values and new home construction across the Sacramento region, in line with general statewide and national trends, the region has recently experienced a period of economic growth. However, housing values across the region are considerably lower than in the Bay Area. As such, Sacramento continues to remain a more affordable housing option for people working and commuting to other regions in northern California. According to the California Department of Finance, there were 196,890 housing units in the City of Sacramento in 2019 and a vacancy rate of 9.2 percent.<sup>9</sup>

### **Jobs-Housing Relationship**

Jobs-housing relationship is used to describe the ratio of residences to jobs in a particular community or geographic area. Low jobs-housing ratio (i.e., few jobs for the number of households in the area) indicates that many workers commute out of their residence area to their place of

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<sup>4</sup> State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2019, with 2010 Census Benchmark. Sacramento, California, May 2019.

<sup>5</sup> California Department of Finance. 2007. E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000. August 2007.

<sup>6</sup> State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2019, with 2010 Census Benchmark. Sacramento, California, May 2019.

<sup>7</sup> City of Sacramento, 2013. City of Sacramento 2013-2021 Housing Element. Adopted December 17, 2013. p. H 3-16.

<sup>8</sup> City of Sacramento, 2013. City of Sacramento 2013-2021 Housing Element. Adopted December 17, 2013. p. H 3-16.

<sup>9</sup> State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2019. Sacramento, California, May 2019.



employment. In areas with high jobs-housing ratio (i.e., many jobs for the number of households in the area), jobs need to be filled by workers from outside the area. A jobs-housing ratio of 1.0 reflects that there is one job available per household and is considered to be in “balance.” Areas with high or low jobs-housing ratios are likely to generate longer home-to-work commutes.

When assuming that the affordability of housing and the incomes of jobs in the local market are paired reasonably closely, if the quantity and proximity of housing units is proportionate to the quantity and proximity of jobs, the majority of employees would be able to work and reside in the same community. A more balanced relationship between jobs and housing can help reduce the number of vehicle trips and the overall vehicle miles traveled as a result of shorter commutes to employment within the same proximate residential areas. Such a reduction in vehicle trips and vehicle miles traveled would tend to reduce levels of air pollutant emissions (including greenhouse gas emissions) and would create less vehicular congestion on area roadways and intersections. It is important that the determination of the jobs-housing relationship focuses on whether housing in the community is affordable to local employees. The availability of an adequate housing supply, presenting a range of price levels that include prices that are reasonably affordable for local employees, can potentially reduce the commute mileage between homes and work sites.

In 2019, there were approximately 244,789 employees in City of Sacramento, with 189,428 households.<sup>10</sup> This generates a jobs/housing ratio of 1.29, reflective of Sacramento’s continuing role as the regional employment center, and demonstrating that employees commute from other neighboring communities in the region to work within the City.

### 3.3.1 Analysis

#### ***Population***

The proposed project would include 266 residential units. To determine the estimated population increase that may result from implementation of the proposed project, this analysis assumes average household size of 2.79 persons, which is the average household size in the City of Sacramento based on the latest census data.<sup>11</sup> Using this factor, the projected population increase associated with the proposed project would be approximately 742 people. As discussed earlier in this section, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical environmental effects that would be a result of population growth that would result from the proposed project are examined in the appropriate environmental resource sections of this EIR.

#### ***Jobs-Housing Relationship***

While construction of the proposed project would generate temporary construction jobs, the project is a residential development that does not include non-residential uses that would generate an increase in jobs. Consequently, implementation of the proposed project would help to decrease

<sup>10</sup> City of Sacramento. 2019. City of Sacramento, Economic Development Department: Key Demographics. Available: <http://www.cityofsacramento.org/Economic-Development/Why-Sacramento/Demographics-and-Market-Information/Key-Demographics>. Accessed April 6, 2020.

<sup>11</sup> California Department of Finance. 2019. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2019, with 2010 Benchmark.

the projected imbalance between jobs and housing in the City, creating a more even jobs-housing balance and putting residents closer to jobs opportunities. In addition, as noted in the 2035 General Plan Master EIR, over time, several factors, including recent demographic trends and ongoing housing and development patterns would likely result in a more balanced ratio of jobs and housing in the City, along with a reduction in vehicle trips, vehicle miles traveled, and associated pollutant emissions and congestion on area roadways and intersections.

## CHAPTER 4

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# Environmental Setting, Impacts, and Mitigation Measures

### 4.0 Introduction to the Analysis

This Environmental Impact Report (EIR) evaluates the potential physical environmental effects resulting from implementation of the proposed project. Some environmental issue areas that are typically considered under CEQA would not be affected by the proposed project and, pursuant to CEQA, are not further analyzed in this EIR. A discussion of those issues that were not further analyzed in the EIR can be found in the Initial Study in **Appendix A**.

#### 4.0.1 Definitions of Terms Used in the EIR

This EIR uses a number of terms that have specific meaning under CEQA. Among the most important of the terms used in the EIR are those that refer to the significance of environmental impacts. The following terms are used to describe environmental effects of the proposed plan:

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or threshold an impact would be considered significant. Standards of Significance used in this EIR include those standards provided by the City of Sacramento. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, State, and local regulations and ordinances.
- **Significant Impact:** A project impact is considered significant if the project would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project-related physical change compared to specified significance criteria. A significant impact is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.”<sup>1</sup>
- **Potentially Significant Impact:** A potentially significant impact is identified where the proposed project may cause a substantial adverse change in the environment, depending on certain unknown conditions related to the project or the affected environment. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

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<sup>1</sup> State CEQA Guidelines, section 15382.

- **Less-than-Significant Impact:** A project impact is considered less than significant when the physical change caused by the proposed project would not exceed the applicable significance criterion.
- **Significant and Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse physical change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level.
- **Cumulative Impact:** Under CEQA, a cumulative impact refers to “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”<sup>2</sup> Like any other significant impact, a significant cumulative impact is one in which the cumulative adverse physical change would exceed the applicable significance criterion and the project’s contribution is “cumulatively considerable.”<sup>3</sup>
- **Mitigation Measure:** A mitigation measure is an action that could be taken that would avoid or reduce the magnitude of a significant impact. Section 15370 of the State CEQA Guidelines defines mitigation as:
  - a. Avoiding the impact altogether by not taking a certain action or parts of an action;
  - b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
  - c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
  - d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
  - e. Compensating for the impact by replacing or providing substitute resources or environments.

## 4.0.2 Section Format

Chapter 4 is divided into technical sections (e.g., Section 4.1, Aesthetics, Light, and Glare) that present for each environmental resource issue area the physical environmental setting, regulatory setting, significance criteria, methodology and assumptions, and impacts on the environment. Where required, potentially feasible mitigation measures are identified to lessen or avoid significant impacts. Each section includes an analysis of project-specific and cumulative impacts for each issue area.

The technical environmental sections each begin with a description of the proposed project’s **environmental setting** and the **regulatory setting** as it pertains to a particular issue. The environmental setting provides a point of reference for assessing the environmental impacts of the proposed project and project alternatives. The environmental setting discussion addresses the conditions that exist prior to implementation of the project. This setting establishes the baseline by which the proposed project and project alternatives are measured for environmental impacts. The regulatory setting presents relevant information about federal, state, regional, and/or local

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<sup>2</sup> State CEQA Guidelines, section 15355.

<sup>3</sup> State CEQA Guidelines, section 15130(a).

laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

Next, each section presents **significance criteria**, which identify the standards used by the City of Sacramento to determine the significance of effects of the proposed project. The significance criteria used for this analysis were derived from the City of Sacramento's established significance standards, which, in turn, reflect policies of the 2035 General Plan, as well as other criteria applicable under CEQA, including thresholds established by trustee and responsible agencies.

A **methods and assumptions** description in each section presents the analytical methods and key assumptions used in the evaluation of effects of the proposed project, and is followed by an **impacts** and **mitigation** discussion. The impact and mitigation portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed project. As required by section 15126.2(a) of the State CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts, but may be considered in linking the implementation of a project to a physical environmental change, or in determining whether an impact is significant.

Where enforcement exists and compliance can be reasonably anticipated, this EIR assumes that the proposed project would meet the requirements of applicable laws and other regulations.

Mitigation measures pertinent to each individual impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is also disclosed. An example of the format is shown below.

## Impacts and Mitigation Measures

### Impact 4.X-1: Impact Statement.

A discussion of the potential impact of the project on the resource is provided in paragraph form. To identify impacts that may be site- or project element-specific, where appropriate, the discussion differentiates between construction effects and operational effects. A statement of the level of significance before application of any mitigation measures is provided in **bold**.

### **Mitigation Measure 4.X-1:**

Recommended mitigation measure numbered in consecutive order. *OR*

**Mitigation:** None required.

Where appropriate, one or more potentially feasible mitigation measures are described. If necessary, a statement of the degree to which the available mitigation measure(s) would reduce the significance of the impact is included in **bold**.

## **Cumulative Impacts**

An analysis of cumulative impacts follows the project-specific impacts and mitigation measures evaluation in each section. A cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other past, present and reasonably foreseeable projects causing related impacts.<sup>4</sup>

The beginning of the cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed (e.g., the City of Sacramento, the Sacramento Valley Air Basin, other activity concurrent with project construction). In some instances, a project-specific impact may be considered less than significant, but when considered in conjunction with other cumulative projects or activities may be considered significant or potentially significant.

As noted above, where a cumulative impact is significant when compared to existing or baseline conditions, the analysis must address whether the project's contribution to the significant cumulative impact is "considerable." If the contribution of the project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the project's contribution to a less-than-considerable level. If the project's contribution is not considerable, it is considered less than significant and no mitigation of the project contribution is required.<sup>5</sup> The cumulative impacts analysis is formatted the same as the project-specific impacts, as shown above.

The *State CEQA Guidelines* suggest that the analysis of cumulative impacts for each environmental factor can employ one of two methods to establish the effects of other past, current, and probable future projects. A lead agency may select a list of projects, including those outside the control of the agency, or alternatively, a summary of projections. These projections may be from an adopted general plan or related planning document, or from a prior environmental document that has been adopted or certified, and these documents may describe or evaluate regional or area-wide conditions contributing to the cumulative impact.

In this Draft EIR, a combination of these two methods is used depending upon the specific resource area being analyzed. To evaluate traffic and traffic-related air quality and traffic-related

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<sup>4</sup> State CEQA Guidelines section 15355.

<sup>5</sup> State CEQA Guidelines section 15130(a)(3).

noise impacts, the impacts were evaluated using the projected growth in traffic through 2036 based on SACOG projections. To evaluate construction noise impacts, the impacts were evaluated using a list of recently approved and/or proposed projects within the vicinity of the project site, including:

- Delta Shores – This is a large development project located one mile south of the project site. The commercial portion of the development has been constructed and is operational while the residential (675 multi-family units and 4,089 single-family units) and mixed-use town center (458 units and 161,000 square feet of retail) portions have yet to be constructed.
- Unnamed Apartment Project – This multi-family residential development is located about two miles northeast of the project site. The unnamed apartment complex would include 150 units and be located at the corner of Florin Road and 29<sup>th</sup> Street.

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## 4.1 Aesthetics, Light, and Glare

This section describes and evaluates potential impacts related to aesthetics, light, and glare that could result from construction and operation of the proposed project.

The Environmental Setting of this chapter includes descriptions of existing visual characteristics of the project site and vicinity. Existing plans and policies relevant to urban design and visual resource issues associated with implementation of the proposed project are provided. The impact discussion evaluates potential impacts to aesthetic and visual resources that could result from implementation of the proposed project in the context of existing conditions based on analyses of photographs, site reconnaissance, and project data. Where significant impacts are identified, potentially feasible measures that could be undertaken to avoid or reduce the magnitude of those significant impacts are described.

No comments pertaining to aesthetics, light, and glare were submitted in response to the NOP.

### 4.1.1 Environmental Setting

#### Existing Conditions

The city of Sacramento is characterized by a downtown urban core surrounded by suburbs and agricultural land. To the east, on clear days, the foothills of the Sierra Nevada Mountains provide a backdrop to the visual setting of the city. The city is located at the confluence of the Sacramento and American Rivers. These river corridors create two of the primary natural scenic resources of the city. The Sacramento River flows north to south and serves as the western boundary for much of the city. The American River flows westward on the northern boundary of the Central City and meets the Sacramento River just west of Interstate 5 (I-5). Sacramento's downtown skyline is visible from nearby locations, as well as from miles around the city. High-rise buildings are the distinctive features of the skyline.

The Pocket Community Plan area contains mostly residential neighborhoods with local employment and retail centers at key intersections. The Pocket area is characterized by tree-lined streets flanked by residences of a multitude of ages, heights, colors, materials, and architectural styles. Interspersed among the traditional residential neighborhoods are commercial corridors, including Pocket Road, Freeport Boulevard, and other distinct pockets of more typically urban uses, including predominantly low-rise buildings with granite, metal, and glass facades, and restaurants, shops, supermarkets, big box retail buildings, office buildings, medical buildings, and auto repair shops of varying heights, styles, colors, materials, and ages.

#### Project Site and Vicinity

An aerial view of the project site and vicinity and the locations of photographic views included in subsequent figures are provided on **Figure 4.1-1**. Photographs of the project site and vicinity area are provided on **Figure 4.1-2** through **Figure 4.1-6**.

The approximately 12.7-acre project site is located south of Pocket Road between I-5 and Freeport Boulevard within the southeastern portion of the Pocket Community Plan area. The

project site is generally triangular in shape, is regularly disced, and is currently vacant with the exception of a cell phone tower, which is located in the southeastern corner of the site, and a gravel road that provides access to the cell phone tower, which runs along the northern and eastern boundaries of the site. The project site is characterized visually as a large, flat, and vacant dirt field with growing and mown weedy vegetation scattered on the surface.

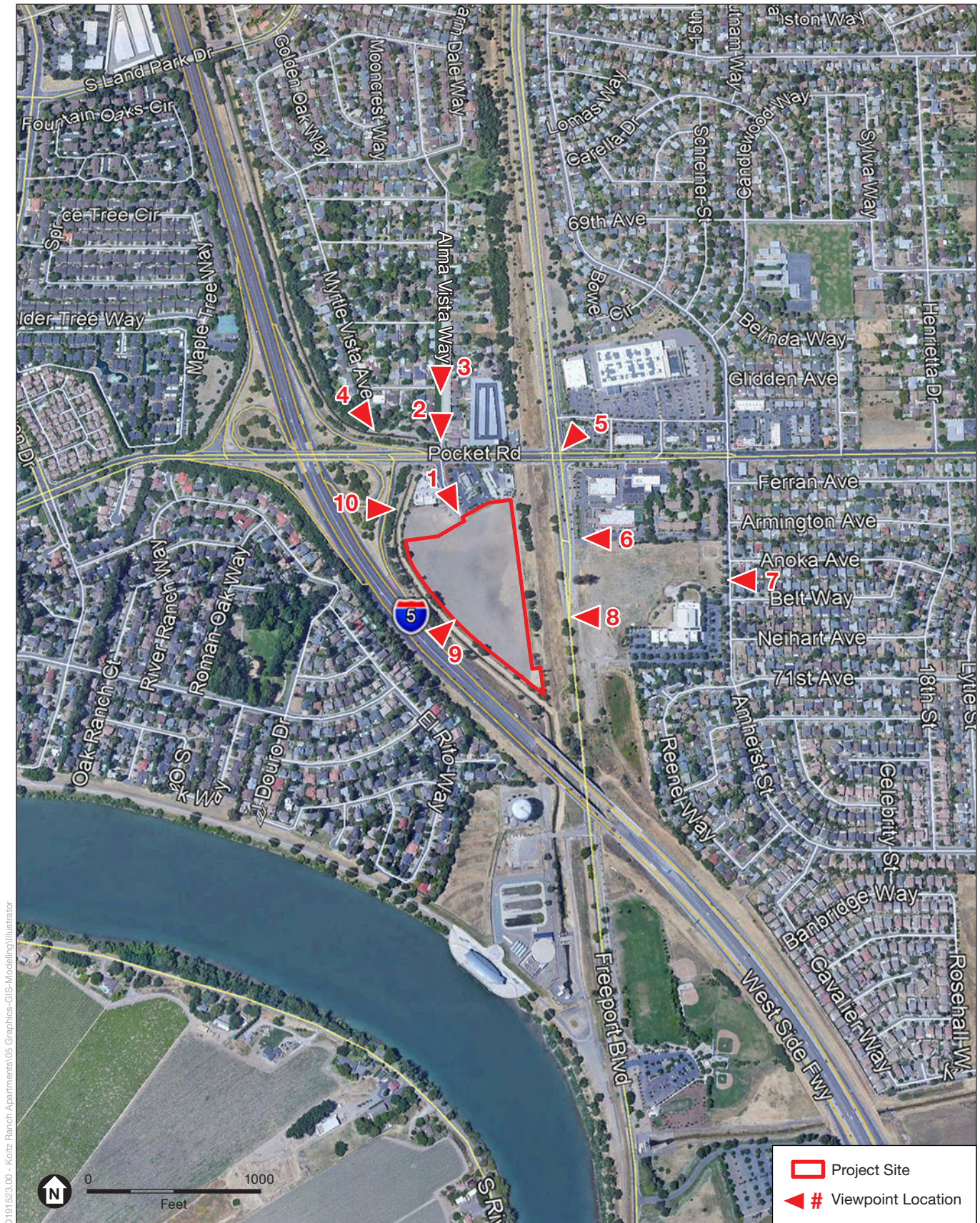
Views from within the project site and from its northern boundary include the site's barren surface, mature trees located along its southern boundary, the aforementioned metal cell tower, overhead power lines, and a 130-foot-tall silver-colored City-owned water tower across I-5, which is topped by a flagpole and American flag. Views from elsewhere within the project site include mature trees that flank the western and eastern perimeter of the site in varying degrees of concentration; intermittent views of vehicles traveling along Pocket Road, Freeport Boulevard, and I-5, and limited views of commercial and residential buildings to the north, northeast, and east of the project site.

Southern-facing views of the project site from Pocket Road and from Alma Vista Way immediately north of Pocket Road are largely obscured by the distance from the project site and by commercial buildings to the north of the project site that front Pocket Road. However, the aforementioned City-owned water tower remains visually prominent from this location. Views of the project site and the areas south of the project site from the single-family neighborhood north of the project site across Pocket Road are almost entirely obscured by distance from the project site, the aforementioned commercial buildings that front Pocket Road, houses within the neighborhood, mature trees, and, in the western portion of the neighborhood, by the elevated grade of Pocket Road.

Views of the project site from the east, including from Freeport Boulevard and from commercial and residential areas east and northeast of the project site, are largely and more progressively obscured by distance from the project site and by mature trees that flank portions of the project site's eastern boundary. Views toward the project site from the east include distant views of the over-stories of mature trees that flank the project site's western boundary.

Views of the project site from its western boundary, along the drainage that runs along the western boundary of the site include the site's barren surface, commercial buildings immediately north of the project site, mature trees along the eastern boundary of the project site, and limited views of commercial and other non-residential buildings east and northeast of the project site. Views of the project site from Pocket residential neighborhoods to the south, southwest, and west of I-5 are entirely obscured by the elevated grade of the freeway and the mature trees that screen views of the freeway and the areas east of the freeway from the west of the project site.





SOURCE: Google Earth, 2019

Klotz Ranch Apartments

**Figure 4.1-1**  
Photo Location Map





Viewpoint 1: View of the project site from the terminus of Klotz Ranch Court. View facing southeast.



Viewpoint 2: View toward the project site from Alma Vista Way immediately north of Pocket Road. View facing south.

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SOURCE: ESA, 2020

Klotz Ranch Apartments

**Figure 4.1-2**  
Viewpoints 1 and 2





Viewpoint 3: View toward the project site from Alma Vista Way, within the neighborhood north of the project site. View facing south.



Viewpoint 4: View toward the project site from the terminus of Myrtle Vista Avenue. View facing southeast.

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SOURCE: ESA, 2020

Klotz Ranch Apartments

**Figure 4.1-3**  
Viewpoints 3 and 4





Viewpoint 5: View toward the project site from the intersection of Pocket Road and Freeport Boulevard. View facing southwest.



Viewpoint 6: View toward the project site across Freeport Boulevard from the commercial center south of Pocket Road. View facing west.

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SOURCE: ESA, 2020

Klotz Ranch Apartments

**Figure 4.1-4**  
Viewpoints 5 and 6





Viewpoint 7: View toward the project site from Amherst Street in residential neighborhood east of the project site. View facing west.



Viewpoint 8: View toward the project site from Freeport Boulevard. View facing west.

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SOURCE: ESA, 2020

Klotz Ranch Apartments

**Figure 4.1-5**  
Viewpoints 7 and 8





Viewpoint 9: View toward the western portion of the project site. View facing northeast.



Viewpoint 10: View toward the northwestern portion of the project site. View facing northeast.

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SOURCE: ESA, 2020

Klotz Ranch Apartments

**Figure 4.1-6**  
Viewpoints 9 and 10



## Light and Glare

### Introduction to Light and Glare

Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare, and if designed incorrectly, could be considered unattractive. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime.

Ambient light levels or illumination is measured in foot-candles. **Table 4.1-1** lists typical ambient illumination levels in foot-candles for exterior and interior lighting. “Horizontal” foot-candles measure light illumination on a horizontal surface, such as a sidewalk or parking lot; “vertical” foot-candles measure light illumination on a vertical surface.

**TABLE 4.1-1**  
**TYPICAL ILLUMINATION LEVELS IN FOOT-CANDLES**

| Light Source    | Foot-Candles |
|-----------------|--------------|
| Starlight       | 0.0002       |
| Moonlight       | 0.02         |
| Street Lighting | 0.6-1.6      |
| Office Lighting | 70-150       |
| Direct Sunlight | 6,000-10,000 |

SOURCE: City of Sacramento, 2014. *Sacramento 2035 General Plan Background Report*. Public Review Draft, August 2014. Table 6-13, p. 6-122.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Reflective glare, such as the reflected view of the sun from a window or mirrored surface, can be distracting during the day.

## 4.1.2 Regulatory Setting

### Federal

There are no federal regulations pertaining to visual resources that are applicable to the proposed project.

### State

#### **California Scenic Highway Program**

California’s Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list

of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development, but seeks to encourage quality development that does not degrade the scenic value of the corridor. Jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program.

County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of State Scenic Highways.

According to the Caltrans list of designated scenic highways under the California Scenic Highway Program, there are no highway segments within the city of Sacramento that are designated scenic. SR 160 from the Contra Costa County line to the south limit of the city of Sacramento is the only officially designated state scenic highway near the city of Sacramento.<sup>1</sup> The project site is not visible from this portion of SR 160.

## Local

### ***City of Sacramento 2035 General Plan***

The project site is under the Suburban Corridor land use designation in the Sacramento 2035 General Plan. The Suburban Corridor land use designation is described in the 2035 General Plan (Page 2-88) as providing "auto-oriented, moderate-density retail, office, and residential corridors that support surrounding suburban neighborhoods." The 2035 General Plan includes the following goals and policies that are relevant to the proposed project.

### **Land Use and Urban Design Element**

**Goal LU 2.4: City of Distinctive and Memorable Places.** Promote community design that produces a distinctive, high-quality built environment whose forms and character reflect Sacramento's unique historic, environmental, and architectural context, and create memorable places that enrich community life.

***Policy LU 2.4.1: Unique Sense of Place.*** The City shall promote quality site, architectural and landscape design that incorporates those qualities and characteristics

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<sup>1</sup> California Department of Transportation, 2017. *California Scenic Highway Program*. Available: [http://www.dot.ca.gov/hq/LandArch/16\\_livability/scenic\\_highways/](http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/). Accessed April 11, 2017.

that make Sacramento desirable and memorable including: walkable blocks, distinctive parks and open spaces, tree-lined streets, and varied architectural styles. (RDR)

***Policy LU 2.4.2: Responsiveness to Context.*** The City shall require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento's climate, and consideration of cultural and historic

**Goal LU 2.7: City Form and Structure.** Require excellence in the design of the city's form and structure through development standards and clear design direction.

***Policy LU 2.7.3: Transitions in Scale.*** The City shall require that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. (RDR)

***Policy LU 2.7.7: Buildings that Engage the Street.*** The City shall require buildings to be oriented to and actively engage and complete the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking. (RDR)

**Goal LU 4.5: Urban Neighborhoods.** Promote vibrant, high-density, mixed-use urban neighborhoods with convenient access to employment, shopping, entertainment, transit, civic uses (e.g., school, park, place of assembly, library, or community center), and community-supportive facilities and services.

***Policy LU 4.4.1: Well-Defined Street Forms.*** The City shall require that new buildings in urban neighborhoods maintain a consistent setback from the public right-of-way in order to create a well-defined public sidewalk and street. (RDR)

***Policy LU 4.4.3: Building Design.*** The City shall encourage sensitive design and site planning in urban neighborhoods that mitigates the scale of larger buildings through careful use of building massing, setbacks, façade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details. (RDR)

## Environmental Resources Element

***Policy ER 7.1.3: Lighting.*** The City shall 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. (RDR)

***Policy ER 7.1.4: Reflective Glass.*** The City shall prohibit new development from (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. (RDR)

### **Urban Form Guidelines**

The 2035 General Plan includes Urban Form Guidelines for the Suburban Corridor designation, as presented below:

1. A development pattern with moderate lot coverage, moderate side yard setbacks, and buildings sited near the corridor to create a varied but consistent street wall
2. Building heights generally ranging from one to four stories
3. Highest building heights at major intersections and lower when adjacent to lower-density neighborhoods unless near a major intersection
4. Lot coverage generally not exceeding 50 percent
5. Building façades and entrances directly addressing the street and have a high degree of transparency on street-fronting façades
6. Buildings with a high degree of pedestrian-oriented uses located at street level
7. Integrated (vertical and horizontal) residential uses along the corridors
8. Parking limited in the front of the building and located to the side or rear of buildings
9. Limited curb cuts along arterial streets, with shared access to
10. Attractive streetscape with sidewalks designed to accommodate pedestrian traffic that includes appropriate landscaping, lighting, and pedestrian amenities/facilities
11. Public and semi-public outdoor spaces such as plazas, courtyards, and cafes

### ***Pocket Area Community Plan***

The Pocket Community Plan is part of the City's 2035 General Plan. The Pocket Community Plan land use designation for the project site is Suburban Corridor. Unless where specified otherwise, land use policies and urban form criteria for the Pocket Community Plan are contained in the applicable sections of the Land Use and Urban Design Element of the General Plan. In certain cases, the Pocket Community Plan provides a refinement of the goals and objectives of the General Plan to serve as a guideline for development specifically within the Pocket Community Plan area. However, there are no visual or urban form policies specific to the Pocket Community Plan area that are applicable to the proposed project or that supplement or modify applicable General Plan policies.

### ***City of Sacramento Planning and Development Code (Title 17)***

The City of Sacramento's Planning and Development Code (Sacramento City Code Title 17) is intended "[t]o implement the city's general plan through the adoption and administration of zoning laws, ordinances, rules, and regulations" (section 17.100.010(B)). To achieve this outcome, the Planning and Development Code:

- regulates the use of land, buildings, or other structures;
- regulates the location, height, and size of buildings or structures, yards, courts, and other open spaces, the amount of building coverage permitted in each zone, and population density; and

- regulates the physical characteristics of buildings, structures, and site development, including the location, height, and size of buildings and structures; yards, courts, and other open spaces; lot coverage; land use intensity through regulation of residential density and floor area ratios; and architectural and site design.

### **Site Plan and Design Review**

Pursuant to Chapter 17.808 of the City Code, with specific and limited exemptions described below, development in the city is subject to Site Plan and Design Review (SPDR). The intent of this process is to (1) ensure that the development is consistent with applicable plans and design guidelines; (2) is high quality and compatible with surrounding development; (3) is supported by adequate circulation, utility, and related infrastructure; (4) is water and energy efficient; and (5) avoids environmental effects to the extent feasible. The aspects of design considered in the SPDR process include architectural design, site design, adequacy of streets and accessways for all modes of travel, energy consumption, protection of environmentally sensitive features, safety, noise, and other relevant considerations.

Through the SPDR process, the City has the authority to approve or require deviations from design and development standards to respond to site- and project-specific considerations. Deviations are subject to review and approval of either the City Design Director or the City Planning and Design Commission, depending on the nature of the deviation.

Depending on the nature of the proposal, SPDR can be conducted by staff, the City Design Director, or the Planning and Design Commission. The Planning and Design Commission review is required for certain large projects (more than 150 residential units or 125,000 square feet for non-residential or mixed use projects), projects more than 60 feet in height (except within the Central City Special Planning District), or where a deviation requires Commission review. City Design Director review is required where a project is not in substantial compliance with applicable design guidelines or requests a deviation. For projects taking place in a historic district or related to an historic landmark, SPDR is undertaken by the Preservation Commission or the City Preservation Director, as appropriate. All other projects not requiring review by the respective Commission or Director are reviewed by City staff.

## **4.1.3 Analysis, Impacts and Mitigation**

### **Significance Criteria**

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts to aesthetics may be considered significant if implementation of the proposed project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; or

- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.
  - *Glare.* Glare is considered to be significant if it would be cast in such a way as to cause public hazard or annoyance for a sustained period of time.
  - *Light.* Light is considered significant if it would be cast onto oncoming traffic or residential uses.

## Issues not Discussed in Impacts

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. No scenic vistas are present in the vicinity of the project site, which is located in a developed urban setting, and therefore the proposed project would not have an impact on a scenic vista. As described in the Regulatory Setting above, none of the freeway segments within the area of the project site has been designated as scenic. Thus, implementation of the proposed project would not damage scenic resources in the vicinity of a scenic highway. For these reasons, the first and second significance criteria listed above are not further addressed in this section of the EIR.

## Methodology and Assumptions

The analysis of aesthetics involves a qualitative comparison of the existing built and natural environment to the future built and natural environment and evaluation of the visual changes that would result from implementation of the proposed project. Key view corridors were examined, and existing views to and from the project site were compared to those that would be expected to occur in the future under the proposed project. In addition, the changes proposed in the project were evaluated in the context of adopted City policies and regulations.

## Impacts and Mitigation Measures

**Impact 4.1-1: The proposed project could substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality.**

Changes in the visual character or quality of a site affect each individual differently, and thus to some extent are based on subjective and individual perspectives. Implementation of the proposed project would result in physical changes to the project site in the form of a mid-rise multifamily residential development on a currently vacant site within an urban context.

The 266-unit apartment complex would consist of six apartment buildings and recreation/amenity areas, including a clubhouse/pool area, a tot lot on the northeastern corner of the site, and a sports court and dog run on the southwest corner of the site. The project components are shown in Figure 2-7, in Chapter 2, Project Description.

The design of the proposed apartment structures is modern. A variety of stucco colors would be employed to accentuate the architecture. Darker colors would be used at the base and sides of the buildings to provide a strong visual base while lighter and more vibrant colors will be used to signify building entry and provide visual points of reference. Each of the structures would be 42

feet tall with architectural details (i.e., parapets) reaching a height of 48 feet. Energy efficient LED light fixtures would be installed within the apartment buildings and for exterior lighting. Exterior elevations for each type of building are provided in Figures 2-9 and 2-10 in Chapter 2, Project Description.

The clubhouse/pool area would be located on the northwestern portion of the site. The clubhouse would include an outdoor amenity deck approximately 32 feet in height. The pool area would include a pool, spa, outdoor kitchen, television and fire place lounges, hammock area, yoga lawn, two bocce ball courts, and a passive recreation lawn lounge area.

Landscaping consisting of deciduous, conifer, evergreen, flowering, and native trees would be located along the perimeter of the project site and between the buildings. Overall, the proposed project would include 107,982 square feet of landscaping, which encompasses approximately 20 percent of the project site. Water detention basins and landscaping surrounding the basins, which would be fenced off from the main project would provide another 81,921 square feet of green space.

Implementation of the proposed project would result in changes to the existing visual character of the project site and would change views of the project site from areas adjacent to the project site. The currently vacant lot would be replaced with a modern multi-family residential complex comprising six 42-foot-tall buildings and associated amenities and landscaped elements. The new buildings would be visible to varying degrees by pedestrians and occupants of vehicles on Pocket Road, Freeport Boulevard, and other local streets, as well from residential and non-residential uses adjacent to the project site. Previously unobstructed views across the currently unoccupied site would be replaced with views of multi-story buildings with concrete, stucco and glass exterior materials. At night, exterior security and accent lighting and interior lighting from residential units would be visible from the aforementioned vantage points. Given that the project site is currently vacant, the visual change would be substantial.

While implementation of the proposed project would result in substantial visual changes to the project site and views of the project site, the physical development would be required to be consistent with the applicable policies of the Sacramento General Plan, which includes policies designed to ensure new development is visually compatible and complimentary to its site and surroundings. Specifically, General Plan Policy LU 2.4.2 ensures that the City require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento's climate, and consideration of cultural and historic context of Sacramento's neighborhoods and centers. Policy LU 2.7.3 requires that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. Policy LU 2.7.7 requires buildings to be oriented to and actively engage and complete the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking. Policy LU 4.4.3 ensures that the City encourages sensitive design and site planning in urban neighborhoods that mitigates the scale of larger buildings through careful use of building massing, setbacks, façade articulation,

fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details. Policy ER 7.1.4 guides the City to seek to ensure that new development does not significantly impact Sacramento's natural and urban landscapes. In addition, as previously discussed, all development in the city is subject to site plan and design review to ensure that the development is consistent with applicable plans and design guidelines and is compatible with surrounding development. Site plan and design review would ensure that development of the proposed project is consistent with applicable plans and design guidelines, is of high quality, and is compatible with surrounding development, thus avoiding adverse impacts to visual character within the context of a built-up urban setting.

In summary, while the proposed project would represent a substantial visual change to the existing condition on the currently unoccupied site, new physical development that would occur with implementation of the proposed project would be required to comply with applicable plans, policies, and guidelines that are designed to ensure new development is visually compatible and complimentary to its site and surroundings. Consequently, the effects of the proposed project on visual character and quality would be a **less-than-significant** impact.

#### Mitigation Measure

None required.

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#### **Impact 4.1-2: The proposed project could create a new source of substantial light.**

##### **Construction**

Construction of the proposed project would take place during daylight hours, within a standard daily construction time window. Nighttime construction activities are not anticipated. Lighting within the construction site would be for security purposes only and would be focused within the project site so as to not be directly visible to nearby sensitive receptors residing in nearby housing units. Therefore, the impact related to construction lighting would be **less than significant**.

##### **Operation**

The proposed project would include a variety of lighting and signage, including building perimeter lighting, emergency lighting, outdoor security lighting, landscape lighting, and interior lighting that would be visible from outside of buildings. Building lighting could result in illuminated surfaces that could be directly visible from adjacent uses or other affected light-sensitive uses (e.g., pedestrians, vehicles). The photometric plan prepared for the proposed project shows that light fixtures would be placed throughout the site to provide illumination in parking areas, along pedestrian paths, and near buildings. The photometric plan also demonstrates that the lighting at the property lines is near zero foot candles, meaning that lighting is low along the property lines. As a result, while lighting from the project site would be visible from adjacent areas, the light would not cause an adverse impact on surrounding light-sensitive uses.

The Sacramento 2035 General Plan includes Policy ER 7.1.3, which requires projects 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. Compliance with General Plan Policy ER 7.1.3 would ensure that the proposed project would not create a new source of substantial light and the impact would be **less than significant**.

#### Mitigation Measure

None required.

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#### **Impact 4.1-3: The proposed project could create a new source of glare.**

Glare is caused by direct light sources as well as reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on the intensity and direction of sunlight. At night, artificial lighting can cause glare from reflective surfaces. Glare can create hazards to motorists and nuisances for pedestrians and other viewers. The effects of additional nighttime lighting have been previously considered under Impact 4.1-2.

The buildings throughout the project site would be finished with stucco, with wood beams and cementitious trim accents. No reflective building materials would be used. Further, the glass installed for building windows would be typical glass used in residential structures, and would not be overly reflective.

The Sacramento 2035 General Plan includes Policy ER 7.1.4, which prohibits new development from (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. Required adherence to the requirements of the general plan would ensure that the proposed project would not create glare that could result in a public hazard or a substantial annoyance to nearby land uses, and the impact would be **less than significant**.

#### Mitigation Measure

None required.

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### **Cumulative Impacts**

**Impact 4.1-4: The proposed project, in combination with other cumulative development, could contribute to substantial cumulative degradation of the existing visual character or quality in the vicinity.**

The geographic context for changes in the visual character in the vicinity of the proposed project is the Pocket Community Plan area. With the exception of a few pockets of undeveloped land,

such as the project site, the Pocket Community Plan area is mostly built out with well-established neighborhoods. As discussed previously in this section, the Pocket area is characterized by tree-lined streets flanked by residences of a multitude of ages, heights, colors, materials, and architectural styles. Interspersed among the traditional residential neighborhoods are commercial corridors, including Pocket Road, Freeport Boulevard, and other distinct pockets of more typically urban uses, including predominantly low-rise buildings with granite, metal, and glass facades, and restaurants, shops, supermarkets, big box retail buildings, office buildings, medical buildings, and auto repair shops of varying heights, styles, colors, materials, and ages.

As discussed above, while implementation of the proposed project would result in substantial visual changes to the project site and views of the project site, the physical development would be required to be consistent with the applicable policies of the Sacramento General Plan, which includes policies designed to ensure new development is visually compatible and complimentary to its site and surroundings. In addition, as previously discussed, all development in the city is subject to site plan and design review to ensure that the development is consistent with applicable plans and design guidelines and is compatible with surrounding development. Site plan and design review would ensure that development of the proposed project is consistent with applicable plans and design guidelines, is of high quality, and is compatible with surrounding development, thus avoiding adverse impacts to visual character within the context of a built-up urban setting. Therefore, the cumulative impact would be **less than significant**.

#### Mitigation Measure

None required.

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#### **Impact 4.1-5: The proposed project, in combination with other cumulative development, could contribute to cumulative sources of substantial light in the area.**

Cumulative impacts related to light under buildout of the General Plan are analyzed in the Sacramento 2035 General Plan Master EIR. Under general plan buildout, the geographic context for the analysis of cumulative visual resources impacts includes the existing incorporated city limits plus a few small adjacent areas to the north and west. This cumulative impact analysis considers implementation of the proposed 2035 General Plan.

As previously discussed, Sacramento is an urbanized city and contains numerous existing sources of nighttime lighting. Existing development within the city of Sacramento and the remainder of Sacramento County outside of the city limits have resulted in a cumulative increase in nighttime lighting.

The cumulative effect of this past development has resulted in a cumulative loss of available nighttime views resulting in a potentially significant cumulative effect. Future development would occur within the city within existing urban uses, which would already be subject to lighting from existing development and vehicle headlights. General Plan Policy ER 7.1.3 requires that misdirected, excessive, or unnecessary outdoor lighting be minimized. Compliance by future

development in the city, including development allowed under the proposed project, with existing City policy would limit excessive lighting and the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

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**Impact 4.1-6: The proposed project, in combination with other cumulative development, could contribute to cumulative sources of glare.**

The cumulative context for glare is the geographic area where glare that is generated by the proposed project is also exposed to glare from other cumulative projects. This would primarily include development in the vicinity of the proposed project. It should be noted that glare is a project-specific effect, caused by individual occurrences that do not necessarily lead to cumulative effects. The cumulative effects would typically be annoyance and awareness that glare is recurring in an area.

Interspersed among the traditional residential neighborhoods of the Pocket area commercial corridors, including Pocket Road, Freeport Boulevard, and other distinct pockets of more typically urban uses, including buildings with granite, metal, and glass facades, including retail centers located either adjacent to the street frontage or set back with large, sparsely landscaped surface parking areas. These retail centers also generally have a significant amount of artificial lighting both in the parking lots and on the storefronts and signs. Many of the storefronts consist primarily of glass that can be a source of glare.

As discussed above, the Sacramento 2035 General Plan includes Policy ER 7.1.4, which prohibits new development from (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. Required adherence to the requirements of the general plan would ensure that the proposed project would not create glare that could result in a public hazard or a substantial annoyance to nearby land uses, and the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

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## 4.2 Air Quality

This section addresses the potential impacts of the proposed project on ambient air quality and its potential to expose people to unhealthful pollutant concentrations. This section also identifies mitigation measures to reduce the severity of any significant air quality impacts from the proposed project. Impacts related to greenhouse gases (GHG) are addressed in Section 4.4, Global Climate Change.

Comments on the NOP (see Appendix B) included a letter from the Sacramento Metropolitan Air Quality Management District (SMAQMD) that requested that the analysis examine the types and levels of emissions generated by the proposed project, the existing air quality conditions, and the impact of the project on emissions of nitrogen oxides, reactive organic gases, particulate matter (PM10 and PM2.5) including from exhaust and fugitive dust, and toxic air contaminants (TACs). In addition, the SMAQMD requested that the proposed project's construction and operational emissions be disclosed and analyzed and that possible onsite and offsite mitigation measures to reduce construction and operational emissions be evaluated. This issues have been addressed in this section.

In addition, due to the project site's proximity to Interstate 5 (I-5), SMAQMD suggested that the project proponent consider reducing the exposure of future residents on the project site to (TACs) by planting a vegetation barrier along the western boundary of the site. In addition, as an additional measure to reduce resident exposure to air pollutants generated by traffic on I-5, SMAQMD suggested that the project proponent plant as many trees as possible throughout the site. As shown in Figure 2-8 (see Chapter 2), a vegetative barrier would be installed along the western side of the project site between the proposed project and I-5. In addition, the project site would be extensively landscape with trees and vegetative cover. Please note that CEQA currently does not require an analysis of the environment's impact on proposed new sensitive receptors.<sup>1</sup> As a result, the impact of (TACs) generated by existing traffic traveling along I-5 on future sensitive receptors on the project site is not discussed further.

The analysis included in this section was developed based on project-specific construction and operational features and assumptions provided by the project proponent, data provided in the *City of Sacramento 2035 General Plan* (2035 General Plan),<sup>2</sup> the *City of Sacramento 2035 General Plan Master Environmental Impact Report*,<sup>3</sup> and traffic information provided by the traffic consultant (see Section 4.6).<sup>4</sup> The impacts were assessed to be consistent with SMAQMD's *CEQA Guide to Air Quality Assessment in Sacramento County* (CEQA Guide).<sup>5</sup>

<sup>1</sup> *California Building Industry Association v. Bay Area Air Quality Management District* (2015)

<sup>2</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015.

<sup>3</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.

<sup>4</sup> National Data & Surveying Services, 2020. Peak Hour Turning Movement Counts for the Klotz Apartment Project. March 2020, and Kimley Horn, 2020, Existing (2020) plus Project Peak-Hour Traffic Volumes.

<sup>5</sup> Sacramento Metropolitan Air Quality Management District, 2019. *Guide to Air Quality Assessment in Sacramento County*. Updated July 2019. Available: [www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools](http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools). Accessed April 7, 2020.

## 4.2.1 Environmental Setting

Air quality is affected by the emissions rate, type, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Wind speed, wind direction, and air temperature combined with topographic features such as mountains and valleys determine how air pollutant emissions affect local air quality.

### Climate and Topography

Sacramento lies within the Sacramento Valley Air Basin (SVAB). The topographic features giving shape to the SVAB are the Coast Range to the west, the Sierra Nevada to the east, and the Cascade Range to the north. These mountain ranges channel winds through the SVAB, but also inhibit the dispersion of pollutant emissions. The SVAB, including Sacramento, is characterized by a Mediterranean climate that includes mild, rainy winter weather from November through March and warm to hot, dry weather from May through September.

During the summer, Sacramento Valley has an average high temperature of 92 degrees Fahrenheit (°F) and an average low temperature of 58 °F. In the winter, the average high temperature is 58 F, and the average low is 40 °F. The average annual rainfall is approximately 20 inches. The predominant annual and summer wind pattern in the Sacramento Valley is the full sea breeze, commonly referred to as Delta breezes. These cool winds originate from the Pacific Ocean and flow through the Carquinez Straits, a sea-level gap in the Coast Range. In the winter (December to February), northerly winds predominate. Wind directions in the Sacramento Valley are influenced by the predominant wind flow pattern associated with each season. During about half the days from July through September, however, a phenomenon called the “Schultz Eddy,” a large isotropic vertical-axis eddy on the north side of the Carquinez Straits, prevents the Delta breezes from transporting pollutants north and out of the SVAB and causes the wind pattern to circle back south, all of which tends to keep air pollutants in the SVAB. This phenomenon’s effect exacerbates the pollution levels in the area and increases the likelihood of violations of State and federal air quality standards.

The vertical and horizontal movement of air is an important atmospheric component involved in the dispersion and subsequent dilution of air pollutants. Without movement, air pollutants can collect and concentrate in a single area, increasing the associated health hazards. For example, inversions occur frequently in the SVAB, especially during autumn and early winter, and restrict the vertical dispersion of pollutants released near ground level.

### Air Pollutants of Concern

Air pollutants of concern within the SVAB include certain criteria air pollutants and TACs.

#### ***Criteria Air Pollutants***

Criteria air pollutants are a group of six common air pollutants for which the United States Environmental Protection Agency (U.S. EPA) has set ambient air quality standards (see Table 4.2-3). Criteria air pollutants include ground-level ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM) in size fractions of 10 microns or less in diameter (PM<sub>10</sub>) and 2.5 microns or less in diameter (PM<sub>2.5</sub>), and lead. Most

of the criteria pollutants are directly emitted; however, ozone is a secondary pollutant that is formed in the atmosphere by chemical reactions between nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG). In addition to the criteria air pollutants identified by the US EPA, California has added four criteria air pollutants (visibility reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride).

Criteria air pollutants of concern in the SVAB include ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, as concentrations of these pollutants are above state and national ambient air quality standards (see Table 4.2-2). SO<sub>2</sub>, CO, lead, visibility reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride concentrations are well below state and national ambient air quality standards and are not air pollutants of concern in the SVAB. **Table 4.2-1** lists the health effects associated with the criteria air pollutants of concern.

**TABLE 4.2-1**  
**HEALTH AND ENVIRONMENTAL EFFECTS OF CRITERIA AIR POLLUTANTS OF CONCERN**

| Pollutant          | Adverse Effects   |
|--------------------|---|
| Ozone              | <ul style="list-style-type: none"> <li>People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. In addition, people with certain genetic characteristics, and people with reduced intake of certain nutrients, such as vitamins C and E, are at greater risk from ozone exposure.</li> <li>Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and airway inflammation. It also can reduce lung function and harm lung tissue. Ozone can worsen bronchitis, emphysema, and asthma, leading to increased medical care.</li> <li>Ozone affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges and wilderness areas. In particular, ozone harms sensitive vegetation during the growing season.</li> </ul>   |
| Particulate Matter | <ul style="list-style-type: none"> <li>Particulate matter contains microscopic solids or liquid droplets that are so small that they can be inhaled and cause serious health problems. Particles less than 10 micrometers in diameter pose the greatest problems, because they can get deep into your lungs, and some may even enter the bloodstream. Of these, particles less than 2.5 micrometers in diameter, also known as fine particles or PM<sub>2.5</sub>, pose the greatest risk to health.</li> <li>Fine particles (PM<sub>2.5</sub>) are the main cause of reduced visibility (haze) in parts of the United States, including many national parks and wilderness areas.</li> </ul>   |
| Nitrogen Dioxide   | <ul style="list-style-type: none"> <li>Breathing air with a high concentration of NO<sub>2</sub> can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms. Longer exposures to elevated concentrations of NO<sub>2</sub> may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO<sub>2</sub>.</li> <li>NO<sub>2</sub>, along with other oxides of nitrogen (NO<sub>x</sub>), reacts with other chemicals in the air to form both particulate matter and ozone. Both of these are also harmful when inhaled due to effects on the respiratory system.</li> </ul> |

SOURCES: U.S. Environmental Protection Agency (US EPA), 2018. Ozone Basics. Available: <https://www.epa.gov/ozone-pollution/ozone-basics#effects>. Accessed April 6, 2020.  
 US EPA, 2018. Particulate Matter (PM) Basics. Available: <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#effects>. Accessed April 6, 2020.  
 US EPA, 2016. Basic Information about NO<sub>2</sub>. Available: <https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects>. Accessed April 6, 2020.

### Ground-Level Ozone

As discussed above, ozone is a secondary air pollutant that forms in the atmosphere through a complex series of photochemical reactions involving the ozone precursors: ROG (also referred to

as volatile organic compounds (VOC) by some regulating agencies) and  $\text{NO}_x$ . The main sources of ROG in the SVAB are the evaporation of solvents, paints, and gasoline; the main sources of  $\text{NO}_x$  are combustion processes (including motor vehicle engines). Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through a photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath, and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

### **Carbon Monoxide**

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure of humans to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impaired central nervous system function, and angina (chest pain) in persons with serious heart disease. Very high concentrations of CO can be fatal.

### **Particulate Matter**

PM is frequently classified by particle size, where  $\text{PM}_{10}$  consists of PM that is 10 microns or less in diameter and  $\text{PM}_{2.5}$  consists of the subset of  $\text{PM}_{10}$  that is 2.5 microns or less in diameter (a micron is one-millionth of a meter).  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fine particulate matter,  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$ , are a health concern particularly at levels above the federal and state ambient air quality standards.  $\text{PM}_{2.5}$  (including diesel exhaust particles) has greater effects on health because these particles are small enough to be able to penetrate to the deepest parts of the lungs.

### **Nitrogen Dioxide**

$\text{NO}_2$  is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of  $\text{NO}_2$ . Aside from its contribution to ozone formation,  $\text{NO}_2$  can increase the risk of acute and chronic respiratory disease and reduce visibility.  $\text{NO}_2$  may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels.

### **Other Criteria Air Pollutants**

Other criteria air pollutants include  $\text{SO}_2$  and lead, which are not air pollutants of concern in the SVAB.  $\text{SO}_2$  is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel.



SO<sub>2</sub> is also a precursor to the formation of particulate matter, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain. The maximum SO<sub>2</sub> concentrations recorded in the project vicinity are well below federal and state standards.

Lead has a range of adverse neurotoxic health effects, which puts children at special risk. Some lead-containing chemicals cause cancer in animals. Primary sources of lead in the atmosphere include use of leaded gasoline (phased out in the United States beginning in 1973), use of lead based paint (on older houses and cars), smelters (metal refineries), and manufacture of lead storage batteries. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California.

### ***Toxic Air Contaminants***

TACs are State of California designated airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances and may be emitted from a variety of common sources including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. The primary TAC of concern for the proposed project is diesel particulate matter (DPM), which would be generated during the construction phase.

### **Diesel Particulate Matter**

The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways and rail lines with diesel locomotive operations.

The California Air Resources Board (CARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans. It is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM. More than 90 percent of DPM is less than 1 µm in diameter, and thus is a subset of PM<sub>2.5</sub>; therefore, DPM also contributes to the same non-cancer health effects as PM<sub>2.5</sub> exposures (see Table 4.2-1). DPM may also facilitate development of new allergies and susceptibility to respiratory diseases.

Regulation of diesel engines and fuels have decreased DPM levels by 68 percent since 1990. Furthermore, CARB estimates that emissions of DPM in 2035 will be less than half those in 2010, even with increasing vehicle miles traveled (VMT).<sup>6</sup> Nonetheless, based on 2012 estimates of statewide exposure, DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime.

### **Asbestos**

Asbestos is a fibrous mineral and used as a processed component of building materials. Because asbestos has been proven to cause serious adverse health effects, including asbestosis and lung

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<sup>6</sup> California Air Resources Board, 2016. Overview: Diesel Exhaust and Health. Available: <https://www.arb.ca.gov/research/diesel/diesel-health.htm>. Accessed April 7, 2020.

cancer, it is strictly regulated based on its natural widespread occurrence and its use as a building material. When building materials containing asbestos are disturbed, asbestos fibers may be released and suspended in ambient air. Asbestos is also naturally occurring in ultramafic rock (a rock type commonly found in California), but its occurrence at the project site has a low probability.<sup>7</sup>

## Existing Conditions

The project site is located in Sacramento, California, approximately 80 miles northeast of San Francisco and 85 miles west-southwest of Lake Tahoe. The project site is bounded by Pocket Road to the north and Freeport Boulevard to the east. The southwestern boundary of the project site is located adjacent to Interstate 5 (I-5), which traverses the state from north to south. In addition to I-5, the City of Sacramento is bisected by Interstate 80 (I-80), which provides an east-west connection between San Francisco and Reno; and U.S. Highway 50, which provides an east-west connection between Sacramento and South Lake Tahoe. Two railroads also transect Sacramento; the Union Pacific Railroad (UPRR) and the BNSF Railway. The project site was previously graded and is currently vacant.

### *Existing Ambient Air Quality*

Nearby monitoring stations provide air quality data that are representative of the ambient air at the project site and are located in Sacramento at 1309 T Street and on Bercut Drive. The T Street monitoring station measures and records concentrations of O<sub>3</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, while the Bercut Drive station provides the nearest representative measurement of CO. The T Street monitoring station and the Bercut Drive monitoring stations are located approximately 6 miles and 8 miles north of the project site, respectively. **Table 4.2-2** presents a 4-year summary of air pollutant concentration data collected at these monitoring stations for O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and CO, as well as the number of days the applicable standards were exceeded in a given year. National and state regulatory standards are discussed in the Regulatory Setting Section 4.2.2, below.

As shown in Table 4.2-2, ozone levels in the project vicinity have resulted in numerous violations of ambient air quality standards between 2015 and 2018. Concentrations of ozone in the project vicinity only exceeded the 1-hour state standard twice, once in 2017 and again in 2018, but exceeded the 8-hour national and state standards 11 times throughout the 4-year study period.

Monitoring data for PM<sub>10</sub> in the project area indicate that the state standard was exceeded each year during the 4-year study period with at least 22 exceedances in 2018; however, the exact number of exceedance days is unavailable. There were no exceedances of the national 24-hour standard for PM<sub>10</sub> from 2015 through 2017; however, there were six recorded exceedances of the national 24-hour standard in 2018. Regarding PM<sub>2.5</sub>, the study area was estimated to have exceeded the 24-hour national standard approximately three times in 2015, approximately six times in 2017, and an unknown amount of times in 2018.

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<sup>7</sup> California Department of Conservation, 2000. A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos. August 2000. Available: [ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr\\_2000-019.pdf](ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf). Accessed April 7, 2020.

There have been no recorded exceedances of the state or national 1-hour and annual NO<sub>2</sub> standards or the state or national 1-hour and 8-hour CO standards during the 4-year study period.

**TABLE 4.2-2**  
**SUMMARY OF AIR QUALITY MONITORING DATA (2015–2018)**

| Pollutant   | National/State Standard | 2015              | 2016              | 2017                | 2018               |
|---|-------------------------|-------------------|-------------------|---------------------|--------------------|
| <b>Ozone</b>  |                         |                   |                   |                     |                    |
| Maximum 1-hour concentration, ppm                                     | 0.09 <sup>a</sup>       | 0.092             | 0.094             | <b>0.107</b>        | <b>0.097</b>       |
| Number of days above State 1-Hour standard                            |                         | 0                 | 0                 | 1                   | 1                  |
| Maximum 8-hour concentration, ppm                                     | 0.070 / 0.070           | <b>0.077</b>      | <b>0.075</b>      | <b>0.078</b>        | <b>0.085</b>       |
| Number of days above National and State 8-Hour standard               |                         | <b>4</b>          | <b>3</b>          | <b>3</b>            | <b>1</b>           |
| <b>Nitrogen Dioxide (NO<sub>2</sub>)</b>                              |                         |                   |                   |                     |                    |
| Annual average concentration, ppm                                     | 0.053 / 0.030           | 0.011             | 0.010             | 0.010               | 0.009              |
| Maximum 1-Hour concentration, ppm                                     | 0.100 / 0.18            | 0.055             | 0.055             | 0.059               | 0.066              |
| Number of days above National 1-Hour standard                         |                         | 0                 | 0                 | 0                   | 0                  |
| Number of days above State 1-Hour standard                            |                         | 0                 | 0                 | 0                   | 0                  |
| <b>Respirable Particulate Matter (PM<sub>10</sub>)</b>                |                         |                   |                   |                     |                    |
| Annual average concentration, µg/m <sup>3</sup>                       | 20 <sup>a</sup>         | <b>22.6</b>       | 19.1              | <b>23.8</b>         | --                 |
| Maximum 24-Hour concentration (national/state), µg/m <sup>3</sup>     | 150 / 50                | 57.8/ <b>59.1</b> | 50.3/ <b>51.4</b> | 149.9/ <b>150.3</b> | <b>292.6/309.5</b> |
| Estimated number of days above National 24-Hour standard <sup>c</sup> |                         | 0                 | 0                 | 0                   | <b>6.0</b>         |
| Estimated number of days above State 24-Hour standard <sup>c</sup>    |                         | NA                | <b>1.1</b>        | NA                  | <b>22.2</b>        |
| <b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>                     |                         |                   |                   |                     |                    |
| Annual average concentration, µg/m <sup>3</sup>                       | 12.0 / 12               | 9.5               | 7.6               | 9.1                 | 12.7               |
| Maximum 24-Hour concentration, µg/m <sup>3</sup>                      | 35 <sup>b</sup>         | <b>36.3</b>       | 24.4              | <b>44.5</b>         | <b>149.9</b>       |
| Estimated number of days above National 24-Hour standard <sup>c</sup> |                         | <b>3.0</b>        | 0                 | <b>6.1</b>          | --                 |
| <b>Carbon Monoxide (CO)</b>   |                         |                   |                   |                     |                    |
| Maximum 8-Hour concentration, ppm                                     | 9 / 9.0                 | 0.9               | 1.3               | 1.2                 | 3                  |
| Number of days above National or State 8-hour standard                |                         | 0                 | 0                 | 0                   | 0                  |
| Maximum 1-Hour concentration, ppm                                     | 35 / 20                 | 1.3               | 1.6               | 1.9                 | 3.3                |
| Number of days above National or State 1-hour standard                |                         | 0                 | 0                 | 0                   | 0                  |

NOTES: Number of days exceeded is for all days in a given year, except for particulate matter. PM<sub>10</sub> and PM<sub>2.5</sub> are monitored every three days. Ozone, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> monitoring data from T Street Station. Carbon monoxide monitoring data from Sacramento-Bercut Station. The CARB and US EPA use different methods to calculate the emissions for certain criteria air pollutants for comparisons to the state and national standards.

**Bold** values are in excess of applicable standard.

-- indicates data was not available

ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; NA = No data or insufficient data.

a. State standard, not to be exceeded.

b. National standard, not to be exceeded.

c. Particulate matter sampling schedule of one out of every 3 days, for a total of approximately 122 samples per year. Estimated days exceeded mathematically estimates of how many days' concentrations would have been greater than the level of the standard had each day been monitored.

SOURCES: California Air Resources Board, 2018. Summaries of Air Quality Data, 2015-2018. Available:

<https://www.arb.ca.gov/adam/index.html>. Accessed February 27, 2020.

U.S. Environmental Protection Agency, 2018. Air Data. Available: <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=5f239fd3e72f424f98ef3d5def547eb5>. Accessed February 27, 2020.

## **Odors**

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

## **Sensitive Receptors**

Air quality does not affect individuals or groups within the population in the same way, and some groups are more sensitive to adverse health effects caused by exposure to air pollutants than others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases.

Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces the overall health risk associated with exposure to pollutants. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions. Workers are not considered sensitive receptors because all employers are required to follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees. The nearest sensitive receptors to the project site consist of the following:

- Residences on the eastern side of River Ranch Way and El Rito Way, located approximately 400 feet from the southwestern boundary of the project site;
- Residences on the opposite side of Pocket Road, located approximately 450 feet north of the project site;
- Whispering Pines Apartments, located approximately 900 feet from the eastern boundary of the project site;
- Residences along Reenel Way, located approximately 600 feet east of the project site;

- John D. Sloat Elementary School, located approximately 2,000 feet northeast of the project site; and a
- Child care center (Her Daycare WeeCare) is located approximately 1,250 feet east of the project site.

## 4.2.2 Regulatory Setting

### Federal

#### ***Criteria Air Pollutants***

The US EPA is required by the federal Clean Air Act (CAA) to identify and establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The federal CAA identifies two types of NAAQS: primary and secondary. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The US EPA has set NAAQS for six principal pollutants, called criteria air pollutants. These criteria air pollutants include O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO, PM, and lead. The original indicator for PM was total suspended particulates; currently the standards are in terms of PM<sub>10</sub> and PM<sub>2.5</sub>. **Table 4.2-3** presents the current NAAQS (and state ambient air quality standards) and provides a brief discussion of the principal sources for each pollutant.

The US EPA classifies air basins (or portions thereof) as “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQS had been achieved. The classification is determined by comparing actual monitoring data with the standards. “Unclassified” is defined by the federal CAA as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant. Furthermore, an area may be designated attainment with a maintenance plan (also known as a maintenance area), which means that an area was previously non-attainment for a criteria air pollutant but has since been re-designated as attainment. These areas have demonstrated through modeling they have sufficient controls in place to meet and maintain the NAAQS.

**TABLE 4.2-3  
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND MAJOR SOURCES**

| Pollutant   | Averaging Time      | State Standard  | National Standard      | Major Pollutant Sources   |
|---|---------------------|---|------------------------|---|
| Ozone   | 1 hour              | 0.09 ppm  | ---                    | Formed when reactive organic gases (ROG) and nitrogen oxides (NO <sub>x</sub> ) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/ industrial mobile equipment.  |
|   | 8 hour              | 0.070 ppm   | 0.070 ppm              |   |
| Carbon Monoxide                                   | 1 hour              | 20 ppm  | 35 ppm                 | Internal combustion engines, primarily gasoline-powered motor vehicles.   |
|   | 8 hour <sup>a</sup> | 9.0 ppm   | 9 ppm                  |   |
| Nitrogen Dioxide                                  | 1 hour              | 0.18 ppm  | 100 ppb                | Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.  |
|   | Annual Avg.         | 0.030 ppm   | 0.053 ppm              |   |
| Sulfur Dioxide                                    | 1 hour              | 0.25 ppm  | 75 ppb                 | Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.   |
|   | 3 hour              | ---   | 0.5 ppm <sup>b</sup>   |   |
|   | 24 hour             | 0.04 ppm  | 0.14 ppm               |   |
|   | Annual Avg.         | ---   | 0.030 ppm              |   |
| Respirable Particulate Matter (PM <sub>10</sub> ) | 24 hour             | 50 µg/m <sup>3</sup>                                  | 150 µg/m <sup>3</sup>  | Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).  |
|   | Annual Avg.         | 20 µg/m <sup>3</sup>                                  | ---                    |   |
| Fine Particulate Matter (PM <sub>2.5</sub> )      | 24 hour             | ---   | 35 µg/m <sup>3</sup>   | Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO <sub>x</sub> , sulfur oxides, and organics. |
|   | Annual Avg.         | 12 µg/m <sup>3</sup>                                  | 12.0 µg/m <sup>3</sup> |   |
| Lead  | Monthly Ave.        | 1.5 µg/m <sup>3</sup>                                 | ---                    | Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.  |
|   | Quarterly           | ---   | 1.5 µg/m <sup>3</sup>  |   |
| Hydrogen Sulfide                                  | 1 hour              | 0.03 ppm  | No National Standard   | Geothermal power plants, petroleum production and refining  |
| Sulfates  | 24 hour             | 25 µg/m <sup>3</sup>                                  | No National Standard   | Produced by the reaction in the air of SO <sub>2</sub> .  |
| Visibility Reducing Particles                     | 8 hour              | Extinction of 0.23/km; visibility of 10 miles or more | No National Standard   | See PM <sub>2.5</sub> .   |
| Vinyl chloride                                    | 24 hour             | 0.01 ppm  | No National Standard   | Polyvinyl chloride and vinyl manufacturing.   |

**NOTE:**

a A more stringent 8-hour carbon monoxide state standard exists around Lake Tahoe (6 ppm).

b Secondary national standard.

ppb = parts per billion; ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter.

SOURCES: California Air Resources Board, 2016. Ambient Air Quality Standards. Available: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Standards last updated May 4, 2016. Accessed February 28, 2020; California Air Resources Board, 2009. *ARB Fact Sheet: Air Pollution Sources, Effects and Control*. Available: <http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>. Accessed February 28, 2020.

The Sacramento region's attainment status for the criteria air pollutants are summarized in **Table 4.2-4** (state and federal designations are provided). The Sacramento region is considered a federal non-attainment area for ozone and PM<sub>2.5</sub> and as an attainment-maintenance area for the federal CO and PM<sub>10</sub> standards.

**TABLE 4.2-4  
SACRAMENTO COUNTY ATTAINMENT STATUS**

| Pollutant and Averaging Time                      | Designation/Classification |                         |
|---|----------------------------|-------------------------|
|   | State Standards            | Federal Standards       |
| Ozone (1-hour)                                    | Non-attainment             | No Federal Standard     |
| Ozone (8-hour)                                    | Non-attainment             | Non-attainment/Severe   |
| Carbon Monoxide                                   | Attainment                 | Attainment/Maintenance  |
| Nitrogen Dioxide                                  | Attainment                 | Unclassified/Attainment |
| Sulfur Dioxide                                    | Attainment                 | Unclassified/Attainment |
| Respirable Particulate Matter (PM <sub>10</sub> ) | Non-attainment             | Attainment/Maintenance* |
| Fine Particulate Matter (PM <sub>2.5</sub> )      | Non-attainment             | Non-attainment/Moderate |
| Lead  | Attainment                 | Unclassified/Attainment |
| Visibility Reducing Particles                     | Unclassified               | No Federal Standard     |
| Sulfates  | Attainment                 | No Federal Standard     |
| Hydrogen Sulfide                                  | Unclassified               | No Federal Standard     |
| Vinyl Chloride                                    | Unclassified               | No Federal Standard     |

**NOTE:**

California Air Resources Board (CARB) makes area designations for ten criteria pollutants (O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, lead, visibility reducing particles, sulfates, and hydrogen sulfide). CARB does not designate areas according to the vinyl chloride standard.

\* Effective October 28, 2013, the US EPA formally re-designated Sacramento County as attainment for the federal PM<sub>10</sub> standard.

SOURCE: CARB, 2018. Area Designation Maps. Available: <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>. Accessed February 28, 2020.

The federal CAA requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The US EPA has responsibility to review all state SIPs to determine if they conform to the mandates of the federal CAA and will achieve air quality goals when implemented.

### ***Hazardous Air Pollutants***

Federal laws use the term “Hazardous Air Pollutants” (HAPs) to refer to the same types of compounds that are referred to as TACs under State law. Currently, 187 substances are regulated as HAPs. The federal CAA requires the US EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. NESHAPs potentially applicable to the proposed project include the National Emission Standard for Asbestos (40 CFR 61, Subpart M).

## **State**

### ***Criteria Air Pollutants***

At the state level, CARB oversees California air quality policies and regulations. California had adopted its own air quality standards (California Ambient Air Quality Standards, or CAAQS) as shown in Table 4.2-3. Most of the California ambient standards tend to be at least as protective as NAAQS and are often more stringent.

In 1988, California passed the California Clean Air Act (CCAA) (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or non-attainment, but based on state ambient air quality standards rather than the federal standards. The CCAA requires each air district in which state air quality standards are exceeded to prepare a plan that documents reasonable progress towards attainment. If an air basin (or portion thereof) exceeds the CAAQS for a particular criteria air pollutant, it is considered to be non-attainment of that criteria air pollutant until the area can demonstrate compliance. As indicated in Table 4.2-4, Sacramento County is classified as non-attainment for the 8-hour and 1-hour state ozone standards, and is non-attainment for the 24-hour and annual state PM<sub>10</sub> standards.

### ***Toxic Air Contaminants***

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807. A total of 243 substances have been designated TACs under California law; they include the 187 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify, quantify, and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. Further regulations of diesel emissions by the CARB include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-road Diesel Vehicle Regulation, and the New Off-road Compression Ignition Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment.

In 2004, CARB adopted a measure to limit idling of diesel-fueled commercial motor vehicles. Heavy-duty diesel vehicles with a Gross Vehicle Weight Rating of 10,000 pounds or heavier are prohibited from idling for more than 5 minutes within California’s borders. Exceptions to the rule apply for certain circumstances.

### ***Title 24 - California Building Code Standards***

The Building Code Standards for Residential and Nonresidential Buildings specified in Title 24, Part 6 of the California Code of Regulations were established in 1978 in response to a legislative mandate to reduce California’s energy consumption and make for development of healthier buildings. The standards are updated approximately every 3 years to allow for consideration and possible incorporation of new energy-efficiency technologies and cleaner building methods. The



current standards became effective on January 1, 2020. The most recently updated Title 24 (California Building Code) requires that all new residential construction now install MERV 13 filters to reduce particulate impacts to indoor air quality. This regulation will greatly reduce PM<sub>2.5</sub> and DPM concentrations in all indoor areas within the project site.

## Local

### ***Sacramento Metropolitan Air Quality Management District***

The SMAQMD is the regional agency responsible for air quality regulation within Sacramento County. The agency regulates air quality through its planning and review activities and has permit authority over most types of stationary emission sources. SMAQMD can require operators of stationary sources to obtain permits, can impose emission limits, set fuel or material specifications, and establish operational limits to reduce air emissions. The SMAQMD regulates new or modified stationary sources of criteria air pollutants and TACs.

### **SMAQMD Air Quality Plan**

All areas designated as non-attainment are required to prepare plans showing how the area would meet the air quality standards by its attainment dates. The following are the most recent air quality plans applicable to the area of the proposed project:

- Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan;<sup>8</sup>
- SMAQMD's Triennial Report and Air Quality Plan Revision;<sup>9</sup>
- PM<sub>10</sub> Implementation/Maintenance Plan and Redesignation Request for Sacramento County;<sup>10</sup> and
- PM<sub>2.5</sub> Maintenance Plan and Redesignation Request.<sup>11</sup>

### **SMAQMD Rules and Regulations**

The construction phase of the proposed project would be subject to the applicable SMAQMD rules and regulations with regard to construction equipment, particulate matter generation, architectural coatings, and paving materials. Equipment used during construction would be subject to the following applicable requirements of SMAQMD:

**Rule 201 (General Permit Requirements):** Requires any business or person to obtain an authority to construct and a permit to operate prior to installing or operating new equipment

<sup>8</sup> Sacramento Metropolitan Air Quality Management District, 2017. Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan. July 24, 2017. Available: <http://www.airquality.org/ProgramCoordination/Documents/Sac%20Regional%202008%20NAAQS%20Attainment%20and%20RFP%20Plan.pdf>. Accessed April 7, 2020.

<sup>9</sup> Sacramento Metropolitan Air Quality Management District, 2015. Triennial Report and Air Quality Plan Revision. May 28, 2015. Available: [www.airquality.org/ProgramCoordination/Documents/11%202015TriennialReportandProgressRevision.pdf](http://www.airquality.org/ProgramCoordination/Documents/11%202015TriennialReportandProgressRevision.pdf). Accessed April 7, 2020.

<sup>10</sup> Sacramento Metropolitan Air Quality Management District, 2010. PM<sub>10</sub> Implementation/Maintenance Plan and Redesignation Request for Sacramento County. October 28, 2010. Available: [www.airquality.org/ProgramCoordination/Documents/10%20PM10%20Imp%20and%20MP%202010.pdf](http://www.airquality.org/ProgramCoordination/Documents/10%20PM10%20Imp%20and%20MP%202010.pdf). Accessed April 7, 2020.

<sup>11</sup> Sacramento Metropolitan Air Quality Management District, 2013. PM<sub>2.5</sub> Implementation/Maintenance Plan and Redesignation Request for Sacramento PM<sub>2.5</sub> Nonattainment Area. October 24, 2013. Available: [www.airquality.org/ProgramCoordination/Documents/9%20PM2.5%20Imp%20and%20MP%202013.pdf](http://www.airquality.org/ProgramCoordination/Documents/9%20PM2.5%20Imp%20and%20MP%202013.pdf). Accessed April 7, 2020.

or processes that may release or control air pollutants to ensure that all SMAQMD rules and regulations are considered.

**Rule 401 (Ringelmann Chart/Opacity).** Limits the discharge pollutants darker in color than shade No. 1 on the Ringelmann Chart or that obscure a human observers view.

**Rule 402 (Nuisance).** Prohibits emissions of contaminants that are a nuisance or cause harm to the public.

**Rule 403 (Fugitive Dust).** Requires persons participating in activities that emit fugitive dust to take reasonable precautions to limit emissions of fugitive dust from being airborne beyond the property line.

**Rule 404 (Particulate Matter).** Limits emissions of particulate matter to 0.23 grams per dry standard cubic meter.

**Rule 420 (Sulfur Content of Fuels).** Limits emissions of sulfur compounds from fuel combustion to 1.14 grams per cubic meter of gaseous fuel.

**Rule 442 (Architectural Coatings).** Imposes limits on the VOC content of architectural coatings within the SMAQMD. The Rule also includes regulations for painting practices, thinning, and use of rust preventative coatings and lacquers.

**Rule 453 (Cutback and Emulsified Asphalt Paving Materials).** Prohibits the use of rapid or medium cure cutback asphalt and certain slow cure cutback asphalt. This rule also prohibits the use of certain emulsified asphalt containing organic compounds that evaporate at 260 degrees Celsius.

The operational phase of the proposed project would be subject to SMAQMD Rule 201, discussed above. Potentially applicable stationary pollutant sources that would be installed as part of the proposed project include multiple new boilers and natural gas burning fire places at the pool area. A permit would be required for all boilers with a rated heat input capacity of 1 million British thermal units (Btu) per hour or greater, or boilers of any size that are not fired exclusively on purchased quality natural gas, liquid petroleum gas, or any combination thereof. A permit is required if the aggregate rated heat input capacity of all boilers used in the same process is 1 million Btu per hour or greater. SMAQMD Rule 414 applies to boilers rated less than 1 million Btu per hour.

### ***City of Sacramento 2035 General Plan***

The following goals and policies from the 2035 General Plan are relevant to air quality.

**Goal LU 1.1: Growth and Change.** Support sustainable growth and change through orderly and well-planned development that provides for the needs of existing and future residents and businesses, ensures the effective and equitable provision of public services, and makes efficient use of land and infrastructure.

**Policy LU 1.1.1: Regional Leadership.** The City shall be the regional leader in sustainable development and encourage compact, higher-density development that conserves land resources, protects habitat, supports transit, reduces vehicle trips, improves air quality, conserves energy and water, and diversifies Sacramento's housing stock.

**Goal LU 2.6: City Sustained and Renewed.** Promote sustainable development and land use practices in both new development, reuse, and reinvestment that provide for the transformation of Sacramento into a sustainable urban city while preserving choices (e.g., where to live, work, and recreate) for future generations.

***Policy LU 2.6.10: Promote Resiliency.*** The City shall continue to collaborate with nonprofit organizations, neighborhood groups, and other community organizations to promote the issues of air quality, food availability, renewable energy systems, sustainable land use and the reduction of GHGs.

***Policy LU 2.7.5: Development Along Freeways.*** The City shall promote high-quality development character of buildings along freeway corridors and protect the public from the adverse effects of vehicle-generated air emissions, noise, and vibration, using techniques such as:

- Requiring extensive landscaping and trees along the freeway fronting elevation
- Establish a consistent building line, articulating and modulating building elevations and heights to create visual interest
- Include design elements that reduce noise and provide for proper filtering, ventilation, and exhaust of vehicle air emissions.

**Goal M 1.2: Multimodal System.** Increase multimodal accessibility (i.e., the ability to complete desired personal or economic transactions via a range of transportation modes and routes) throughout the city and region with an emphasis on walking, bicycling, and riding transit.

***Policy M 1.2.1: Multimodal Choices.*** The City shall develop an integrated, multimodal transportation system that improves the attractiveness of walking, bicycling, and riding transit over time to increase travel choices and aid in achieving a more balanced transportation system and reducing air pollution and greenhouse gas emissions.

**Goal M 4.1: Street Roadway System.** Create a context-sensitive street and roadway system that provides access to all users and recognizes the importance that roads and streets play as public space. As such, the City shall strive to balance the needs for personal travel, goods movement, parking, social activities, business activities, and revenue generation, when planning, operating, maintaining, and expanding the roadway network.

***Policy M 4.1.6: Roundabouts.*** Where feasible, the City shall consider roundabouts as an intersection traffic control option with demonstrated air quality, safety, and mobility benefits.

**Goal PSH 5.1: Human Services and Healthy Communities.** Improve the provision of human services and promote public health and safety.

***Policy PSH 5.1.15: Air Quality Alerts.*** The City shall continue to partner with SMAQMD to enhance awareness of air quality index alerts and related outreach and education to protect the health of residents.

**Goal ER 6.1: Improved Air Quality.** Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that affect climate change.

**Policy ER 6.1.1: Maintain Ambient Air Quality Standards.** The City shall work with the California Air Resources Board and the Sacramento Metropolitan Air Quality Management District (SMAQMD) to meet State and Federal ambient air quality standards in order to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution.

**Policy ER 6.1.2: New Development.** The City shall review proposed development projects to ensure projects incorporate feasible measures that reduce construction and operational emissions for reactive organic gases, nitrogen oxides and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) through project design.

**Policy ER 6.1.3: Emissions Reduction.** The City shall require development projects that exceed SMAQMD ROG and NO<sub>x</sub> operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project.

**Policy ER 6.1.4: Sensitive Uses.** The City shall coordinate with SMAQMD in evaluating exposure of sensitive receptors to toxic air contaminants, and will impose appropriate conditions on projects to protect public health and safety.

**Policy ER 6.1.10: Coordination with SMAQMD.** The City shall coordinate with SMAQMD to ensure projects incorporate feasible mitigation measures if not already provided for through project design.

### 4.2.3 Analysis, Impacts and Mitigation

#### Significance Criteria

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts related to air quality are considered significant if the proposed project would result in the following:

- Conflict with or obstruct implementation of an applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading odors) adversely affecting a substantial number of people.

The SMAQMD has developed significance thresholds to help lead agencies determine whether a project may have a significant air quality impact. Projects whose emissions are expected to meet or exceed the recommended significance criteria would have a potentially significant adverse impact on air quality.

The SMAQMD has established mass emissions thresholds for the ozone precursors, NO<sub>x</sub> and ROG, and for PM<sub>10</sub> and PM<sub>2.5</sub> because the Sacramento region does not meet the state and federal ozone and PM<sub>2.5</sub> or state PM<sub>10</sub> ambient air quality standards. Emissions of ozone precursors or

PM from an individual project could contribute to an existing exceedance of the ozone standards. For particulate emissions specifically, SMAQMD has a threshold of zero emissions unless all Basic Construction Emission Control Practices (best management practices) are implemented to control fugitive dust emissions from a project site. Implementation of the SMAQMD best management practices would then allow for use of the “non-zero” thresholds for determining significance of PM emissions. Construction activities are not likely to generate substantial quantities of CO; however, increased traffic congestion could result in CO hotspots (exceedance of the CO ambient air quality standards). **Table 4.2-5** presents the applicable SMAQMD thresholds of significance.

**TABLE 4.2-5  
SMAQMD CRITERIA AIR POLLUTANT THRESHOLDS OF SIGNIFICANCE**

| Pollutant                             | Construction Phase                           | Operational Phase                            |
|---------------------------------------|--|--|
| Oxides of nitrogen (NO <sub>x</sub> ) | 85 lbs/day                                   | 65 lbs/day                                   |
| ROG (VOC)                             | None   | 65 lbs/day                                   |
| PM <sub>10</sub>                      | 0/80 lbs/day and 14.6 tons/year <sup>1</sup> | 0/80 lbs/day and 14.6 tons/year <sup>1</sup> |
| PM <sub>2.5</sub>                     | 0/82 lbs/day and 15 tons/year <sup>1</sup>   | 0/82 lbs/day and 15 tons/year <sup>1</sup>   |
| CO                                    | 20 ppm (1-hour); 9 ppm (8-hour)              | 20 ppm (1-hour); 9 ppm (8-hour)              |
| Cancer Risk <sup>2</sup>              | 10 in one million                            | 10 in one million                            |
| Chronic Hazard Index <sup>2</sup>     | 1.0  | 1.0  |

NOTE:

<sup>1</sup> If all feasible Best Achievable Control Technology/Best Management Practices are applied, then the threshold of significance is 80 lbs/day and 14.6 tons/year for PM<sub>10</sub>, and 82 lbs/day and 15 tons/year for PM<sub>2.5</sub> for both construction and operational phases.

<sup>2</sup> These thresholds are for stationary sources but are being applied here to determine significance of the proposed project.

SOURCE: Sacramento Metropolitan Air Quality Management District, 2019. Guide to Air Quality Assessment in Sacramento County. Chapter 2 Appendix (Updated July 2019). Available: [www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf](http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf). Accessed April 7, 2020.

Specifically, the proposed project would have a potentially significant adverse impact on air quality if emissions from the proposed project would:

- Result in short-term (construction) emissions of NO<sub>x</sub> above 85 pounds per day;
- Result in short-term (construction) or long-term (operational) emissions of PM<sub>10</sub> above 0 pounds per day without implementation of all best management practices (BMPs) and above 80 pounds per day or 14.6 tons per year after implementation of all BMPs;
- Result in short-term (construction) or long-term (operational) emissions of PM<sub>2.5</sub> above 0 pounds per day without implementation of all BMPs and above 82 pounds per day or 15.0 tons per year after implementation of all BMPs;
- Result in long-term (operational) emissions of NO<sub>x</sub> or ROG above 65 pounds per day;
- 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);
- Create objectionable odors affecting a substantial number of people; or
- Result in TAC exposures that cause a lifetime cancer risk exceeding 10 in 1 million.

## Methodology and Assumptions

Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to project operation. First, during project construction (short-term), the proposed project would generate ozone precursors and affect local particulate concentrations primarily due to fugitive dust sources and diesel exhaust. Under operations (long-term), the proposed project would result in an increase in emissions primarily due to motor vehicle trips and on-site stationary sources (such as the boilers). Other sources include minor area sources such as use of landscaping equipment and use of consumer products.

### Construction Impacts

Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 and then compared to SMAQMD's applicable regional significance thresholds. This version of CalEEMod calculates the construction equipment exhaust emissions based on CARB's OFFROAD2011 model emission and load factors, and calculates fugitive dust, including from ground disturbance and vehicle travel, using factors from USEPA's AP-42, *Compilation of Air Emissions Factors*, and other sources. Inputs to the model include square footage of the apartment buildings and clubhouse, as well as the amount of parking on-site; the estimated project schedule; and vehicle trip data obtained from the traffic study prepared for the proposed project. Reasonable project assumptions obtained from the Applicant and CalEEMod default settings were used to estimate criteria air pollutant and ozone precursor emissions, which can be found in **Appendix C**. To estimate on-road mobile exhaust emissions, CalEEMod version 2016.3.2 uses vehicle emission factors from CARB's EMFAC model (2014); therefore, the CalEEMod construction "off-site" vehicle exhaust emissions estimates were not used in this analysis, and the proposed project's on-road vehicle exhaust emissions were estimated outside of CalEEMod using emissions factors obtained from the latest version of the EMFAC model, released in 2017. The emissions generated from construction activities include:

- Exhaust emissions from fuel combustion for mobile heavy-duty diesel and gasoline-powered equipment (including construction equipment and employee vehicles);
- Particulate matter from soil disturbance and site preparation and grading activity (also known as fugitive dust); and
- Evaporative emissions of ROG from paving activity and the application of architectural coatings.

### Health-based Effects of Ozone

Given that ground-level ozone formation occurs through a complex photo-chemical reaction between NO<sub>x</sub> and VOCs in the atmosphere with the presence of sunlight, the impacts of ozone are typically considered on a basin-wide or regional basis instead of a localized basis. SMAQMD has not established a significance threshold for ozone. The health-based ambient air quality standards for ozone are as concentrations of ozone and not as the mass weight (e.g., pounds) of their precursor pollutants (i.e., NO<sub>x</sub> and VOCs). It is not necessarily the pounds of precursor pollutants that causes human health effects, but the concentration of resulting ozone or particulate matter. Meteorology, the availability of ozone precursors, the presence of sunlight, seasonal impacts, and other complex chemical factors all combine to determine the ultimate concentration

and location of ozone.<sup>12,13</sup> Nonetheless, since project emissions would potentially exceed the numeric indicator for NO<sub>x</sub> emissions, it is possible that project NO<sub>x</sub> emissions could result in an increase in ground-level ozone concentrations in proximity to the project site or elsewhere in the air basin and this impacts would be potentially significant. Therefore, mitigation measures would be required and are further discussed below.

Similar to as expressed in the *amicus curiae* brief submitted for the *Sierra Club v. County of Fresno* case (*Friant Ranch Case*),<sup>14,15</sup> the CEQA criteria pollutant significance thresholds from the SMAQMD were set at emission levels tied to the region's attainment status. They are emission levels at which stationary pollution sources permitted by the SMAQMD must offset their emissions and the CEQA evaluation of the project must identify any feasible mitigation measures. They are not intended to be indicative of any localized human health impact that a project may have. Therefore, the project's exceedance of the mass regional emissions threshold (i.e., pounds per day [ppd] NO<sub>x</sub> thresholds) from project-related activities does not necessarily indicate that the project would cause or contribute to the exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels.

Though the SMAQMD has not established significance thresholds for ozone, in December 2019, the SMAQMD published their Draft Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District (Friant Ranch Guidance). The Friant Ranch Guidance recommends that lead agencies use the Minor Project Health Effects Screening Tool to conservatively estimate health effects from projects whose emissions would not exceed the maximum thresholds of significance established by the SMAQMD and other nearby air districts.<sup>16</sup> As discussed under Impact 4.2-2, after mitigation, the proposed Project would not exceed the significance thresholds; therefore, the SMAQMD Minor Project Health Effects Screening Tool was used to determine ozone-related health impacts that could result from the proposed project.

### Construction Activity Health Risk Assessment

The primary TAC emitted during construction of the proposed project would be DPM from construction equipment exhaust. DPM exhaust is a complex mixture of gases and fine particles,

<sup>12</sup> South Coast Air Quality Management District, 2014. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

<sup>13</sup> San Joaquin Valley Unified Air Pollution Control District, 2014. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

<sup>14</sup> South Coast Air Quality Management District, 2014. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

<sup>15</sup> San Joaquin Valley Unified Air Pollution Control District, 2014. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

<sup>16</sup> SMAQMD, 2019. *DRAFT Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District*. December 2019. Available at: [http://www.airquality.org/LandUseTransportation/Documents/SMAQMD\\_FriantRanch\\_DraftFinalPublic.pdf](http://www.airquality.org/LandUseTransportation/Documents/SMAQMD_FriantRanch_DraftFinalPublic.pdf). Accessed April 8, 2020.

commonly known as soot. The health risk resulting from exposure to DPM emissions from construction equipment was evaluated using air emission and dispersion modeling software. A health risk assessment (HRA) was conducted that evaluated the risks to nearby receptors from exposure to TACs associated with the proposed project. The HRA focused on construction emissions at the project site, which is considered a new but temporary source. The construction HRA focused on cancer risks and chronic health hazards at residences located near the project site, and at a daycare center (Her Daycare WeeCare) located approximately 1,250 feet east of the proposed project site. The analysis focused on the potential impacts at the closest residence to the proposed project site, as sensitive individuals (young, elderly, ill) could be present there. This represents the worst-case analysis. If predicted risks are found to be less than significance thresholds for these sensitive receptors, risks at other sensitive receptors farther from the proposed project site would be even lower and also less than significance thresholds.

Consistent with SMAQMD Guidelines, the following analysis assesses potential health risk impacts at sensitive receptors located in the vicinity of the project site. Since the construction emissions associated with the proposed project would represent a new emissions source, the potential health risk impacts are analyzed at the receptor that would be exposed to the maximum risk and hazard due to its proximity to the site.

For construction activities, DPM exposure represents the primary health hazard. As discussed above, DPM emissions would be generated by the operation of off-road construction equipment (e.g., excavators, loaders, cranes, graders) and on-road diesel-fired heavy-duty vehicles. Although other exposure pathways exist (i.e., ingestion, dermal contact), the inhalation pathway is the dominant exposure pathway from DPM for both cancer risk and chronic non-cancer health effects. Consequently, the HRA prepared for the proposed project only evaluates the inhalation cancer and chronic non-cancer effects of DPM inhalation.

A three-step process was used to estimate cancer risks and chronic health hazards of DPM exposure. The first step involved using the CalEEMod software program to estimate average annual diesel exhaust emissions during project construction. The second step involved using the AERSCREEN (version 16216) dispersion model to convert emissions to maximum annual DPM concentrations. AERSCREEN is the screening version of AERMOD (version 19191) and uses worst-case meteorology to predict conservative concentrations. The dispersion modeling used average DPM emissions, sensitive receptor locations, and construction emission source parameters. For this project, two sources were used to represent the construction and haul truck activities:

- A conservative representation of the on-site construction equipment within the project site modeled as a rectangular area source with an internal vertical dimension of 1.4 meters.<sup>17</sup>
- A conservative representation of off-site haul trucks transporting excavated soil and vendor trucks delivering construction materials, along Pocket Road to I-5, modeled as a series of area source along Pocket Road between the project site and I-5.

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<sup>17</sup> Bay Area Air Quality Management District, San Francisco Department of Public Health, San Francisco Planning Department, 2012. The San Francisco Community Risk Reduction Plan: Technical Support Documentation December 2012.



The above sources were modeled with an emission rate of one gram per second to determine the worst-case scenario dispersion factor (unit concentration) occurring at the nearest sensitive receptor within a 1,000-foot radius. The maximum impact or maximum exposed individual at a residence (MEIR) was determined using this worst-case dispersion factor and annual DPM average emissions from CalEEMod to represent the “worst-case” exposure scenario. The closest sensitive receptor to the main construction area is a residence west of the project site, adjacent to the west side of I-5. The closest sensitive receptor to the haul truck route is a residence directly north of Pocket Road. The third step applied the calculated MEIR DPM concentration for the construction period using the Office of Environmental Health Hazard Assessment (OEHHA) methodologies<sup>18</sup> to calculate the potential cancer risk from the project’s construction activities over the lifetime of the MEIR. Modeling assumptions, OEHHA equations, and the health impact calculations are detailed in Appendix C.

### **Operational Impacts**

Operation of the proposed project would increase emissions of ozone precursors (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub> from vehicle trips and area sources (e.g., landscape maintenance and consumer products such as cleaning products). Additional operational emissions include natural gas combustion from water heating (boilers) as well as combustion in fireplaces that would be located in the clubhouse. Operational emissions for project buildout were estimated using CalEEMod version 2016.3.2 based on the proposed land uses (for area and stationary source emissions), trip generation rates, and VMT developed for the proposed project. As mentioned in the Construction Impacts discussion above, this version of CalEEMod uses vehicle emission factors from an outdated version of CARB’s EMFAC model (2014). However, for operational emissions CalEEMod allows the user to replace those emission factor inputs with other emission factors. The default emission factors were replaced with emission factors obtained from the latest version of the EMFAC model, released in 2017. Therefore, unlike the construction emissions, the CalEEMod “off-site” vehicle exhaust emissions output was used in the operations analysis. The land use designations selected in the model were apartments mid-rise to represent the proposed residential units, racquet club to represent the proposed club house, and parking to represent the asphalt that would be applied for onsite roads and parking areas.

### **Localized CO Concentrations**

CO concentration levels are highest near crowded or congested intersections where traffic is slow or idling. Projects that would increase traffic volumes on surrounding roadways and/or degrade the existing level of service (LOS) would potentially increase CO concentrations at nearby intersections. Because CO is in a maintenance plan and the proposed project would lead to an increase in traffic in the project area, it was determined CO needed to be analyzed for the purposes of completing a robust analysis. SMAQMD has developed screening criteria to analyze potential CO impacts and identify when site-specific CO dispersion modeling is necessary. The screening criteria are divided into two tiers; if the first tier of screening criteria is not met, then

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<sup>18</sup> Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program – Risk Assessment Guidelines*, February 2015.

the second tier of screening criteria shall be examined. According to SMAQMD, a project would not result in a significant CO impact if one of the following tiers is met:<sup>19</sup>

1. First Tier

- a. Traffic generated by the project will not result in deterioration of intersection LOS or LOS E or F; and
- b. The project will not contribute to additional traffic to an intersection that already operates at LOS E or F.

2. Second Tier

- a. The project would not result in an affected intersection experiencing more than 31,600 vehicles per day;
- b. The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other location where horizontal or vertical mixing of air will be substantially limited; and
- c. 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).

The proposed project meets the SMAQMD's Tier 1 screening criteria. Intersections that would be affected by the proposed project include (1) Pocket Road and Greenhaven Drive; (2) Pocket Road and I-5 southbound ramps; (3) Pocket Road and I-5 northbound ramps; (4) Pocket Road and Klotz Ranch Court/Alma Vista Way; and (5) Pocket Road and Freeport Boulevard/Meadowview Road. Each of the affected intersections currently operates at LOS D or better; and the proposed project would not result in a reduced LOS at any of these intersections.

### **Toxic Air Contaminants**

Emissions of TAC generated during operation of the proposed project would be primarily from any resident-owned vehicles that require diesel fuel and to a lesser extent gasoline-fueled vehicles. There would be no project-related stationary sources of TACs onsite that would warrant preparation of an HRA for operations.

### ***Siting New Sensitive Receptors Health Risk***

Siting new receptors where they would be exposed to an existing TAC source, while not a CEQA impact, is a potential health risk consideration that should be analyzed and generally addressed in the conditional use permitting for the proposed project.<sup>20</sup> By incorporating residential units, the proposed project is siting new sensitive receptors near a high-volume roadway (i.e. Interstate 5 [I-5]) that is an existing TAC source. A mobile source air toxics analysis was prepared, using the

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<sup>19</sup> Sacramento Metropolitan Air Quality Management District, 2019. Guide to Air Quality Assessment in Sacramento County (Chapter 4). Updated July 2019. Available: [www.airquality.org/LandUseTransportation/Documents/Ch4OperationalFINAL8-2016.pdf](http://www.airquality.org/LandUseTransportation/Documents/Ch4OperationalFINAL8-2016.pdf). Accessed April 7, 2020

<sup>20</sup> Sacramento Metropolitan Air Quality Management District (SMAQMD), 2019. Guide to Air Quality Assessment in Sacramento County (Chapter 5). Updated July 2019. Available: [www.airquality.org/LandUseTransportation/Documents/Ch5TACFinal9-2018.pdf](http://www.airquality.org/LandUseTransportation/Documents/Ch5TACFinal9-2018.pdf). Accessed April 7, 2020.

SMAQMD MSAT Tool, for the proposed project outside of the CEQA process to demonstrate consistency with the City of Sacramento's 2035 General Plan policies relative to TAC exposure.<sup>21</sup> The analysis included coordination with SMAQMD in evaluating exposure of project-related sensitive receptors to TAC, and to identify appropriate project conditions to protect public health and safety.<sup>22</sup> The SMAQMD recommends evaluating strategies to reduce air pollution exposures when considering construction projects of this nature outside of the CEQA process.<sup>23</sup>

Landscaping with trees and shrubs is planned throughout the project site. Proposed trees would consist of a variety of trees recommended by SMAQMD.<sup>24</sup> The vegetation included in the design of the proposed Project could potentially alter pollutant transport and dispersion and is a recommended strategy for reducing air pollution exposure.

The Building Code Standards for Residential and Nonresidential Buildings specified in Title 24, Part 6 of the California Code of Regulations would require the proposed project to comply with 2019 energy efficiency standards. As part of these standards, all new residential construction would be required to install MERV 13 filters to reduce particulate impacts to indoor air quality, which would further reduce the potential for air pollution exposure.

### ***Issues or Potential Impacts Not Discussed Further***

An odor analysis typically evaluates the potential for a project to generate odors and for the project to be affected by odors from nearby sources of odors. The SMAQMD CEQA Guide identifies wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants as land use types that typically generate odor impacts. General land uses to be developed under the proposed project are not typically considered sources of odors. Because there are no new odor sources and no impact would occur, odors are not addressed further in this EIR.

## **Impacts and Mitigation Measures**

### **Impact 4.2-1: Implementation of the proposed project could conflict with or obstruct implementation of an applicable air quality plan.**

The *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*, which addresses attainment of the federal 8-hour ozone standard, and the *2014 Triennial Report and Plan Revision*, are the current plans required by US EPA and CARB and issued by SMAQMD, in conjunction with other regional air districts, to meet attainment. These plans demonstrate reasonable progress towards attainment as required by the SIP and CCAA. To

<sup>21</sup> Sacramento Metropolitan Air Quality Management District (SMAQMD), 2020. *Sacramento Metropolitan Air Quality Management District, Mobile Sources Air Toxics Protocol Tool*. Available: <http://sacramentorisk.azurewebsites.net/>. Accessed April 20, 2020.

<sup>22</sup> Environmental Science Associates, 2020. Klotz Ranch Apartments Mobile Source Air Toxics Analysis, prepared for The Spanos Corporation, April 2020.

<sup>23</sup> California Air Resources Board, 2017. *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways*. Available: [https://ww2.arb.ca.gov/sites/default/files/2017-10/rd\\_technical\\_advisory\\_final.pdf](https://ww2.arb.ca.gov/sites/default/files/2017-10/rd_technical_advisory_final.pdf). Accessed April 7, 2020.

<sup>24</sup> Sacramento Metropolitan Air Quality Management District, 2017. *Landscaping Guidance for Improving Air Quality near Roadways*. April 2017.

demonstrate compliance of the proposed project with the plans there needs to be appropriate conformational analysis. In this case the appropriate analysis incorporates land use assumptions and travel demand modeling from the Sacramento Area Council of Governments (SACOG). To determine compliance with the applicable air quality plan, SMAQMD recommends, as inferred by the SIP, comparing the project's VMT and population growth rate to the SACOG growth projections included in the *Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS).<sup>25</sup>

SACOG is required to consider adopted local land use plans, including the 2035 General Plan, in the formulation of the land use forecast and growth projections in the MTP/SCS. Therefore, if the project is consistent with the VMT and population growth projections in the City's 2035 General Plan, the project would also be consistent with the SACOG MTP/SCS. SACOG adopted its 2020 MTP/SCS on November 19, 2019, but the State is still considering that MTP/SCS and it is not, yet, final. Following approval of the 2020 MTP/SCS by the State, the City will have authority to determine whether the proposed project is consistent with that MTP/SCS. However, the residential nature of the proposed project combined with the site's proximity to employment opportunities and transit options leads to the conclusion that the proposed project is consistent with the 2020 MTP/SCS.

The City's 2035 General Plan includes the assumption that the project site would be developed with a commercial land use, which would generate more vehicle trips, and therefore higher VMT than the proposed residential land use. Therefore, the proposed project would not generate VMT that would exceed the projections in the 2035 General Plan. Additionally, the 2035 General Plan projects that by the year 2035, the City's population would have grown to 640,381 people.<sup>26</sup> The most recently published data from the California Department of Finance state that the population of the City was approximately 508,172 people in year 2019.<sup>27</sup> The proposed project is anticipated to increase the population by 742 residents, which would not likely contribute to an exceedance of the City's 2035 population projections. In addition, the project site in designated Suburban Corridor on the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram, which allows multi-family residential uses. For these reasons, the proposed project would be consistent with the City of Sacramento's 2035 General Plan and would consequently be within the growth projections provided by SACOG and thereby consistent with the MTP/SCS.

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<sup>25</sup> Sacramento Area Council of Governments, 2020. *Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted November 18, 2019.

<sup>26</sup> City of Sacramento, 2013. *2035 General Plan, 2013-2013 Housing Element, Table H 3-3*. Available at <http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Housing-Element.pdf?la=en>. Accessed April 1, 2020.

<sup>27</sup> State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2019, with 2010 Census Benchmark. Sacramento, California, May 2019.

In addition to the proposed project's consistency with the SACOG 2020 MTP/SCS, as discussed under Impact 4.2-2, below, the proposed project would not generate operational emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub> or PM<sub>2.5</sub> that would exceed the SMAQMD thresholds of significance for project operational emissions. Therefore, the impact of the proposed project would not conflict with or obstruct implementation of applicable air quality plans and the impact would be considered **less than significant**.

#### Mitigation Measure

None required.

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#### **Impact 4.2-2: Implementation of the proposed project would result in a net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.**

This impact analysis takes into consideration both short-term construction and long-term operational impacts in terms of baseline and project increases for criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The focus of this analysis is related to the ground-level ozone precursor NO<sub>x</sub> and particulate matter for which the SVAB is in non-attainment. While the SVAB is currently in attainment of federal and state CO standards, a screening-level CO hotspot emissions analysis was conducted to ensure that the proposed project would not contribute to future exceedances of the NAAQS or CAAQS that would violate the maintenance plan and move the region to non-attainment status.

#### **Short-Term Construction Impacts**

Construction-related emissions are considered short-term in duration, but nevertheless can represent a significant, adverse impact on air quality. Construction-related emissions arise from a variety of activities, including operation of heavy equipment, employee vehicles, excavation for infrastructure and building foundations, architectural coatings and paving.

Construction of the proposed project would begin with site clearing, followed by excavation and grading. There would be some balancing of the earthwork onsite between cut and fill, however, approximately 20,100 cubic yards of soil would need to be hauled offsite. Project construction would begin in fall of 2020 and is anticipated to occur over a period of 24 months with completion by fall 2022.

Emissions of ozone precursors (ROG and NO<sub>x</sub>) are generated primarily by mobile sources and largely vary as a function of vehicle trips per day and the type, quantity, intensity, and frequency of heavy-duty, off-road equipment used. Typically, a large portion of construction-related ROG emissions results from the application of asphalt on to roads and parking areas, and the application of architectural coatings.

Construction-related fugitive dust emissions of particulate matter would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. Project construction activities could result in dust adversely affecting local visibility and PM<sub>10</sub> concentrations on a temporary and intermittent basis.

Construction emissions were estimated for the proposed project using the methods contained in SMAQMD's *Guide to Air Quality Assessment in Sacramento County*.<sup>28</sup> The CalEEMod model was used to quantify construction emissions from off-road equipment, haul trucks associated with imported and exported soils, on-road worker vehicle emissions, and vendor delivery trips. The unmitigated and mitigated construction emissions for the worst-case day for each construction year can be found in **Tables 4.2-6** and **4.2-7**, respectively. Those tables compare emissions from the phased construction schedule to SMAQMD's NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> construction thresholds, which are appropriate for this analysis.

**TABLE 4.2-6**  
**UNMITIGATED PROJECT CONSTRUCTION EMISSIONS<sup>1,2</sup>**

| Construction Year <sup>3</sup> | NO <sub>x</sub> (ppd) | PM <sub>10</sub> (ppd) | PM <sub>2.5</sub> (ppd) | PM <sub>10</sub> (tpy) | PM <sub>2.5</sub> (tpy) |
|--------------------------------|-----------------------|------------------------|-------------------------|------------------------|-------------------------|
| 2020                           | <b>111.6</b>          | <b>20.4</b>            | <b>12.0</b>             | <b>0.2</b>             | <b>0.1</b>              |
| 2021                           | 18.2                  | <b>2.8</b>             | <b>1.4</b>              | <b>0.2</b>             | <b>0.1</b>              |
| 2022                           | 16.3                  | <b>2.7</b>             | <b>1.3</b>              | <b>0.2</b>             | <b>0.1</b>              |
| SMAQMD Thresholds <sup>4</sup> | 85                    | 0                      | 0                       | 0                      | 0                       |
| Maximum Emissions              | <b>111.6</b>          | <b>20.4</b>            | <b>12.0</b>             | <b>0.2</b>             | <b>0.1</b>              |
| Significant (Yes or No)?       | <b>Yes</b>            | <b>Yes</b>             | <b>Yes</b>              | <b>Yes</b>             | <b>Yes</b>              |

NOTES:

ppd = pounds per day; tpy = tons per year

- 1 Project construction emissions estimates were made using CalEEMod version 2016.3.2. See Appendix C for model outputs and more detailed assumptions.
- 2 Values in **bold** are in excess of the applicable SMAQMD significance threshold.
- 3 The construction schedule has been postponed one year compared to the years used for these emissions calculations. Project construction would occur over a period of 24 months. Construction would begin in fall 2021, with site grading and utility infrastructure work completed by early spring 2022. Construction of the structures is expected to commence in spring 2022 with completion by fall 2023. However, use of an earlier year for emissions calculations purposes would not have a material effect on the model outputs.
4. SMAQMD has established a zero emissions threshold for PM<sub>10</sub> and PM<sub>2.5</sub> when projects do not implement SMAQMD's Best Available Control Technology/Best Management Practices.

SOURCE: ESA, 2020.

<sup>28</sup> Sacramento Metropolitan Air Quality Management District, 2019. *Guide to Air Quality Assessment*. Updated July 2019.

**TABLE 4.2-7**  
**MITIGATED PROJECT CONSTRUCTION EMISSIONS <sup>1</sup>**

| Construction Year <sup>2</sup>                                       | NO <sub>x</sub> (ppd) | PM <sub>10</sub> (ppd) | PM <sub>2.5</sub> (ppd) | PM <sub>10</sub> (tpy) | PM <sub>2.5</sub> (tpy) |
|--|-----------------------|------------------------|-------------------------|------------------------|-------------------------|
| 2020   | 64.7                  | 10.2                   | 4.6                     | 0.1                    | <0.1                    |
| 2021   | 3.0                   | 1.9                    | 0.6                     | 0.2                    | 0.1                     |
| 2022   | 2.9                   | 1.9                    | 0.6                     | 0.1                    | <0.1                    |
| SMAQMD Thresholds  | 85                    | 80                     | 82                      | 14.6                   | 15                      |
| Maximum Emissions  | 64.7                  | 10.2                   | 4.6                     | 0.2                    | 0.1                     |
| Emissions with Tier 4 Engines and Dust Control Measures <sup>3</sup> |                       |                        |                         |                        |                         |
| Significant (Yes or No)?   | No                    | No                     | No                      | No                     | No                      |

## NOTES:

ppd = pounds per day; tpy = tons per year.

- 1 Project construction emissions estimates were made using CalEEMod version 2016.3.2. See Appendix C for model outputs and more detailed assumptions. NO<sub>x</sub> emissions account for implementation of Mitigation Measures 4.2-2(a) and 4.2-2(b).
- 2 The construction schedule has been postponed one year compared to the years used for these emissions calculations. Project construction would occur over a period of 24 months. Construction would begin in fall 2021, with site grading and utility infrastructure work completed by early spring 2022. Construction of the structures is expected to commence in spring 2022 with completion by fall 2023. However, use of an earlier year for emissions calculations purposes would not have a material effect on the model outputs.
- 3 Tier 4 engines would reduce on-site NO<sub>x</sub> and PM emissions by approximately 90 percent as required by CFR Title 40, Section 1039.101, and standard dust control measures would reduce fugitive dust emissions by approximately 55 percent.

SOURCE: ESA, 2020.

As shown in Table 4.2-6, maximum daily unmitigated construction NO<sub>x</sub> emissions would exceed the SMAQMD significance thresholds during the first year of construction activity in 2020, and unmitigated maximum daily and annual construction PM<sub>10</sub> and PM<sub>2.5</sub> emissions would exceed the SMAQMD significance thresholds for each year of construction. The predominant construction sources associated with these emissions would be off-road diesel equipment and on-road haul trucks during construction of the proposed project. Overall, the proposed project would have a **significant impact** related to unmitigated construction emissions.

Implementation of Mitigation Measures 4.2-2(a) and 4.2-2(b) are recommended to reduce the significant impact to a less-than-significant level. Implementation of Mitigation Measure 4.2-2(a) would require the Applicant to incorporate SMAQMD's best management practices, including fugitive dust controls, and implementation of Mitigation Measure 4.2-2(b) would require the Applicant and/or construction contractor(s) to use off-road construction equipment at the project site that meet US EPA Tier 4 emissions standards. These measures are described in the mitigation summary, below.

As shown in Table 4.2-7, maximum mitigated daily construction emissions of NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, as well as maximum annual mitigated emissions of PM<sub>10</sub> and PM<sub>2.5</sub>, would be reduced to below the significance thresholds, including the non-zero PM thresholds that are activated by acceptance of feasible SMAQMD best management practices as applied with the mitigation measures. Therefore, the short-term construction impact associated with the net increase of criteria pollutants for which the project region is non-attainment of air quality standards would be mitigated to less than significant.

To determine ozone-related health risk that would result from project, the location of the project site was input into the SMAQMD Minor Project Health Effects Screening Tool. For a conservative analysis, the screening tool uses the emissions significance thresholds in order to determine health impacts. Since mitigated emissions associated with the proposed project would be below the NO<sub>x</sub> thresholds of significance, it can be assumed that the ozone-related health effects associated with the proposed project would be less than the health risk estimated by the screening tool. Ozone-related health effects estimated using the Minor Project Health Effects Screening Tool are summarized in **Table 4.2-8**, below.

**TABLE 4.2-8  
OZONE-RELATED HEALTH RISKS**

| Ozone Health Endpoint                 | Age Range <sup>a</sup> | Average Incidences (per year) <sup>b</sup> | Percent of Background Health Incidence <sup>c</sup> |
|---------------------------------------|------------------------|--|---|
| Hospital Admissions (all respiratory) | 65-99                  | 0.088                                      | 0.00010%  |
| Mortality, Non-Accidental             | 0-99                   | 0.055                                      | 0.0004%   |
| Emergency Room Visits, Asthma         | 0-17                   | 0.495                                      | 0.00206%  |
| Emergency Room Visits, Asthma         | 18-99                  | 0.763                                      | 0.00138%  |

NOTES:

<sup>a</sup> Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by the US EPA in their health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.

<sup>b</sup> Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects and background health incidences are across Northern California model domain.

<sup>c</sup> The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, these background incidence rates cover the modeled domain. Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP.

SOURCE: SMAQMD, 2019. DRAFT Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District. December 2019.

As shown in Table 4.2-8, the contribution of the proposed project to ozone-related health impacts is minuscule compared to the background ozone-related health risk. Furthermore, the ozone-related health risk estimated by the screening tool is a conservative estimate. Given that the proposed project would result in emissions lower than the emissions assumed by the screening tool, it is likely that the ozone-related health risk associated with the proposed project would be less than the risk estimated by the SMAQMD Minor Project Health Effect Screening Tool.

CO is a localized pollutant of concern. CO is of less concern during construction because construction activities are not likely to generate substantial quantities of CO. Due to the temporary use of construction equipment in any one area, construction of individual development or infrastructure projects pursuant to the project would not emit CO in quantities that could pose health concerns.

### Long Term Operational Impacts

The proposed project would increase long-term operational emissions due to motor vehicle trips and onsite area and energy sources. The CalEEMod computer model was used to estimate operational pounds per day emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, and tons per year



emissions of PM<sub>10</sub> and PM<sub>2.5</sub>; the results of this analysis are summarized in **Table 4.2-9**. Estimated emissions are compared to the SMAQMD significance thresholds. As shown in Table 4.2-9, emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would not exceed SMAQMD's significance thresholds.

**TABLE 4.2-9**  
**PROJECT OPERATIONAL EMISSIONS<sup>1</sup>**

| Source                         | ROG (ppd) | NO <sub>x</sub> (ppd) | PM <sub>10</sub> (ppd) | PM <sub>2.5</sub> (ppd) | PM <sub>10</sub> (tpy) | PM <sub>2.5</sub> (tpy) |
|--------------------------------|-----------|-----------------------|------------------------|-------------------------|------------------------|-------------------------|
| Area                           | 7.5       | 0.3                   | 0.1                    | 0.1                     | <0.1                   | <0.1                    |
| Energy                         | 0.1       | 0.7                   | 0.1                    | 0.1                     | <0.1                   | <0.1                    |
| Mobile                         | 3.9       | 7.5                   | 8.0                    | 2.2                     | 1.4                    | 0.4                     |
| Total Emissions                | 11.5      | 8.4                   | 8.1                    | 2.4                     | 1.4                    | 0.4                     |
| SMAQMD Thresholds <sup>3</sup> | 65        | 65                    | 80                     | 82                      | 14.6                   | 15                      |
| Significant (Yes or No)?       | No        | No                    | No                     | No                      | No                     | No                      |

NOTES:

ppd = pounds per day; tpy = tons per year

1 Project operational emissions estimates were made using CalEEMod version 2016.3.2. See Appendix C for model outputs and more detailed assumptions.

2 SMAQMD has established a zero emissions threshold for PM<sub>10</sub> and PM<sub>2.5</sub> when projects do not implement their Best Available Control Technology/Best Management Practices. However, as identified in Project Description Section 2.8, *Sustainable Development Features*, the project would implement sustainable features consistent with the SMAQMD's best management practices; therefore, the non-zero emissions thresholds are used to assess impact significance.

As discussed above in *Methodology and Assumptions*, the proposed project would meet the SMAQMD Tier 1 screening criteria for CO analyses; therefore, the proposed project would have a less-than-significant impact with regard to local CO concentrations and would not result in an exceedance of the NAAQS or CAAQS.

## Summary

### Short-Term Impacts

As discussed above, the SMAQMD has established a threshold of zero for unmitigated emissions of PM<sub>10</sub> and PM<sub>2.5</sub> for all construction activities if the project does not propose to implement SMAQMD's best management practices to control PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Since the project Applicant has not proposed to implement the SMAQMD's basic practices, the proposed project would result in a significant construction impact associated PM<sub>10</sub> and PM<sub>2.5</sub>. Therefore, implementation of Mitigation Measure 4.2-2(a) is recommended, which would require the Applicant to incorporate the SMAQMD's basic practices. With incorporation of the SMAQMD's basic practices, peak daily and annual significance thresholds increase to 80 ppd and 14.6 tpy for PM<sub>10</sub> and 82 ppd and 15 tpy for PM<sub>2.5</sub>. With implementation of the recommended practices, construction of the proposed project would result in PM<sub>10</sub> and PM<sub>2.5</sub> emissions that would not exceed the SMAQMD thresholds of significance and the impact would be less than significant.

With regard to ozone precursors, construction of the proposed project would generate unmitigated NO<sub>x</sub> emissions that would exceed the SMAQMD threshold during 2020, resulting in a significant impact. Therefore, implementation of Mitigation Measure 4.2-2(b) is recommended, which would

require the Applicant and/or its construction contractors to use off-road equipment at the project site that meet US EPA Tier 4 emissions standards. Implementation of Mitigation Measure 4.2-2(b) would reduce NO<sub>x</sub> emissions to below the significant threshold, resulting in a less-than-significant impact.

#### Mitigation Measures

##### **Mitigation Measure 4.2-2(a)**

The applicant shall require all construction plans to include the following SMAQMD best management practices:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.
- Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- Pave all roadways, driveways, sidewalks, parking lots as soon as possible. In addition, building pads shall be laid immediately after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment shall be checked by a certified mechanic and determine to be running in proper condition before it is operated.

##### **Mitigation Measure 4.2-2(b)**

All diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB. This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data.

A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by the air district as necessary. The Certification Statement must state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.

The Lead Agency may waive the equipment requirement above only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. If the Lead Agency grants the waiver, the contractor shall use the next cleanest piece of off-road equipment available, as detailed in Table M-AIR-1A below.

For purposes of this mitigation measure, “commercially available” shall mean the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the region occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction for the project and (ii) geographic proximity to the project site of Tier 4 Final equipment.

The Contractor shall maintain records concerning its efforts to comply with this requirement.

Table M-AIR-1A describes the Off Road Compliance Step Down approach. If engines that comply with Tier 4 Final off-road emission standards are not commercially available, then the Contractor shall meet Compliance Alternative 1. If off-road equipment meeting Compliance Alternative 1 are not commercially available, then the Project sponsor shall meet Compliance Alternative 2. If off-road equipment meeting Compliance Alternative 2 are not commercially available, then the Project sponsor shall meet Compliance Alternative 3 as demonstrated below.

**TABLE M-AIR-1A**  
**OFF ROAD EQUIPMENT COMPLIANCE STEP DOWN APPROACH**

| Compliance Alternative | Engine Emissions Standard | Emissions Control |
|------------------------|---------------------------|-------------------|
| 1                      | Tier 4 Interim            | N/A               |
| 2                      | Tier 3                    | ARB Level 3 VDECS |
| 3                      | Tier                      | ARB Level 3 VDCES |

If seeking a waiver from this requirement it must be demonstrated, to the satisfaction of the Lead Agency, that the emissions do not exceed significance thresholds as stated above in **Table 4.2-7**.

**Significance After Mitigation:** With implementation of Mitigation Measures 4.2-2(a) and 4.2-2(b), construction emissions from the proposed project would be reduced to below the respective significance thresholds and therefore, the impact would be mitigated to **less than significant**.

### Long Term Impacts

As shown in Table 4.2-9, emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would not exceed SMAQMD’s significance thresholds with implementation of the proposed project’s sustainable features that are consistent with the SMAQMD’s best management practices. In addition, with all intersections effected by the project qualifying for CO hotspot First Tier screening, there would

be no potential for the project to result in a violation of the NAAQS or CAAQS from operational CO emissions, and thus this impact would be **less than significant**.

#### Mitigation Measure

None required.

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#### **Impact 4.2-3: Implementation of the proposed project could expose sensitive receptors to substantial pollutant concentrations.**

##### **Construction**

The key drivers to exposure sensitivity are concentration of pollutants and duration of exposure. DPM represents the primary TAC of concern from construction activities. Construction of the proposed project would generate DPM emissions due to operation of internal combustion engines associated with equipment such as loaders, backhoes, and cranes, as well as haul trucks.

Exposure of sensitive receptor within the area of the project site to DPM emissions is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure. A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to OEHHA, health risk assessments should be based on a 30-year exposure period.<sup>29</sup> However, such assessments should be limited to the period/duration of activities associated with the proposed project.

**Table 4.2-10** identifies the maximum increase in cancer risk and chronic hazard index for sensitive receptors in the vicinity of the project site due to construction activities. The calculated cancer risk assumes sensitive receptors do not have mechanical filtration and exposure would occur with windows open. For cancer and chronic exposures, the cancer risk to residences from DPM emissions for construction of the proposed project is estimated to result in a maximum incremental increase in carcinogenic risk of approximately 16.3 in one million and an increase in chronic hazard index of 0.6. The maximum cancer risk that would occur at the residential land uses west of the project site would exceed the maximum individual cancer risk threshold of 10 in one million, but the chronic hazard index would not. This represents a **significant impact** relative to exposure of sensitive receptors to substantial pollutant concentrations.

However, implementation of **Mitigation Measure 4.2-3**, which would require all diesel-powered construction equipment to be equipped with engines that meet Tier 4-final emissions standards would decrease the maximum incremental cancer risk to 0.6 in one million for residents. The impact to sensitive receptors in the vicinity of project site would be mitigated to a less-than-significant level.

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<sup>29</sup> Office of Environmental Health Hazard Assessment, 2015. *Guidance Manual for Preparation of Health Risk Assessments*. February 2015.

**TABLE 4.2-10**  
**MAXIMUM INCREASE IN CANCER RISK AND HAZARD INDEX FOR OFF-SITE SENSITIVE RECEPTORS**

| Sensitive Receptor                            | Maximum Cancer Risk (in one million) |                         | Chronic Hazard Index |                         |
|---|--------------------------------------|-------------------------|----------------------|-------------------------|
|   | Project                              | Project with Mitigation | Project              | Project with Mitigation |
| Off-site Child Residence West of Project Site | 16.3                                 | 0.6                     | 0.01                 | 0.001                   |
| Maximum Individual Cancer Risk Threshold      | 10                                   | 10                      | 1.0                  | 1.0                     |
| Exceeds Threshold?                            | Yes                                  | No                      | No                   | No                      |
| Daycare Center                                | 6.9                                  | 0.3                     | 0.004                | 0.0002                  |
| Maximum Individual Cancer Risk Threshold      | 10                                   | 10                      | 1.0                  | 1.0                     |
| Exceeds Threshold?                            | No                                   | No                      | No                   | No                      |

NOTE: See Appendix C for the Health Risk Assessment calculations.

### Mitigation Measure:

#### **Mitigation Measure 4.2-3**

Implement Mitigation Measure 4.2-2(b), see Impact 4.2-2.

**Significance After Mitigation:** With implementation of Mitigation Measure 4.2-2(b), on-site DPM construction emissions that would be associated with the proposed project would be reduced to the extent that the associated cancer risk would be less than 10 in one million and chronic hazard index less than 1.0; therefore, the impact would be mitigated to **less than significant**.

### **Operation**

As discussed previously, the proposed project would result in only limited operation period activities that would generate TAC emissions, including operation of any resident-owned vehicles that are both diesel and gasoline fueled. These activities would result in limited emissions of TACs, and therefore would have negligible associated health risks from the project's operation to existing sensitive receptors in the area.

### **Cumulative Impacts**

The geographic context for changes in the air quality environment due to development of the proposed project is both regional and local. The ozone precursor NO<sub>x</sub> and PM<sub>10</sub> and PM<sub>2.5</sub> emissions would be the primary pollutants of regional concern because the project area is in non-attainment of ambient air quality standards for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, which means that the cumulative context would be comprised of evaluating impacts within the SVAB.

Project related particulate emissions (fugitive dust and fine particulate matter, including DPM), CO, and TACs could result in localized impacts in close proximity (e.g., within 1,000 feet) to

other cumulative pollutant sources. In addition to the proposed project, there are two other projects in various stages of development and planning near the project site that would be constructed and operational in the foreseeable future. These include Delta Shores and an unnamed apartment complex. Delta Shores is a large development project located 1 mile to the south of the project site. The commercial portion of the development has been constructed and is operational, while the residential (675 multi-family units and 4,089 single family units) and mixed-use town center (458 units and 161,00 square feet retail) portions have yet to be constructed. The unnamed apartment complex would include 150 units and would be located about 2 miles northeast of the site at the corner of Florin Road and 29th Street.

As described above in Impact 4.2-1, the proposed project would not conflict with or obstruct implementation of applicable air quality plans based on SACOG's future growth projections for the region, and thus, the impact of the proposed project would not be cumulatively considerable and this impact is not discussed further in the cumulative analysis.

**Impact 4.2-4: Implementation of the proposed project, in conjunction with other planned projects, could result in a cumulative net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.**

#### **Short-Term Cumulative Impacts**

NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are the pollutants that SMAQMD has identified as the primary concerns from construction. Development of the proposed project and other construction activities elsewhere in the SVAB could also contribute construction-related NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> emissions. As described in Impact 4.2-2, after implementation of mitigation measures, the proposed project would not result in substantial short-term emissions of NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> during construction. As a result, the proposed project's contribution to these cumulative emissions would not be considerable, and thus the cumulative construction impact would be mitigated to **less than significant**.

#### **Long-Term Cumulative Impacts**

ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are the pollutants that SMAQMD has identified as generally the primary concerns from project operation. Thus, all other mobile, area, and energy sources in the SVAB that would operate concurrently with the proposed project would contribute to cumulative operational-related ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions. As described in Impact 4.2-2, the proposed project would not result in substantial long-term emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. In addition, cumulative plus project traffic volumes have been analyzed for road segments in the vicinity of the proposed project.<sup>30</sup> The cumulative without project scenario assumes the previously approved commercial land use mix on the project site would be developed, which would have generated more trips than the apartments that are now proposed for the site under this project. Therefore, the cumulative with project scenario would result in an incremental decrease in air pollutants compared to what would have occurred under the cumulative scenario. As a

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<sup>30</sup> National Data & Surveying Services, 2020. Peak Hour Turning Movement Counts for the Klotz Apartment Project. March 2020, and Kimley Horn, 2020, Cumulative (2035) plus Project Peak-Hour Traffic Volumes.

result, the proposed project's contribution to cumulative emissions would not be considerable, and thus the cumulative operational impact would **less than significant**.

#### Mitigation Measure

None required.

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#### **Impact 4.2-5: Implementation of the proposed project, in conjunction with other planned projects, could cumulatively expose sensitive receptors to substantial pollutant concentrations.**

As discussed above, there are two other cumulative projects in various stages of development and planning in the project area that would be constructed and operational in the foreseeable future; however, the projects would be located over a mile from the project site, and would not result in TAC emissions that would combine with the proposed project's TAC emissions to result in a cumulative health risk effect. However, the SMAQMD considers the project-level threshold of significance for evaluating TACs generated by a project to also be applicable to the project's cumulative contribution to significant TAC emissions. The evaluation of health risks from TACs represents a local rather than a regional analysis. Short-term TAC emissions associated with the proposed project were shown to represent a **significant impact** relative to exposure of sensitive receptors to substantial pollutant concentrations.

#### Mitigation Measure

##### **Mitigation Measure 4.2-5**

Implement Mitigation Measure 4.2-2(b), see Impact 4.2-2.

**Significance After Mitigation:** With implementation of Mitigation Measure 4.2-2(b), which would require all diesel-powered construction equipment to be equipped with engines that meet Tier 4f emissions standards, and would decrease the maximum incremental carcinogenic risk to 0.9 in one million for residents, on-site DPM construction emissions that would be associated with the proposed project would be reduced to the extent that the associated cancer risk would be less than 10 in one million; and therefore, the cumulative impact would be mitigated to **less than significant**.

#### **Operation**

As discussed previously, the proposed project would result in limited operational activities that would generate TAC emissions, including operation of any resident-owned diesel-fueled and gasoline vehicles. These activities would not result in the emissions of TACs, and therefore would have negligible associated cumulative health risks to existing sensitive receptors in the area. Therefore, the cumulative impact would be less than significant.

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## 4.3 Cultural Resources and Tribal Cultural Resources

This section examines the potential impacts of the proposed project on cultural resources and tribal cultural resources. The term cultural resource includes historical resources, archaeological resources, and human remains.

Comments on the NOP (see Appendix B) included responses from four Native American tribes regarding potential impacts of the project on cultural resources and tribal cultural resources. The United Auburn Indian Community requested a site visit and all existing cultural resource assessments conducted for the project. The Shingle Springs Rancheria requested the initiation of the consultation process and requested all completed cultural resources documentation for the project. The Wilton Rancheria provided a set of mitigation measures to incorporate into the project, including avoidance, inadvertent discovery, a pre-construction site visit, and worker awareness training. Finally, the Buena Vista Rancheria noted that they do not have any tribal knowledge of cultural resources present in the project area and would like to be notified in the event of a discovery during construction. Information given based on Native American Tribal oral history of the vicinity during consultation has described the site as being sensitive.

Historical resources are categorized as historic architectural resources and archaeological resources. When applicable, the distinction between architectural resources and archaeological resources hinges on the condition of the resource—if a resource is considered a ruin (e.g., building lacking structural elements, structure lacking historic configuration, etc.), it is classified as an archaeological resource. Built environment architectural resources include historic buildings, structures (e.g., bridges, canals, roads, utility lines, railroads), objects (e.g., monuments, boundary markers), and districts. Archaeological resources include historic-era and prehistoric remnants of past cultures, typically recorded as sites or districts. Historic-era archaeological resources are those archaeological resources dating to the period after Euroamerican settlement and may include foundations, landscaping, refuse scatters, mining features, and railroad grades. Prehistoric archaeological resources are those archaeological resources dating to the period prior to Euroamerican settlement and may include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps, ceremonial sites, and trails. A tribal cultural resource is a site, feature, place, cultural landscape, sacred place, or object of cultural value to a California Native American tribe. This section relies upon the information and findings presented in the cultural resources technical report prepared by Origer and Alshuth in August 2017.<sup>1</sup>

Paleontological resources are the fossilized evidence of past life found in the geologic record. Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the surface of the earth. Despite the abundance of these rocks, and the vast numbers of organisms that have lived through time, preservation of plant or animal remains as fossils can be a rare occurrence. In many cases, fossils of animals and plants occur only in limited areas and in small numbers relative to the distribution of the living organisms they represent. In particular, fossils of

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<sup>1</sup> Alshuth, Taylor, and Tom Origer, 2017. *Historical Resources Study for the Klotz Ranch Court Apartments Project Sacramento, Sacramento County, California*. Prepared by Tom Origer & Associates.

vertebrates – animals with backbones – are sufficiently rare to be considered nonrenewable resources.

### 4.3.1 Environmental Setting

#### Prehistory

Categorizing the prehistoric period into cultural stages allows researchers to describe a broad range of archaeological resources with similar cultural patterns and components during a given timeframe, thereby creating a regional chronology. A commonly used interpretation of the Central Valley prehistoric record has divided human history in the region into three basic periods: Paleo-Indian (13,550 to 10,550 before present [BP]), Archaic (10,550 to 900 BP), and Emergent (900 to 300 BP)<sup>2</sup> The Archaic period is subdivided into three sub-periods: Lower Archaic (10,550 to 7550 BP), Middle Archaic (7,550 to 2,550 BP), and Upper Archaic (2,550 to 900 BP).<sup>3</sup> Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

#### Ethnography

The project area is within the lands occupied and used by the Plains Miwok, a subgroup of the Eastern Miwok.<sup>4</sup> Historic maps and accounts of early travelers to the Sacramento Valley testify that the valley consisted of open grasslands and occasional oak groves, with abundant elk.<sup>5</sup> The area was generally wet in winter and exceedingly dry in summer. Native Americans typically situated their larger, permanent settlements on high ground along the region's major rivers, such as the Sacramento, to the west of the project area.<sup>6 7</sup>

The Plains Miwok are part of the larger Eastern Miwok language group who form one of the two major divisions of the Miwokan subgroup of Utian speakers. Plains Miwok speakers lived in the Central Valley along the Sacramento, Cosumnes, and Mokelumne Rivers, and built their homes on high ground, with principal villages concentrated along major drainages. Plains Miwok speakers lived in semi-autonomous villages, or village clusters, that were largely economically, politically, and socially independent from one another; though villages participated in some shared regional religious and trade networks. Larger villages had an assembly house, a 40 to 50

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<sup>2</sup> Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton, "The Central Valley: A View from the Catbird's Seat", In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 147-163, AltaMira Press, Lanham, Maryland, 2007.

<sup>3</sup> Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton, "The Central Valley: A View from the Catbird's Seat", In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 147-163, AltaMira Press, Lanham, Maryland, 2007.

<sup>4</sup> Levy, Richard, "Eastern Miwok", In *California*, edited by Robert F. Heizer, pp. 398-405, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

<sup>5</sup> Jackson, William A., *Map of the Mining District of California*, <https://www.loc.gov/resource/g4361h.mf000060/>, 1859.

<sup>6</sup> Kroeber, Alfred L., pp. 351, Handbook of the Indians of California, Bureau of American Ethnology Bulletin 78, Smithsonian Institution, Washington, D.C., 1976 reprinted ed., Dover Publications, Inc., New York, 1925 [1976].

<sup>7</sup> Levy, Richard, "Eastern Miwok", In *California*, edited by Robert F. Heizer, pp. 398-405, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

foot-diameter semi-subterranean structure, in addition to a sweathouse, a smaller version of the assembly house.<sup>8</sup>

Seasonality defined Plains Miwok subsistence strategies, and their economy was based principally on the use of natural resources from the grasslands and riparian corridors adjacent to the area's many drainages. As with the majority of California Native American groups, the Plains Miwok relied heavily on acorn for food. Other non-animal foods consisted of nuts, seeds, roots, greens, berries, and mushrooms. Animal foods included deer, tule elk, pronghorn antelope, jackrabbit, squirrel, beaver, quail, and waterfowl. Salmon was the principal animal food for the Plains Miwok, ranking above other river resources such as sturgeon. Nuts, basketry, and obsidian were obtained through trade with the Sierra Miwok to the east and salt, shells, basketry, and bows were obtained in turn through trade from the west.<sup>9</sup> Wooden digging sticks, poles, and baskets were used for gathering vegetal resources, while stone mortars, pestles, and cooking stones were used for processing foods. Items used for obtaining animal resources included nets, snares, seines, bows, and arrows. Arrow points were primarily made of basalt and obsidian.<sup>10</sup>

As with other California Native American groups, the Gold Rush of 1849 had a devastating effect on the Plains Miwok. The flood of miners that came to the area in search of gold brought diseases with them that decimated the Plains Miwok population. Those who survived were subjected to violence and prejudice at the hands of the miners, and the Plains Miwok eventually were pushed out of their ancestral territory. Although this contact with settlers had a profound negative impact on the Plains Miwok population through disease and violent actions, the Miwok people survived and maintained strong communities and action-oriented organizations.<sup>11</sup>

The closest documented Native American village to the project area was *Hulpumne*, located approximately 1.5 miles south of the project area. Many other village sites have been archaeological and ethnographically identified along the Sacramento River in the vicinity of the project area.

## City of Sacramento Archaeological Sensitivity

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.

<sup>8</sup> Levy, Richard, "Eastern Miwok", In *California*, edited by Robert F. Heizer, pp. 398-405, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

<sup>9</sup> Levy, Richard, "Eastern Miwok", In *California*, edited by Robert F. Heizer, pp. 398-405, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

<sup>10</sup> Levy, Richard, "Eastern Miwok", In *California*, edited by Robert F. Heizer, pp. 398-405, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

<sup>11</sup> Castillo, Edward D., "The Impact of Euro-American Exploration and Settlement", In *California*, edited by Robert F. Heizer, pp. 99-127, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

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. Recent discoveries during infill construction in downtown Sacramento have shown that the downtown area is highly sensitive for both historic and prehistoric archaeological resources. Native American burials and artifacts were found in 2005 during construction of the New City Hall and historic archaeological resources are abundant downtown due to the evolving development of the area and, in part, to the raising of the surface street level in the 1860s and 1870s, which created basements out of the first floors of many buildings.

## History

While the Spanish had made forays into the Central Valley since the mid eighteenth century, the earliest non-indigenous presence in the region occurred in 1808 when Capitan Gabriel Moraga led an expedition from Mission San Jose to the northern Sacramento River Valley. By the late 1820s, English, American, and French fur trappers, attracted by the valley's abundance of animal life, had established operations throughout the region. The earliest Euro-American settlement of the area occurred in the 1840s with the establishment of land grants by the Mexican government. In 1839, John Sutter, born in Germany to Swiss parents, became a Mexican citizen and obtained Governor Juan B. Alvarado's permission to establish a settlement in the California interior. Sutter left Yerba Buena in August of 1839, traveling up the Sacramento River in search of a site for his estate. Sutter arrived at the confluence of the American and Sacramento rivers, established a settlement, and received the first land grant in the region in 1841 for his New Helvetia Rancho. The New Helvetia Rancho encompassed 97 square miles and included lands on the east bank of the Feather and Sacramento Rivers. Sutter established Sutter's Fort, and developed fisheries, a flour mill, and a lumber mill.<sup>12</sup>

The Sacramento River Valley remained relatively isolated and sparsely populated until the advent of the Gold Rush period. Given Sacramento's proximity to mining areas, and its accessibility to maritime traffic, the area quickly became a trading and economic center. Commerce along the Sacramento River encouraged continued population growth, with many of the miners and farmers settling along the natural levees of the Sacramento River. Settlers recognized that the active flood plain deposited fertile soils in the lands nearest to the river, which supported bountiful crops and provided easy access to transportation corridors along the river itself. Ranchers and farmers found economic success in providing food and supplies for the miners, although frequent flooding troubled settlers' agricultural efforts and additional settlement.<sup>13</sup>

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<sup>12</sup> Hoover, Mildred, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe, *Historic Spots in California*, edited by Douglas Kyle, Stanford University Press, Stanford, California, 2002.

<sup>13</sup> Hoover, Mildred, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe, *Historic Spots in California*, edited by Douglas Kyle, Stanford University Press, Stanford, California, 2002.

## 4.3.2 Regulatory Setting

### State

#### ***California Environmental Quality Act***

CEQA (Public Resources Code [PRC] section 21000 et seq.) is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources, unique archaeological resources, or tribal cultural resources.

#### **Historical Resources**

The State CEQA Guidelines establish that a historical resource includes: (1) a resource in the California Register of Historical Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC section 21084.1 and State CEQA Guidelines section 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the State CEQA Guidelines, then the site may be treated in accordance with the provisions of PRC section 21083, pertaining to unique archaeological resources.

#### **Unique Archaeological Resources**

As defined in PRC section 21083.2, a "unique archaeological resource" is an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

State CEQA Guidelines note that if an archaeological resource is not a unique archaeological, historical resource, or tribal cultural resource, the effects of the project on those cultural resources shall not be considered a significant effect on the environment (State CEQA Guidelines section 15064.5(c)(4)).

### **Tribal Cultural Resources**

Impacts to tribal cultural resources also are considered under CEQA (PRC section 21084.2). PRC section 21074(a) defines a tribal cultural resource as any of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - a. included or determined to be eligible for inclusion in the California Register; or
  - b. included in a local register of historical resources, as defined in PRC section 5020.1(k).
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [PRC] section 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

Pursuant to PRC section 21074(a)(c), a historical resource, unique archaeological resource, or non-unique archaeological resource may also be a tribal cultural resource if it is included or determined eligible for the California Register, included in a local register of historical resources, or is determined to be such by a state lead agency.

### ***California Register of Historical Resources***

The California Register of Historical Resources (California Register) is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC section 5024.1(a)). The criteria for eligibility for the California Register are based upon criteria for listing in the National Register (PRC section 5024.1(b)). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance.

### ***California PRC Section 5097.99***

California PRC section 5097.99, as amended, states that no person shall obtain or possess any Native American artifacts or human remains which are taken from a Native American grave or

cairn. Any person who knowingly or willfully obtains or possesses any such artifacts or human remains is guilty of a felony which is punishable by imprisonment. Any person who removes, without authority of law, any such items with intent to sell or dissect or with malice or wantonness is also guilty of a felony which is punishable by imprisonment.

### ***California Native American Historic Resource Protection Act***

The California Native American Historic Resources Protection Act of 2002 (PRC section 5097.995 et seq.), imposes civil penalties, including imprisonment and fines up to \$50,000 per violation, for persons who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

### ***California Health and Safety Code Sections 7050.5 and 7052***

California Health and Safety Code (HSC) section 7050.5 protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. PRC section 5097.98 (and reiterated in State CEQA Guidelines section 15064.5(e)) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery. HSC section 7052 states that the disturbance of Native American, or any other, human remains is a felony, unless the disturbance has been lawfully authorized.

## **Local**

### ***City of Sacramento 2035 General Plan***

The City of Sacramento 2035 General Plan (2015) Historic and Cultural Resource Element contains several goals and policies relevant to the protection of cultural resources within the project area. The Element provides policies directing the protection of historical, archaeological, and paleontological resources within the City. The following goals and policies from the 2035 General Plan are relevant to cultural resources:

#### **Goal HCR 2.1: Identification and Preservation of Historic and Cultural Resources.**

Identify and preserve the city's historic and cultural resources to enrich our sense of place and our understanding of the city's prehistory and history.

***Policy HCR 2.1.1: Identification.*** The City shall identify historic and cultural resources, including individual properties, districts, and sites (e.g., archaeological sites), to ensure adequate protection of these resources.

***Policy HCR 2.1.3: Consultation.*** The City shall consult with appropriate organizations and individuals (e.g., California Historical Resources Information System (CHRIS) Information Centers, the Native American Heritage Commission (NAHC), the CA Office of Planning and Research (OPR) "Tribal Consultation Guidelines", etc.) and shall establish a public outreach policy to minimize potential impacts to historic and cultural resources.

***Policy HCR 2.1.6: Planning.*** The City shall take historical and cultural resources into consideration in the development of planning studies and documents.

***Policy HCR 2.1.11: Compatibility with Historic Context.*** The City shall review proposed new development, alterations, and rehabilitation/remodels for compatibility with the surrounding historic context. The City shall pay special attention to the scale, massing, and relationship of proposed new development to surrounding historic resources.

***Policy HCR 2.1.14: Adaptive Reuse.*** The City shall encourage adaptive reuse of historic resources when the original use of the resource is no longer feasible.

***Policy HCR 2.1.16: Archaeological & Cultural Resources.*** The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

### 4.3.3 Analysis, Impacts and Mitigation

#### Significance Criteria

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts to cultural and tribal cultural resources may be considered significant if implementation of the proposed project would:

- Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource;
- Disturb any human remains; or
- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

#### Methodology

When evaluating the potential for a historic resource or tribal cultural resource to be present on the project site, several factors are considered and evaluated:

1. Records search. The previous recordation of a historic, prehistoric, archaeological, or tribal cultural resource on or near the project site may indicate a potential for the proposed project to disturb or impact it.
2. Proximity to a water source. Proximity to a water source is important when evaluating the potential for a tribal cultural resource because a river, stream, creek, or lake provides drinking



water, an opportunity for fishing, an opportunity for commerce/trade, and access to other resources.

3. Soil type. Certain soil types, based on their soil characteristics, are more likely to preserve historic, prehistoric, archaeological, paleontological, or tribal cultural resources.
4. Oral history. Native American history is often passed down through generations through storytelling or narratives. Information about family genealogy, cultural knowledge, traditions, or resources may be conveyed.

## Impacts and Mitigation Measures

There are no architectural historical resources, known archaeological resources, or known tribal cultural resources in the project area, so this section assesses potential impacts to previously unrecorded archaeological resources, both as historical resources defined in CEQA Guidelines Section 15064.5, as well as unique archaeological resources, as defined in PRC Section 21083.2(g), and including historical or archaeological resources with the potential to be considered tribal cultural resources as defined by PRC Section 21074(a). Human remains, including those buried outside of formal cemeteries, are also protected under several state laws, including PRC Section 5097.98 and California Health and Safety Code Section 7050.5.

### **Impact 4.3-1: Construction of the proposed project could impact Historical Resources and Unique Archaeological Resources.**

#### ***Historical Resources***

CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. An historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register, or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. The following discussion focuses on architectural and structural resources. Archaeological resources, including archaeological resources that are potentially historical resources according to CEQA Guidelines Section 15064.5, are addressed below.

Tom Origer and Associates completed a records search at the North Central Information Center (NCIC) of the California Historical Resources Information System in 2017 (File No. SAC-17-122). The review included the project area and a ¼-mile radius. Previous surveys, studies, and site records were accessed. Records were also reviewed in the Historic Property Directory for Sacramento County, which contains information on places of recognized historical significance including those evaluated for listing in the *National Register of Historic Places*, the *California Register of Historical Resources*, the *California Inventory of Historical Resources*, *California Historical Landmarks*, and *California Points of Historical Interest*. The purpose of the records search was to (1) determine whether known cultural resources have been recorded within the project vicinity; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

Three historic-era resources have been previously recorded within ¼-mile of the project area: “Victory Trees” (P-34-000639) along State Route 160,<sup>14</sup> P-34-005012, a water tank tower,<sup>15</sup> and P-34-001497, a branch of the Walnut Grove Branch Line Railroad.<sup>16 17 18 19</sup> The branch of the Walnut Grove railroad is the nearest cultural resources to the project area and is located approximately 115 feet from the southern end of the project area.

Through a records search, background research, and a field survey, no historical resources were identified in the project area. As such, there are no architectural or structural resources in the project area that qualify as historical resources, as defined in CEQA Guidelines Section 15064.5; therefore, the project is not anticipated to impact any historical resources and no mitigation is required.

### ***Archaeological Resources***

This section discusses archaeological resources, both as historical resources according to CEQA Guidelines Section 15064.5, as well as unique archaeological resources, as defined in PRC Section 21083.2(g). A significant impact would occur if the project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

Results of the NCIC records search indicate that no cultural resources have been previously recorded in the project area. One prehistoric resource (P-34-000071) is within ¼-mile of the project area. Klotz Mound (P-34-000071) is a pre-contact village mound located along the Sacramento River south of the project area. Klotz Mound was recorded as being completely leveled and destroyed.<sup>20 21</sup>

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<sup>14</sup> Heidecker, Kelly. DPR 523 Site Record form for Victory Trees. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-0000639, 2001.

<sup>15</sup> Francisco, S., DPR 523 Site Record for P-34-005012. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-005012. 2013.

<sup>16</sup> Deis, Richard. DPR 523 Site Record form for Walnut Grove Branch Line. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-001497, 2006.

<sup>17</sup> Havelaar, C. DPR 523 Site Record form for Walnut Grove Branch Line of the Southern Pacific Railroad. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-001497, 2011.

<sup>18</sup> Melvin, Steven, and Rebecca Flores. DPR 523 Site Record form for JSA033. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-001497, 2007.

<sup>19</sup> Roark, Gabriel. DPR 523 Site Record form for Walnut Grove Branch Line of the Southern Pacific Railroad. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-001497, 2006.

<sup>20</sup> Bouey, Paul. Archaeological Site Record for Klotz Mound. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-000071, 1990.

<sup>21</sup> Heizer, R. Archaeological Site Survey Record for S-44; Klotz Mound. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, P-34-000071, 1934.

The records search indicated that none of the 12.7-acre parcel was previously surveyed for cultural resources. Four surveys have been conducted adjacent to the project area.<sup>22 23 24 25</sup> Nine other cultural resources studies have been completed within ¼-mile of the parcel.<sup>26 27 28 29 30 31 32 33 34</sup> These studies include record searches, surveys, excavation reports, and technical studies.

On August 10, 2017, Tom Origer and Associates archaeologist Taylor Alshuth conducted a survey of the project area. Ground visibility varied from good to poor due to varying density of vegetation. A hoe was used to clear patches of grass during survey to increase ground surface visibility. No prehistoric or historic-era resources were identified during the field survey.

The City has conducted correspondence with several culturally affiliated tribes of the area. In all correspondence the site has been identified as being sensitive, including through oral history of the vicinity.

- <sup>22</sup> Chavez, D. *Negative Archaeological Survey Report for the Laguna Boulevard Interchange and Elk Grove Interchange Projects*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-3847, 1990.
- <sup>23</sup> McGowan, D. *Cultural Resources Investigation for an Environmental Impact Report prepared for the Sacramento County Regional Transit's proposed Freeport Transit Center*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-3861, 1992.
- <sup>24</sup> Peak & Associates. *Cultural Resources Assessment of the Klotz Property, Pocket Area, Sacramento County, California*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-421, 1979.
- <sup>25</sup> Shapiro, W. *Archaeological Survey Report for the SMUD Freeport Water Authority 69kV Line Project (1985-01)*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-9135, 2007.
- <sup>26</sup> Chavez, D. *Cultural Resources Evaluation for the Riverbend/I-5 Interchange Project, Sacramento, California*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-3849, 1987.
- <sup>27</sup> Hilton, S. *Historic Property Survey Report for the City of Sacramento Freeport Shores Pedestrian Bicycle Trail Project, Sacramento County, California, Caltrans District 3*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-7963, 2004.
- <sup>28</sup> Hilton, S. *Archaeological Survey Report for the City of Sacramento Freeport Shores Pedestrian Bicycle Trail Project, Sacramento County, California, Caltrans District 3*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-7963, 2004.
- <sup>29</sup> Hilton, S. *Historic Resources Evaluation Report for the City of Sacramento Freeport Shores Pedestrian Bicycle Trail Project, Sacramento County, California, Caltrans District 3*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-7963, 2004.
- <sup>30</sup> Jones & Stokes. *Cultural Resources Inventory and Evaluation Report for the Freeport Regional Water Project, Sacramento and San Joaquin Counties, California*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-9989, 2006.
- <sup>31</sup> Losee, C. *Cultural Resources Investigation for AT&T Mobility CVL1454 "Freeport Water", 7788 Freeport Boulevard, Sacramento City and County, California*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-11825, 2015.
- <sup>32</sup> Maniery, M. *National Register of Historic Places Significance Evaluation of Walnut Grove Branch Line Railroad, Sacramento County, California*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-12160, 1991.
- <sup>33</sup> Shapiro, W. *Archaeological Investigations for the Sump 28 Sedimentation Basin Project, City of Sacramento, Sacramento County, California*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-3862, 1996.
- <sup>34</sup> Weaver, R. *Cultural Resources Survey, Sacramento River Flood Control Test Section, Sacramento County, California*. On file at the North Central Information Center of the California Historical Resources Information System, Sacramento, California, S-3854, 1989.

Based on the results of the records search, background research, and surface survey, no archaeological resources have been identified in the project area and the project area has a low potential to uncover buried archaeological resources. As such, the proposed project is not anticipated to impact any archaeological resources pursuant to CEQA Guidelines Section 15064.5.

Given the general archaeological sensitivity of the vicinity, if any previously unrecorded archaeological resources are identified during project ground disturbing activities and were found to qualify as an historical resource per CEQA Guidelines Section 15064.5 or a unique archaeological resource, as defined in PRC Section 21083.2(g), any impact to the resource resulting from the project could be **potentially significant**. Any potentially significant impact would be reduced to a less-than-significant level by implementing **Mitigation Measure 4.3-1(a)**, which would require cultural resources sensitivity training for all project personnel prior to construction, **Mitigation Measure 4.3-2(b)**, which would require archaeological and Native American monitoring during ground-disturbing activities, and **Mitigation Measure 4.3-2(c)**, which would ensure that appropriate and legal protocols would be followed in the event of an inadvertent discovery of cultural resources.

#### Mitigation Measure

##### **Mitigation Measure 4.3-1(a): Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities.**

The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, as well as culturally affiliated Native American tribes. The City may invite a Native American representative from interested culturally affiliated Native American tribes to participate. The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.

##### **Mitigation Measure 4.3-1(b): Archaeological and Native American Monitoring and the Discovery of Cultural Materials and/or Human Remains.**

Prior to authorization to proceed, the applicant shall employ a Secretary of the Interior-qualified archaeologist, with input from consulting tribes, to prepare a Cultural Resources Monitoring Plan. Monitoring shall be required during initial ground-disturbing activities unless the area is determined to require monitoring of deeper sediments, according to a

schedule outlined in the Cultural Resources Monitoring Plan. The plan shall include (but not be limited to) the following components:

- Person(s) responsible for conducting monitoring activities, including an archaeological monitor and a Native American Tribal monitor;
- Person(s) responsible for overseeing and directing the monitors;
- How the monitoring shall be conducted and the required format and content of monitoring reports, including schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;
- Protocol for notifications in case of encountering cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, patriation);
- Methods to ensure security of cultural resources sites, including protocol for notifying local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction.

During the course of the monitoring, the archaeologist and Native American Tribal monitor may adjust the frequency—from continuous to intermittent—based on the conditions and professional judgment regarding the potential to impact cultural and tribal cultural resources.

**Mitigation Measure 4.3-1(c): In the Event that Cultural Resources or Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.**

If cultural resources or tribal cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or human remains) are encountered at the project site during construction, work shall be temporarily suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City representative. Avoidance and preservation in place is the preferred manner of mitigating impacts to cultural resources and tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:

- Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity.
- Recommendations for avoidance of cultural resources and tribal cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives.
- Native American representatives from interested culturally affiliated Native American tribes will be invited to review and comment on these analyses and shall have the opportunity to meet with the City representative and its representatives who

have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.

- If the discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a cultural resource or a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and a designated Native American Tribal representative will be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with a Native American Tribal representative.
- The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an “Environmentally Sensitive Area.”

If a cultural resource or a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources or tribal cultural resources:

- Each resource will be evaluated for California Register of Historical Resources- (California Register) eligibility through application of established eligibility criteria, in consultation with consulting Native American Tribes, as applicable.

If a cultural resource or a tribal cultural resource is determined to be eligible for listing in the California Register, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City’s invitation within two weeks of receiving the invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

Native American representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long-term management of any discovered tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural resources retaining tribal cultural integrity shall be

consistent with the avoidance and minimization standards identified in this mitigation measure.

If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:

- Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treat the resource with culturally appropriate dignity taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - Protect the cultural character and integrity of the resource.
  - Protect the traditional use of the resource.
  - Protect the confidentiality of the resource.
  - Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
  - Protect the resource.

**Significance After Mitigation:** Implementation of **Mitigation Measures 4.3-1(a), 4.3-1(b) and 4.3-1(c)** would reduce the potential impact to inadvertently discovered archaeological resources to **less than significant**.

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**Impact 4.3-2 Construction of the proposed project could directly or indirectly destroy a unique paleontological resource.**

Paleontological sensitivity is defined as the potential for a geologic formation to produce scientifically important fossils. This is determined by the rock type, the past history of the geologic unit in producing significant fossils, and the fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources, the Society of Vertebrate

Paleontology (SVP)<sup>35</sup> defines four categories of paleontological sensitivity for rock units, reflecting their potential for containing additional significant paleontological resources:

- High Potential: Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered.
- Low Potential: Rock units that are poorly represented by fossil specimens in institutional collections, or that based on general scientific consensus only preserve fossils in rare circumstances, with the presence of fossils being the exception, not the rule.
- Undetermined Potential: Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment.
- No Potential: Rock units such as high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites) that will not preserve fossil resources.

The surficial geology of the project area has been mapped by the California Geological Survey at scales of 1:100,000.<sup>36</sup> The surficial geology is composed entirely of Riverbank Formation. The Riverbank Formation has a high paleontological sensitivity based on the presence of vertebrate fossils found within the formations.<sup>37</sup>

Ground-disturbing activity would disturb the Riverbank Formation, which has a high paleontological sensitivity. The impact to paleontological resources resulting from the project could be **potentially significant**.

#### Mitigation Measure

##### **Mitigation Measure 4.3-2: In the Event that Paleontological Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.**

If paleontological resources are encountered during project subsurface construction, all ground-disturbing activities shall be redirected within 100 feet of the find until a qualified paleontologist can be contacted to evaluate the find and make recommendations. If found to be significant and proposed project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan shall be implemented. Adverse impacts to paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the accession of all fossil material to a paleontological repository. Upon completion of project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.

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<sup>35</sup> Society of Vertebrate Paleontology (SVP). 2010. Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources: standard guidelines, *Society of Vertebrate Paleontology News Bulletin*.

<sup>36</sup> California Geological Survey (CGS), 2009. Preliminary Geologic Map of the Lodi 30' X 60' Quadrangle, California. California Geological Survey. Map. Scale 1:100,000.

<sup>37</sup> University of California Museum of Paleontology (UCMP), *Collections Database Search Results*. Available: <http://www.ucmp.berkeley.edu/science/collections.php>. Accessed March 4, 2020.



**Significance After Mitigation:** Implementation of **Mitigation Measure 4.3-2** would reduce the potential impact to inadvertently discovered paleontological resources to **less than significant**.

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**Impact 4.3-3 Construction of the proposed project could impact human remains.**

Based on the records search and survey results, no human remains are known to exist within the project area. Therefore, the proposed project is not anticipated to impact human remains, including those interred outside of dedicated cemeteries. However, information given based on Native American oral history of the vicinity has described the site as being sensitive.

While unlikely, if any previously unknown human remains were encountered during ground disturbing activities, any impact to the human remains resulting from the project could be **potentially significant**. Any potentially significant impact would be reduced to a less than significant level by implementing **Mitigation Measure 4.3-3**, which would ensure that appropriate and legal protocol would be followed including contacting the County Coroner and, if the remains are determined to be Native American in origin, the Native American Heritage Commission (NAHC).

Mitigation Measure

**Mitigation Measure 4.3-3: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains.**

If an inadvertent discovery of human remains is made at any time during project-related construction activities or project planning, the City shall meet the following performance standards prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]).

If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.

**Significance After Mitigation:** Implementation of **Mitigation Measure 4.3-3** would reduce the potential impact to inadvertently discovered human remains to **less than significant**.

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**Impact 4.3-4: Construction of development allowed under the proposed project could impact tribal cultural resources.**

CEQA requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in PRC Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources.

ESA contacted the California State Native American Heritage Commission (NAHC) on January 24, 2019 to request a search of the NAHC's Sacred Lands File and a list of Native American representatives who may have knowledge of tribal cultural resources in the project area, or interest in the project. The NAHC replied to ESA by email on January 28, 2020 with the statement that the Sacred Lands File has no record of any sacred sites within the project area. The NAHC response included a list of eight Native American representatives from six tribes who may have knowledge of tribal cultural resources in the project area, or be interested in the project.

On January 27, 2020, the City sent letters to four Native American tribal organizations who have previously indicated interest to the City of Sacramento as per AB 52. As of February 27, 2020, four tribes: Buena Vista Rancheria of Me-Wuk Indians, Shingle Springs Band of Miwok Indians, United Auburn Indian Community of the Auburn Rancheria, and Wilton Rancheria have requested consultation with the City.

All four tribes responded to the City as described in the introduction above. The City will engage in continued consultation with the tribe regarding potential impacts to cultural resource and tribal cultural resources.

Based on the records search at the North Central Information Center (NCIC) of the California Historical Resources Information System in 2017 (File No. SAC-17-122) and the NAHC SLF negative search results, there are no known tribal cultural resources listed or determined eligible for listing in the California Register, or included in a local register of historical resources as defined in PRC Section 5020.1(k), or pursuant to PRC Section 21074(a)(1), that would be affected by the project. A surface survey of the project area identified no potential tribal cultural resources. Information given based on Native American oral history of the vicinity has described the site as being sensitive. If any previously unrecorded archaeological resource were identified during project implementation, particularly ground-disturbing construction activities, and were found to qualify as a tribal cultural resource pursuant to PRC Section 21074(a)(2) (determined by the lead agency to be significant pursuant to criteria set forth in PRC Section 5024.1[c]), any impact to the resource resulting from the project could be **potentially significant**. Any potentially

significant impact would be reduced to a less-than-significant level by implementing Mitigation Measures 4.2-1(a) and 4.2-1(b) and/or Mitigation Measure 4.3-3, as applicable.

#### Mitigation Measure

##### **Mitigation Measure 4.3-4**

Implement Mitigation Measures 4.3-1(a), 4.3-1(b), and 4.3-1(c) and/or Mitigation Measure 4.3-3, as applicable.

**Significance After Mitigation:** Implementation of **Mitigation Measure 4.3-4** would reduce the potential impacts to inadvertently discovered tribal cultural resources to **less than significant**.

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## **Cumulative Impacts**

The cumulative context for cultural resources includes Sacramento County for historic-era archaeological resources, and the portions of Central Valley identified as the territory of the local Native American community for pre-contact indigenous archaeological resources. Historic-era archaeological resources tend to be concentrated within historic city limits, but are not confined to historically urban areas. Within the City of Sacramento, excavations have uncovered evidence of pre-contact indigenous culture dating to 7,750 BP. Continued developments within Sacramento increases the likelihood that previously unrecorded archaeological resources and human remains will be inadvertently discovered, and potentially impacted before the resources have been evaluated for inclusion on the California Register, or for their historic and scientific value.

**Impact 4.3-5: Construction of the proposed project, in combination with other development, could contribute to the cumulative loss or alteration of historic-era and indigenous archaeological resources, and human remains in archaeological contexts.**

Cumulative development in Sacramento County and in portions of the Central Valley identified as the territory of the local Native American community or the area of historic-era use and occupation in Sacramento County could result in significant cumulative impacts to cultural and tribal cultural resources. Each individual project is subject to review under CEQA as well as required to obtain necessary permits and approvals from federal and state resource agencies. As a result of these processes, each project would be required to avoid, minimize, and compensate for its impacts on sensitive cultural resources, such that the cumulative impact would be reduced though not completely eliminated. The City's General Plan Master EIR evaluated the potential cumulative loss of archaeological resources and determined that there may be a loss of resources over time. Because not all such impacts from these other projects have been or can be reduced to less than significant levels, the loss of any cultural and tribal cultural resources would result in a significant cumulative impact.

As discussed above, the potential for the project site to contain buried archaeological resources is low. In addition, human remains, including those interred outside of dedicated cemeteries, are not anticipated to be located on the project site; however, the possibility cannot be entirely discounted. Similarly, there is no evidence of tribal cultural resources in project site. The

discovery of previously unknown archaeological resources or human remains, including those which could qualify as tribal cultural resources, is possible in the alluvial Middle and Late Holocene soils of the Sacramento Valley, such as the soils underlying portions of the project site. As a result, ground disturbing activities associated with the proposed project could result in a considerable contribution to the cumulative loss of cultural and tribal cultural resources in Sacramento County and in portions of the Central Valley, and this cumulative impact is considered **potentially significant**.

#### Mitigation Measure

##### **Mitigation Measure 4.3-5**

Implement Mitigation Measures 4.3-1(a), 4.3-1(b), and 4.3-1(c) and/or Mitigation Measure 4.3-3, as applicable.

**Significance After Mitigation:** Implementation of Mitigation Measure 4.3-5 would effectively avoid damage to or loss of cultural and tribal cultural resources, and little to no residual impact would remain after mitigation. With implementation of this mitigation measure, the contribution of the proposed project to this cumulative impact would be less than considerable, and this impact would be reduced to a **less-than-significant** level.

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#### **Impact 4.3-6: Construction of the proposed project, in combination with other development, could contribute to the cumulative loss of paleontological resources.**

The City of Sacramento and surrounding areas are not considered highly sensitive for the presence of paleontological resources. Nonetheless, there could be undiscovered paleontological resources located in the region. Development that requires extensive excavation could damage or destroy such resources. This is considered a significant cumulative impact.

As discussed above, the potential for the project site to contain buried paleontological resources is high and the possibility cannot be entirely discounted. The discovery of previously unknown paleontological resources is possible in the alluvial Middle and Late Holocene soils of the Sacramento Valley, such as the soils underlying portions of the project site. As a result, ground disturbing activities associated with the proposed project could result in a considerable contribution to the cumulative loss of paleontological resources in Sacramento County and surrounding areas, and this cumulative impact is considered **potentially significant**.

##### **Mitigation Measures 4.3-6**

Implement Mitigation Measure 4.3-2, as applicable.

**Significance After Mitigation:** Implementation of Mitigation Measure 4.3-6 would effectively avoid damage to or loss of paleontological resources, and little to no residual impact would remain after mitigation. With implementation of this mitigation measure, the contribution of the proposed project to this cumulative impact would be less than considerable, and this impact would be reduced to a **less-than-significant** level.

## 4.4 Global Climate Change

This section assesses the potential greenhouse gas (GHG) emissions and climate change impacts from construction and operation of the proposed project and identifies potentially feasible mitigation measures where appropriate.

Comments on the NOP (see Appendix B) included a letter from the Sacramento Metropolitan Air Quality Management District (SMAQMD) that referenced the following plans related to reducing GHG emissions:

- The current Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS);
- The City of Sacramento 2035 General Plan (General Plan);
- The Mayors' Commission on Climate Change's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report;
- The City of Sacramento Pedestrian Master Plan (Pedestrian Master Plan); and
- The City of Sacramento 2016 Bicycle Master Plan (Bicycle Master Plan).

The proposed project's consistency with these recommendations and plans has been addressed in this section.

The primary sources of data referenced for this section include:

- Project-specific construction and operational features described in Chapter 2, Project Description;
- State of California climate regulatory guidance;
- SMAQMD *CEQA Guide to Air Quality Assessment in Sacramento County* (CEQA Guide);<sup>1</sup>
- the City's General Plan;<sup>2</sup>
- the *City of Sacramento 2035 General Plan Master Environmental Impact Report*;<sup>3</sup> and
- traffic information provided by the traffic consultant (see Section 4.6).

<sup>1</sup> Sacramento Metropolitan Air Quality Management District, 2020. Guide to Air Quality Assessment in Sacramento County, Chapter 6, Greenhouse Gas Emissions. Updated April 2020. Available: [www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools](http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools). June 11, 2020.

<sup>2</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015.

<sup>3</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.

### 4.4.1 Environmental Setting

“Global warming” and “climate change” are common terms used to describe the increase in the average temperature of the Earth’s near-surface air and oceans since the mid-20<sup>th</sup> Century. Natural processes and human actions have been identified as impacting climate. The International Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. Since the 19<sup>th</sup> Century, however, increasing GHG concentrations resulting from human activity such as fossil fuel combustion, deforestation, and other activities are believed to be a major factor in climate change.

GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the Earth and is reflected back into space – a phenomenon sometimes referred to as the “greenhouse effect.” Some GHGs occur naturally and are necessary for keeping the Earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>) are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O occur naturally and are also generated through human activity. Emissions of CO<sub>2</sub> are largely by-products of fossil fuel combustion, whereas CH<sub>4</sub> primarily results from off-gassing,<sup>4</sup> natural gas leaks from pipelines and industrial processes, and incomplete combustion, and is associated with agricultural practices, landfills, energy providers, and other industrial facilities. Other human-generated GHGs include fluorinated gases such as SFCs, PFCs, and SF<sub>6</sub>, which have much higher heat-absorption potential than CO<sub>2</sub>, and are byproducts of certain industrial processes.

CO<sub>2</sub> is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO<sub>2</sub>. For example, CH<sub>4</sub> and N<sub>2</sub>O are substantially more potent GHGs than CO<sub>2</sub>, with GWPs of approximately 30 and approximately 275 times that of CO<sub>2</sub>, which has a GWP of 1.<sup>5</sup>

In emissions inventories, GHG emissions are typically reported as metric tons of CO<sub>2</sub> equivalents (CO<sub>2</sub>e). CO<sub>2</sub>e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH<sub>4</sub> and N<sub>2</sub>O have much higher GWPs than CO<sub>2</sub>, CO<sub>2</sub> is emitted in higher

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<sup>4</sup> Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

<sup>5</sup> U.S. Environmental Protection Agency. *Understanding Global Warming Potentials*. Available: <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>. Accessed April 8, 2020.

quantities and it accounts for the majority of GHG emissions in CO<sub>2</sub>e, both from developments and human activity in general.

## Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO<sub>2</sub> emissions (and thus substantial increases in atmospheric concentrations of CO<sub>2</sub>). In 1994, atmospheric CO<sub>2</sub> concentrations were found to have increased by nearly 30 percent above pre-industrial concentrations.

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, an increase in high ground-level ozone days, larger forest fires, and increased drought in some parts of the state. Secondary effects are likely to include the displacement of thousands of coastal businesses and residences (as a result of sea level rise), impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity.

As the California Air Resources Board (CARB) *Climate Change Scoping Plan* noted, the legislature, in enacting Assembly Bill (AB) 32 – The Global Warming Solutions Act, found that global warming would cause detrimental effects to some of the state’s largest industries, including agriculture, winemaking, tourism, skiing, commercial and recreational fishing, forestry, and the adequacy of electrical power generation. The *Climate Change Scoping Plan* states: “The impacts of global warming are already being felt in California. The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about 8 inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening low coastal areas with inundation and serious damage from storms.”<sup>6</sup> AB 32 is discussed further below under Regulatory Setting.

## Impacts of Climate Change

### *Ecosystem and Biodiversity Impacts*

Climate change is expected to have effects on diverse types of ecosystems. As temperatures and precipitation change, seasonal shifts in vegetation will occur; this could affect the distribution of associated flora and fauna species. The IPCC states that “a large fraction of both terrestrial and freshwater species faces increased extinction risk under projected climate change during and beyond the 21<sup>st</sup> century, especially as climate change interacts with other stressors, such as habitat modifications, over exploitation, and invasive species.”<sup>7</sup> Forest dieback poses risks for carbon storage, biodiversity, wood production, water quality, and economic activity. Wildfires, which are an important control mechanism in many ecosystems, are becoming more severe and more frequent,

<sup>6</sup> California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. p. 10.

<sup>7</sup> Intergovernmental Panel on Climate Change, 2014. *Climate Change 2013: Impacts, Adaptation, and Vulnerability, Summary for Policymakers*. Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. pp. 14-15.

making it difficult for native plant species to repeatedly re-germinate. Continued emission of GHGs will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems.<sup>8</sup>

### **Human Health Impacts**

Climate change will likely increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, yellow fever, and encephalitis. Cholera, which is associated with algal blooms, could also increase. While these health effects would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable.<sup>9</sup>

## **Greenhouse Gas Emissions Estimates**

### **Global Emissions**

Worldwide emissions of GHGs in 2018 were approximately 51.8 billion metric tons of CO<sub>2</sub>e.<sup>10</sup> This includes both ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

### **U.S. Emissions**

In 2017, the United States emitted about 6,457 million metric tons of CO<sub>2</sub>e. Of the four major emission sectors—residential, commercial, industrial, and transportation—transportation accounts for the highest fraction of GHG emissions (approximately 28.9 percent); these emissions are generated from direct fossil fuel combustion.<sup>11</sup>

### **State of California Emissions**

In California, the transportation sector is the largest emitter of GHGs, followed by the industrial sector. Emissions of CO<sub>2</sub> are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. Nitrous oxide emissions are also largely attributable to agricultural practices and soil management. Carbon dioxide sinks include vegetation and the ocean, which absorb CO<sub>2</sub> through

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<sup>8</sup> Intergovernmental Panel on Climate Change, 2014. *Climate Change 2014, Synthesis Report Summary for Policymakers, Fifth Assessment Report*.

<sup>9</sup> U.S. Environmental Protection Agency, 2008. *Climate Change – Health and Environmental Effects*. Available: [www.epa.gov/climatechange/effects/health.html#climate](http://www.epa.gov/climatechange/effects/health.html#climate). Accessed April 8, 2020.

<sup>10</sup> PBL Netherlands Environmental Assessment Agency, 2019. Trends in Global CO<sub>2</sub> Emissions, 2019 Report. Available at: [https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report\\_4068.pdf](https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report_4068.pdf). Accessed April 8, 2020.

<sup>11</sup> U.S. Environmental Protection Agency, 2019. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017; Table 2-10*. April 2019. Available at: <https://www.epa.gov/sites/production/files/2019-04/documents/us-ghg-inventory-2019-main-text.pdf>. Accessed April 8, 2020.



sequestration and dissolution, and are two of the largest reservoirs of CO<sub>2</sub> sequestration. California produced approximately 424.1 million metric tons of CO<sub>2</sub>e in 2017. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent), and the electric power sector (including both in-state and out-of-state sources) (15 percent).<sup>12</sup>

### **City of Sacramento Emissions**

Based on the most recent data source, the City of Sacramento 2016 GHG inventory, the transportation sector represents the largest source of GHG emissions, accounting for 57 percent of the City's annual emissions of 1.9 million metric tons of CO<sub>2</sub>e<sup>13</sup>. Electricity and natural gas use to operate, heat, and cool commercial, industrial, and residential buildings accounted for another 38 percent of annual CO<sub>2</sub>e emissions. The other CO<sub>2</sub>e emission sectors included in the inventory (with percent contributions reported in parentheses) were waste (3.9 percent), wastewater treatment (0.6 percent), and water consumption (0.3 percent).<sup>14</sup>

### **Baseline Conditions**

The project site is located in Sacramento, California, approximately 80 miles northeast of San Francisco and 85 miles west-southwest of Lake Tahoe. The project site is bounded by Pocket Road to the north and Freeport Boulevard to the east. The southwestern boundary of the project site is located adjacent to Interstate 5 (I-5), which traverses the state from north to south. In addition to I-5, the City of Sacramento is bisected by Interstate 80 (I-80), which provides an east-west connection between San Francisco and Reno; and U.S. Highway 50, which provides an east-west connection between Sacramento and South Lake Tahoe. Two railroads also transect Sacramento; the Union Pacific Railroad (UPRR) and the BNSF Railway. The project site was previously graded and is currently vacant, generating no direct or indirect GHG emissions.

## **4.4.2 Regulatory Setting**

### **Federal**

#### ***U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings***

The U.S. Supreme Court has held that the United States Environmental Protection Agency (US EPA) must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency* et al., twelve states and cities, including California, together with several environmental organizations sued to require the US EPA to regulate GHGs as

<sup>12</sup> California Air Resources Board, 2019. *California Greenhouse Gas Emissions for 2000 to 2017- Trends of Emissions and Other Indicators*. Available at: [https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2017/ghg\\_inventory\\_trends\\_00-17.pdf](https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf). Accessed April 8, 2020.

<sup>13</sup> City of Sacramento, 2020. *City of Sacramento Climate Action Plan Update, Appendix A – Community Inventory and Forecast Methodology*. March, 2020. Available at: [https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Major-Projects/App-A---Community-Technical-Appendix-Final-3\\_16\\_20.pdf?la=en](https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Major-Projects/App-A---Community-Technical-Appendix-Final-3_16_20.pdf?la=en). Accessed April 21, 2020.

<sup>14</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Adopted March 3, 2015.

pollutants under the CAA (127 S. Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and the US EPA had the authority to regulate GHGs.

On December 7, 2009, the US EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:<sup>15</sup>

- **Endangerment Finding:** The current and projected concentrations of the six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

### ***Mandatory Greenhouse Gas Reporting Rule***

On September 22, 2009, the US EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the US EPA to develop "...mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy..." The Reporting Rule applies to most entities that emit 25,000 metric tons of CO<sub>2</sub>e or more per year. The project would not reach this threshold. Since 2010, facility owners must submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for the US EPA to verify annual GHG emissions reports.

### ***Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards***

In 2014 the US EPA and the Department of Transportation's National Highway Traffic Safety Administration established a program that reduces GHG emissions and improves fuel economy for all new cars and trucks sold in the U.S. The program requires manufacturers to build a fleet that meets all federal and state requirements with an end target fuel economy of 54.5 miles per gallon by model year 2025. In January 2017, US EPA issued its Mid-Term Evaluation of the GHG emissions standards, finding that it would be practical and feasible for automakers to meet the model year 2022 to 2025 standards through a number of existing technologies.

In August 2018, the US EPA revised its 2017 determination, and issued a proposed rule that maintains the 2020 Corporate Average Fuel Economy (CAFE) and CO<sub>2</sub> standards for model years 2021 through 2026 (83 Fed. Reg. 42986). The estimated CAFE and CO<sub>2</sub> standards for model year 2020 are 43.7 miles per gallon (mpg) and 204 grams of CO<sub>2</sub> per mile for passenger cars and 31.3 mpg and 284 grams of CO<sub>2</sub> per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. On May 1, 2018, California, joined by 16 other states and the District of Columbia, filed a petition challenging the USEPA's proposed rule to revise the vehicle emissions standards, arguing that the USEPA had reached erroneous conclusions about the feasibility of meeting the existing standards. On October 25, 2019,

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<sup>15</sup> U.S. Environmental Protection Agency. 2016. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Available: <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>. Accessed April 8, 2020.

the D.C. Circuit dismissed the challenges, concluding that it did not have jurisdiction to consider the US EPA's withdrawal of the Obama administration's mid-term determination that model year 2022 to 2025 GHG emission standards promulgated in 2012 remained appropriate. The court noted that the withdrawal did not itself change the emission standards established in 2012 but only created the possibility that the standards could be modified in the future, similar to an agency's grant of a petition for reconsideration of a rule.<sup>16</sup> Accordingly, due to the uncertainty of future federal regulations, this analysis assumes that the existing CAFE standards will remain in place.

## State

In California, the legal framework for GHG emission reduction has come about through an incremental set of Governors' Executive Orders, legislation, and regulations put in place since 2002. The major components of California's climate change initiative are identified below.

### ***California Environmental Quality Act and Senate Bill 97***

Under CEQA, lead agencies are required to disclose the reasonably foreseeable adverse physical environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to climate change. In turn, climate change has the potential to raise sea levels, alter rainfall and snowfall, affect habitat and create other adverse environmental effects.

#### **Senate Bill 97**

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. These State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

#### **State CEQA Guidelines**

State CEQA Guidelines section 15064.4 specifically addresses the significance of GHG emissions, requiring a lead agency to make a "good-faith effort" to "describe, calculate or estimate" GHG emissions in CEQA environmental documents. State CEQA Guidelines Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, (2) whether the project emissions would exceed a locally applicable threshold of significance, and (3) the extent to which the project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions." The State

<sup>16</sup> The State of California's May 1, 2018 petition, the October 25, 2019 decision by the U.S. Court of Appeals for the D.C. Circuit, and other materials in the docket for Case No. 18-1114 are available online: <http://climatecasechart.com/case/california-v-epa-4>. Accessed April 8, 2020.

CEQA Guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (State CEQA Guidelines Section 15064(h)(3)). The State CEQA Guidelines do not, however, set a numerical threshold of significance for GHG emissions.

The State CEQA Guidelines also include the following direction on measures to mitigate GHG emissions, when such emissions are found to be significant:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases; and
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.<sup>17</sup>

### ***Assembly Bill 1493***

In 2002, Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493, also known as the "Pavley" regulations (named for the bill's author, State Senator Fran Pavley), required CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 CARB approved amendments to the CCR, adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1), require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and

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<sup>17</sup> State CEQA Guidelines section 15126.4(a).

medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight (GVW) rating of less than 10,000 pounds and that is designed primarily for the transportation of persons), beginning with model year 2009. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009. For light-duty trucks with an LVW of 3,751 pounds to a GVW of 8,500 pounds, as well as for medium-duty passenger vehicles, GHG emissions were reduced approximately 24 percent between 2009 and 2016.

Because the Pavley regulations would impose stricter standards than those under the CAA, California applied to the US EPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the US EPA granted the waiver.

### ***Advanced Clean Cars Program***

In January 2012, the CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into standards for vehicle model years 2017 through 2025. The program strengthens the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state.

The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016.<sup>18</sup>

### ***Executive Order S-3-05***

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Arnold Schwarzenegger established Executive Order S-3-05, which set forth the following target dates by which statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. As discussed below, the 2020 reduction target was codified in 2006 as Assembly Bill 32. However, the 2050 reduction target has not been codified.

### ***Senate Bill 743***

Senate Bill (SB) 743 was signed in 2013, with the intent to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of

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<sup>18</sup> California Air Resources Board, 2017. *California's Advanced Clean Cars Midterm Review*, January 18, 2017. [https://www.arb.ca.gov/msprog/acc/mtr/acc\\_mtr\\_summaryreport.pdf](https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_summaryreport.pdf). Accessed April 8, 2020.

public health through active transportation, and reduction of greenhouse gas emissions.” When implemented, “traffic congestion shall not be considered a significant impact on the environment” within California Environmental Quality Act (CEQA) transportation analysis.

### ***Executive Order B-30-15***

In 2015, Governor Brown issued Executive Order B-30-15, establishing a GHG reduction target of 40 percent below 1990 levels by 2030. This goal was set to make it possible to reach the ultimate goal of AB 32 to reduce GHG emissions 80 percent under 1990 levels by 2050. Specifically, the Executive Order directed CARB to update the Scoping Plan to express this 2030 target in metric tons. On September 8, 2016, Governor Jerry Brown signed Senate Bill 32 (SB 32), which codified the 2030 reduction target called for in Executive Order B-30-15 (see below). CARB’s 2017 Scoping Plan update addressed the 2030 target, as discussed below.

### ***Global Warming Solutions Act and the California Climate Change Scoping Plan Assembly Bill 32***

In 2006, the California legislature passed AB 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq.), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipated that the GHG reduction goals will be met, in part, through local government actions. CARB identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and noted that successful implementation of the plan relies on local governments’ land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. The AB 32 emissions reduction limit was achieved in 2017, 3 years prior to the 2020 goal.

### ***Senate Bill 32 and Assembly Bill 197***

Signed into law on September 8, 2016, SB 32 (Amendments to California Global Warming Solutions Act of 2006: Emission Limit) amended HSC Division 25.5 and codifies the 2030 target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The 2030 target is intended to ensure that California remains on track to achieve the goal set forth by Executive Order B-30-15 to reduce statewide GHG emissions by 2050 to 80 percent below 1990 levels. SB 32 states the intent of the legislature to continue to reduce GHGs for the protection of all areas of the state and especially the state’s most disadvantaged communities, which are disproportionately impacted by the deleterious effects of climate change on public health. The law amended HSC Division 25.5 and established a new climate pollution reduction target of 40 percent below 1990 levels by 2030, while AB 197 included provisions to ensure the benefits of State climate policies include disadvantaged communities.

### ***Scoping Plan Provisions***

Pursuant to AB 32, CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by CARB on August 24, 2011) outlining measures to meet the 2020 GHG reduction

goals.<sup>19</sup> In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan relied on the requirements of SB 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

The Scoping Plan is required by AB 32 to be updated at least every 5 years. The *First Update to the Climate Change Scoping Plan* describes progress made to meet near-term emissions goals of AB 32, defines California's climate change priorities and activities for the next few years, and describes the issues facing the State as it establishes a framework for achieving air quality and climate goals beyond the year 2020. On December 14, 2017, CARB approved the final version of California's *2017 Climate Change Scoping Plan* (2017 Scoping Plan Update), which outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels.<sup>20</sup> The 2017 Scoping Plan Update identifies key sectors of the implementation strategy, which includes improvements in low carbon energy, industry, transportation sustainability, natural and working lands, waste management, and water. The CARB determined that the target Statewide 2030 emissions limit is 260 million metric tons of CO<sub>2</sub>e (MMTCO<sub>2</sub>e), and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO<sub>2</sub>e beyond current policies and programs. The cornerstone of the 2017 Scoping Plan Update is an expansion of the Cap-and-Trade program to meet the aggressive 2030 GHG emissions goal represented by SB 32 and ensure achievement of the 2050 limit set forth by EO B-30-15.

### ***Senate Bill 375 and the Metropolitan Transportation Plan/Sustainable Communities Strategy***

In addition to policy directly guided by AB 32, in 2008 the legislature passed SB 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, land use and housing allocations. SB 375 requires Regional Transportation Plans developed by the state's 18 metropolitan planning organizations to incorporate a "sustainable communities strategy" (SCS) that will achieve GHG emission reduction targets set by CARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects, such as transit-oriented development. SB 375 would be implemented over the next several years. The Sacramento Area Council of Government's (SACOG) 2020 MTP/SCS was adopted on November 18, 2019. For SACOG's 2020 MTP/SCS, CARB assigned SACOG a 19 percent GHG reduction target that is the percent reduction in passenger vehicle GHG emission per capita by 2035, compared to year 2005. In actual emissions, this change represents a reduction from just over 23 pounds per capita on a given weekday in 2005, to just under 19 pounds per capita by 2035..<sup>21</sup>

<sup>19</sup> California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by CARB August 24, 2011. pp. ES-1 and 17.

<sup>20</sup> California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan: The strategy for achieving California's 2030 greenhouse gas target*, November 2017.

<sup>21</sup> Sacramento Area Council of Governments, 2020. *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted November 18, 2019. p. 173.

### ***Executive Order B-16-12***

In 2012, Governor Brown issued Executive Order B-16-12, ordering that California's State vehicle fleet increase the number of zero-emission vehicles through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015 and 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020. The executive order also requires that California target for 2050 a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels.

### ***California Renewables Portfolio Standard***

SB 1078 established the Renewables Portfolio Standard (RPS) in 2002, which required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from eligible renewable sources by 2017. SB 107 changed the target date to 2010. In November 2008, Executive Order S-14-08 expanded the state's RPS goal to 33 percent renewable power by 2020. In September 2009, Executive Order S-21-09 directed CARB (under its AB 32 authority) to enact regulations to help the state meet the 2020 goal of 33 percent renewable energy. The 33 percent by 2020 RPS goal was codified in April 2011 with SB X1-2. The updated RPS applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. SB 350 (see below) was signed in October 2015, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Most recently, SB 100, signed by Governor Brown on September 10, 2018, increases the RPS requirement to 60 percent eligible renewables by 2030 and 100 percent by 2045.

### ***Senate Bill 350***

SB 350 (Clean Energy and Pollution Reduction Act of 2015) was signed into law on October 7, 2015, establishing new goals for clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 requires the following:

- Increase California's renewable electricity procurement goal under the RPS from 33 percent by 2020 to 50 percent by 2030,
- Double existing building energy efficiency by 2030; and
- Facilitate the growth of renewable energy markets within the western U.S. by reorganizing the California Independent System Operator.

### ***California Building Efficiency Standards – Title 24, Part 6***

California's Energy Efficiency Standards for Residential and Nonresidential Buildings were established by the California Energy Commission in Title 24, Part 6 of the CCR. These standards mandate a reduction in California's energy consumption and are updated on a 3-year cycle to allow for innovation and incorporation of new energy efficient technologies and methods. Buildings for which an application for a building permit is submitted on or after January 1, 2017,



must follow the 2016 standards.<sup>22</sup> Applications for building permits after January 1, 2020 would have to be compliant with the 2019 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

### ***California Green Building Standards Code – CalGreen***

In January 2010, the State of California adopted the California Green Building Standards Code (CalGreen) that established new sustainable building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. This Code went into effect as part of local jurisdictions' building codes on January 1, 2011, and was most recently updated as the 2019 California Green Building Standards Code, which became effective January 1, 2020.<sup>23</sup>

For new multifamily dwellings, the 2019 CalGreen Code mandates that “if residential parking is available, ten percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE [electric vehicle supply equipment].”<sup>24</sup>

To facilitate lowering the carbon intensity of commuting, bicycle parking provisions are a part of the planning and design category of CalGreen. Nonresidential buildings within the authority of California Building Standards Commission must comply with the CalGreen standards or meet the applicable local ordinance, whichever is stricter. Buildings anticipated to have tenant-occupants must provide long-term parking, specifically, secure bicycle parking for at least five percent of tenant-occupant vehicular parking spaces. Non-residential buildings anticipated to generate visitor traffic are required to provide short-term anchored bicycle parking within 200 feet of the visitor entrance for at least five percent of new visitor motorized vehicle parking spaces. Additionally, long-term bike parking must be convenient from the street and must meet one of the following criteria:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

These provisions are an important part of the State's approach to encouraging and facilitating forms of commuting that are less GHG intensive and GHG-free in this case.<sup>25</sup>

<sup>22</sup> California Energy Commission, 2015. California's Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6. Effective Date: January 1, 2017.

<sup>23</sup> California Building Standards Commission, 2019. California 2019 Green Building Standards Code, CalGreen California Code of Regulations, Title 24, Part 11. Effective Date: January 1, 2020.

<sup>24</sup> California Building Standards Commission, 2019. California 2019 Green Building Standards Code, CalGreen California Code of Regulations, Title 24, Part 11. Effective Date: January 1, 2020.

<sup>25</sup> California Building Standards Commission, 2019. California 2019 Green Building Standards Code, CalGreen California Code of Regulations, Title 24, Part 11. Effective Date: January 1, 2020.

### ***California Integrated Waste Management Act and California Assembly Bill 341***

The State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939) in 1990, requiring all cities and counties to divert 50 percent of all solid waste from landfill facilities by January 1, 2000. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally-safe transformation and land disposal. AB 341 (Public Resources Code Division 30, Part 3, Chapter 12.8), which became law in 2011, established a new statewide goal of 75 percent diversion by 2020, and changed the way that the state measures progress toward the 75 percent recycling goal, focusing on source reduction, recycling and composting. AB 341 also requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The objective of the law is to reduce GHG emissions by diverting commercial solid waste into recycling programs and expand the opportunity for additional recycling services and recycling manufacturing facilities in California. Although AB 341 established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939.

### ***California Assembly Bill 1826***

AB 1826 (*Public Resources Code* Division 30, Part 3, Chapter 12.9, Commercial Organic Waste Recycling Law) became effective on January 1, 2016, and requires businesses (including commercial and public entities) and multi-family complexes (with 5 units or more) that generate specified amounts of organic waste (compost) to arrange for organics collection services. This regulation reduces solid waste disposal which leads to a reduction in the carbon footprint of the solid waste sector. The law phases in the requirements on businesses with full implementation realized in 2019:

- **First Tier:** Commencing in April 2016, the first tier of affected businesses included those that generate eight or more cubic yards of organic materials per week.
- **Second Tier:** In January 2017, the affected businesses expanded to include those that generate four or more cubic yards of organic materials per week.
- **Third Tier:** In January 2019, the affected businesses are further expanded to include those that generate four or more cubic yards of commercial solid waste per week.

## **Local**

### ***City of Sacramento 2035 General Plan and Climate Action Plan***

The City of Sacramento Climate Action Plan (CAP) was adopted in February of 2012, and in March of 2015, the CAP was incorporated into appropriate elements the City's 2035 General Plan (General Plan). The General Plan includes various climate strategies, measures, and actions that are meant to address GHG emissions and reduce the City's contribution to climate change. The 2035 General Plan is the City's current action plan for reducing GHG emissions and adapting to climate change. Appendix B of the General Plan is entitled, "Climate Action Plan Policies and Programs." Most of the listed items are "supporting," which, in this context, means that no specific quantitative GHG emission reduction target was developed, but that the implementation of this policy or program would *support* the City's overall efforts to reduce local sources of GHG emissions.

Although the current CAP, as presented in the 2035 General Plan, is a CEQA-qualified CAP consistent with the Section 15183.5 requirements for tiering GHG analysis of projects, it is only valid as such through 2020. As discussed above, it includes a 2020 Citywide GHG target derived from the AB 32 statewide target for 2020 and also includes GHG emissions forecasts through the year 2030 and beyond, and GHG reduction “goals” for the years 2030 and 2050. However, it does not present Citywide targets beyond the year 2020, nor does it demonstrate with specific enforceable actions how the City would achieve its 2030 and 2050 goals.<sup>26</sup> Therefore, it is not CEQA-qualified for the planning horizons of 2030 and 2050, and cannot be used for tiering CEQA analysis of post-2020 projects, such as the proposed project, by demonstrating project consistency with the CAP.

In 2018, the City initiated an update to the General Plan to ensure it remains responsive to the challenges of the coming years. The 2040 General Plan will be the City’s blueprint for how and where Sacramento will grow over the next 20 years. In parallel, the City will also be preparing an updated CAP that outlines a community-wide framework for reducing GHG emissions consistent with SB 32 and with the goal of providing a CEQA-qualified plan that can be used for project tiering out to 2030 and beyond.

### ***Mayors’ Commission on Climate Change’s Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report***

In April 2020, the Mayors’ Commission on Climate Change published the *Achieving Carbon Zero in Sacramento and West Sacramento by 2045*, Draft Report. This report, initiated by Sacramento Mayor Darrell Steinberg and West Sacramento Mayor Christopher Cabaldon, includes recommendations to achieve carbon zero in Sacramento and West Sacramento by the year 2045. The report identifies strategies that focus on the built environment, mobility, and community health and resiliency to achieve zero carbon goals, promote public health, and improve climate resiliency within the two cities. The carbon zero recommendations identified by the Mayors’ Commission on Climate that would be applicable to the proposed project are summarized in **Table 4.4-1**, below.

**TABLE 4.4-1  
MAYORS’ COMMISSION ON CLIMATE CHANGE’S CARBON ZERO RECOMMENDATIONS APPLICABLE  
TO THE PROPOSED PROJECT**

| Goal                     | Description   |
|--------------------------|---|
| <b>Built Environment</b> |   |
| Sustainable Land Use     | <p>Support infill growth that is consistent with the regional Sustainable Communities Strategy to ensure:</p> <ul style="list-style-type: none"> <li>• 90% of the cities’ growth is in the established and center/corridor communities and is 90% small-lot and attached homes by 2040.</li> <li>• Project level VMT is 15% below (or 85% of) the regional average</li> </ul> |

<sup>26</sup> The 2012 CAP was adopted prior to the passing of SB 32. Accordingly, it does not present a 2030 community GHG target based on the SB 32 statewide target for 2030.

**TABLE 4.4-1 (CONTINUED)**  
**MAYORS' COMMISSION ON CLIMATE CHANGE'S CARBON ZERO RECOMMENDATIONS APPLICABLE TO THE PROPOSED PROJECT**

| Goal                                   | Description  |
|--|--|
| <b>Mobility</b>                        |  |
| Active Transportation                  | Expand and enhance accessibility to low-stress, connected infrastructure for walking and rolling, prioritizing improvements that address specific community and neighborhood needs so that: <ul style="list-style-type: none"> <li>• 30% of all trips are by active transportation by 2030.</li> <li>• 40% of all trips are by active transportation by 2045.</li> </ul> |
| Transit and Shared Mobility            | Expand and improve transit and shared mobility services to be more accessible, affordable, timely and attractive than single-occupancy-vehicle use so that: <ul style="list-style-type: none"> <li>• 30% of all trips are by transit and pooled shared mobility by 2030.</li> <li>• 50% of all trips are by transit and pooled shared mobility by 2045</li> </ul>        |
| <b>Community Health and Resiliency</b> |  |
| Urban Greening and Forestry            | Expand green infrastructure to ensure that all neighborhoods, starting with historically marginalized communities and tree-deficient neighborhoods, have: <ul style="list-style-type: none"> <li>• Access to green space within a quarter-mile by 2030.</li> <li>• A baseline canopy of 25% by 2030, and 35% by 2045.</li> </ul>   |

SOURCE: Mayors' Commission on Climate Change, 2020. *Achieving Carbon Zero in Sacramento and West Sacramento by 2045*. April 2020. Available at [https://www.lgc.org/wordpress/wp-content/uploads/2020/04/MCCC-Report\\_Public-Draft\\_April\\_21\\_2020.pdf](https://www.lgc.org/wordpress/wp-content/uploads/2020/04/MCCC-Report_Public-Draft_April_21_2020.pdf). Accessed May 5, 2020.

### ***City of Sacramento Pedestrian Master Plan***

The Pedestrian Master Plan, adopted in September 2006, seeks to improve the pedestrian network throughout the City and encourage walking as a mode of transportation. It includes 13 goals and various policies to create a walkable pedestrian environment, increase walking awareness, and increase pedestrian safety. Goals identified in the Pedestrian Master Plan that would apply to the proposed project include:

- **Goal 2:** Provide a continuous pedestrian network that connects through blocks and sites, and connects buildings to each other, to the street, and to transit facilities;
- **Goal 7:** Configure development on a site to have a strong relationship to the pedestrian setting, providing easy and frequent access and minimizing potential automobile conflicts;
- **Goal 8:** Design buildings such that their architecture enhances pedestrian activities; and
- **Goal 9:** Provide pedestrian friendly automobile parking layouts to prevent isolating pedestrians from their destinations.<sup>27</sup>

### ***City of Sacramento Bicycle Master Plan***

The City of Sacramento Bicycle Master Plan describes investments, policies, programs, and strategies aimed at establishing a safe, continuous bikeway network throughout the City. The Bicycle Master Plan is an extension of the goals contained in the 2035 General Plan and Climate Action Plan to reduce GHG emissions through alternative modes of transportation and VMT

<sup>27</sup> City of Sacramento, 2006. *City of Sacramento Pedestrian Master Plan*. September 2006. Available at [http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Publications/Transportation/Bicycle-Pedestrian/Sac-Ped-Plan\\_9-06.pdf?la=en](http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Publications/Transportation/Bicycle-Pedestrian/Sac-Ped-Plan_9-06.pdf?la=en). Accessed on May 5, 2020.

reductions. The Bicycle Master Plan describes four overarching goals including increase ridership, increase safety, increase connectivity, and increase equity. These goals are discussed further in Section 4.4.3, below.

### ***City of Sacramento Zoning Code for Bicycle Requirements***

The City of Sacramento's Zoning Code establishes bicycle parking requirements by both land use and parking district. According to the City of Sacramento City Council 2012 Zoning Code Parking Update, residential multifamily dwellings with private garages in traditional urban form districts are required to provide 0.10 short-term bicycle parking spaces per unit, or two spaces, whichever is greater. The Zoning Code does not require any long-term bicycle parking spaces for multifamily dwellings with private garage or dedicated storage space.

## **4.4.3 Analysis, Impacts, and Mitigation**

### **Significance Criteria**

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact on the climate if it would:

- Generate(s) GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with and applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

## **Methodology and Assumptions**

### ***Emission Estimates***

Project-related GHG emissions would fall into two categories: short-term emissions due to construction, and long-term, on-going, emissions due to operations. Estimated construction- and operation-related emissions are presented below in **Table 4.4-2** and **Table 4.4-3**, respectively. Additionally, this project is evaluated for its consistency with currently adopted State and local regulations intended to reduce GHG emissions, including the 2017 Scoping Plan Update, Executive Order B-18-12, the California Integrated Waste Management Act, and the City of Sacramento General Plan and Climate Action Plan.

GHG emissions associated with the proposed project were estimated for the construction phase and the operational phase using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is an approved emissions inventory software program that allows the user to estimate criteria pollutant and GHG emissions from land use development projects. This version of CalEEMod calculates the construction equipment exhaust emissions based on CARB's OFFROAD2011 model emission and load factors.

To estimate on-road mobile exhaust emissions, CalEEMod version 2016.3.2 uses vehicle emission factors from CARB's EMFAC model (2014); therefore, the CalEEMod "off-site" vehicle exhaust emissions estimates were not used in the construction emissions estimate, and the

project construction on-road vehicle exhaust emissions were estimated outside of CalEEMod using emissions factors obtained from the latest version of the EMFAC model, released in 2017. However, for operational emissions CalEEMod allows the user to replace those emission factor inputs with other emission factors, so the default emission factors were replaced with emission factors obtained from the 2017 EMFAC model. Therefore, unlike the construction emissions, the CalEEMod “off-site” vehicle exhaust emissions output was used for operations. Project-specific information was used for modeling when possible, e.g., land use, construction schedule, area to be developed, vehicle trip data obtained from the traffic study prepared for the proposed project. Where project-specific data is unavailable, CalEEMod default construction equipment and worker trip factors were used, which capture assumed values consistent with standard practice.

Construction of the project would begin in fall of 2020, with site grading and utility infrastructure work completed by early spring 2021. Construction of the structures is expected to commence in spring 2021 with completion in fall 2022. The project was assumed to be operational in 2022. Additional assumptions and model results are presented in Appendix C. Construction emissions have been amortized over the project life expectancy of 40 years, and added to operational emissions to provide an annual average for project GHG emissions.

### ***Evaluation of Emissions***

As discussed above in the local regulatory setting discussion, the City’s 2012 CAP was adopted prior to the passing of SB 32 and does not present a 2030 community GHG target based on the SB 32 statewide emissions reduction goal for 2030. Therefore, it is not used here.

In the absence of a CEQA-qualified CAP for post-2020 projects, the SMAQMD has developed and adopted an update to its land development project GHG thresholds, which require a project to demonstrate consistency with CARB’s 2017 Climate Change Scoping Plan. The significance threshold for the construction phase is 1,100 metric tons CO<sub>2</sub>e/year. With regard to operational emissions, the SMAQMD’s technical support document, *SMAQMD Greenhouse Gas Thresholds/Best Management Practices Applicability*, identifies operational measures that should be applied to a project to demonstrate consistency with the 2017 Climate Change Scoping Plan.<sup>28</sup> The measures target GHG emissions inventory areas where State measures did not fully achieve reductions, allowing for local supportive measures. These measures are known as tier 1 and tier 2 Best Management Practices (BMPs).

The tier 1 BMPs are:

- BMP 1 – projects shall be designed and constructed without natural gas infrastructure; and
- BMP 2 - projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

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<sup>28</sup> SMAQMD, 2020. SMAQMD Greenhouse Gas Thresholds/Best Management Practices Applicability, April 24, 2020.

If tier 1 BMPs are not fully implemented, then emissions, including natural gas emissions, should be estimated; onsite measures should be implemented to the maximum extent feasible; the project should have the capacity to be all-electric in the future; and BMP 2 requirements should be met.

If emissions exceed 1,100 metric tons/year, then the project must implement SMAQMD's tier 2 BMP:

- BMP 3 - projects shall commitment to reduce applicable project residential VMT by 15 percent relative to Sacramento County targets.

In areas with above average existing VMT, BMP 3 requires a commitment to provide electrical capacity for future 100 percent electric vehicles.

If the project achieves BMP 3, then the operational impact is considered less than significant, and no further analysis is needed.

The project has also been evaluated for its consistency with currently adopted State and local regulations intended to reduce GHG emissions, including the 2017 Scoping Plan Update, the California Integrated Waste Management Act, California Assembly Bill 1826, Executive Order B-18-12, the City of Sacramento Zoning Code for Bicycle Requirements, and the City of Sacramento General Plan and Climate Action Plan. Additionally, an analysis related to increased GHGs due to the urban heat island effect has been addressed and is included in Appendix D.

## Impacts and Mitigation Measures

**Impact 4.4-1: Implementation of the proposed project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

### ***Project Construction-Related Greenhouse Gas Emissions***

As discussed above, construction of the proposed project is assumed to begin in fall of 2020 and be completed in fall of 2022. Construction-related GHG emissions arise from a variety of sources including construction equipment use and vehicle use. Using the methods described above, construction GHG (CO<sub>2</sub>e) emissions for the years 2020, 2021, and 2022 were estimated. Annual construction emissions are presented in **Table 4.4-2**. Total construction emissions generated by the project have been amortized over the expected operational (long-term) life of the proposed project as recommended by SMAQMD. The operational life of a new residential building is estimated to be 40 years based on State of California Executive Order D-16-00. The proposed project is a residential development; therefore, construction emissions associated with the proposed project have been amortized over a project life of 40 years. As shown in Table 4.4-2, construction emissions would not exceed the SMAQMD's significance threshold of 1,100 metric tons CO<sub>2</sub>e/year, and the associated short-term construction emissions impact would be less than significant.

**TABLE 4.4-2  
PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS**

| Construction Year                             | CO <sub>2</sub> e (MT/year) |
|---|-----------------------------|
| 2020  | 164.3                       |
| 2021  | 376.5                       |
| 2022  | 277.1                       |
| <b>Total Construction GHG Emissions</b>       | <b>817.9</b>                |
| <b>Emissions Amortized Over 40 Years</b>      | <b>20.4</b>                 |
| Construction Emissions Significance Threshold | 1,100                       |
| <b>Exceeds Threshold?</b>                     | <b>No</b>                   |

NOTES:

Project construction emissions were estimated using CalEEMod version 2016.3.2. See Appendix C for model outputs and more detailed assumptions.

CO<sub>2</sub>e = carbon dioxide equivalent, MT = metric tons

SOURCE: ESA, 2020.

### ***Project Operation-Related Greenhouse Gas Emissions***

Over the long-term, the proposed project would result in an increase in GHG emissions primarily due to motor vehicle trips and onsite energy sources (e.g., natural gas combustion for pool heating, landscape maintenance, use of consumer products such as hairsprays, deodorants, and cleaning products). Emissions would be minimized due to Title 24 compliance, and compliance with the City's Green Building standards. As described in Project Description Section 2.7, natural gas service would not be offered for the individual residential units; however, a natural gas connection would be used to serve communal amenities such as the pool heater. Therefore, SMAQMD BMP 1 would not be fully implemented by the proposed project. Because the proposed project would not fully comply with BMPs 1 and 2, the project must then comply with BMP 3.

The proposed project is required to comply with applicable CalGreen Tier 2 standards per SMAQMD guidance. As described in Chapter 2, Project Description, each of the 84 individual residential garages would have 110-volt outlets capable of EV slow charging. The parking lot will have 6 EV rapid charging stations, serving 12 parking spaces. Underground electrical conduits will be installed in the parking lot allowing for the seamless future installation of another 20+ rapid charging stations, serving 40 parking spaces. Therefore, the project would be compliant with SMAQMD BMP 2. Annual total project emissions are presented in **Table 4.4-3**.



**TABLE 4.4-3  
PROJECT OPERATIONAL GREENHOUSE GAS EMISSIONS**

| Source  | CO <sub>2</sub> e (MT/year) |
|---|-----------------------------|
| Area  | 4.6                         |
| Energy  | 481.5                       |
| Mobile  | 1,367.9                     |
| Waste   | 79.6                        |
| Water   | 45.1                        |
| <b>Total Annual Operational GHG Emissions</b>   | <b>1,978.6</b>              |
| Operational Emissions Significance Threshold  | 1,100                       |
| <b>Exceeds Threshold?</b>   | <b>Yes</b>                  |
| NOTES:<br>Project construction emissions were estimated using CalEEMod version 2016.3.2. See Appendix C for model outputs and more detailed assumptions.<br>CO <sub>2</sub> e = carbon dioxide equivalent, MT = metric tons<br>SOURCE: ESA, 2020. |                             |

As indicated in Table 4.4-3, the project's operational GHG emissions would be approximately 1,978.6 MT CO<sub>2</sub>e per year, which exceeds the operational significance threshold of 1,100 MT CO<sub>2</sub>e per year. Therefore, the proposed project must implement SMAQMD's Tier 2 BMP (BMP 3), which is a commitment to reduce applicable project residential VMT by 15 percent relative to Sacramento County targets. This is enforced by ensuring that the proposed project install EV charging stations as proposed.

As described in Section 4.6, Transportation and Circulation, the proposed project would have a VMT that is 15 percent below the regional average. The proposed project's VMT per capita would be 14.95, while a residential project must not exceed 15.22 VMT per capita. Therefore, the proposed project would result in a **less-than-significant impact** with regard to GHG emissions.

#### Mitigation Measures

None required.

**Impact 4.4-2: Implementation of the proposed project could conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.**

#### ***Consistency with Applicable Plans and Regulations***

CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs and describes the required contents of such a plan. As described below, the project would be consistent with the following plans and regulations:

- 2017 Scoping Plan Update;
- The California Integrated Waste Management Act;
- California Assembly Bill 1826;
- The policies and programs as presented in Appendix B of the 2035 General Plan and Climate Action Plan;
- The Mayors' Commission on Climate Change's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report;
- The City of Sacramento Pedestrian Master Plan;
- The City of Sacramento Bicycle Master Plan; and
- The City of Sacramento Zoning Requirements for Bicycle Parking.

#### Consistency with 2017 Scoping Plan Update

The 2017 Scoping Plan Update establishes the framework for achieving the 2030 statewide GHG reduction target of 40 percent below 1990 levels. The plan update details local actions that land use development projects and municipalities can implement to support the statewide goal. For project-level CEQA analyses, the 2017 Scoping Plan Update states that projects should implement feasible mitigation, preferably measures that can be implemented onsite. Many of the project features align with these actions and would contribute to direct and indirect reduction of GHG emissions.

The Scoping Plan Update incorporates a broad array of regulations, policies, and state plans designed to reduce GHG emissions. Those that are applicable to the construction and operation of the proposed project are listed in **Table 4.4-4**. As shown below, the proposed project would implement sustainability features and incorporate characteristics to reduce energy use, conserve water, reduce waste generation, and reduce vehicle travel consistent with statewide strategies and regulations. As a result, the proposed project would not conflict with applicable Climate Change Scoping Plan strategies and regulations to reduce GHG emissions.

**TABLE 4.4-4**  
**CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE**

| Sector / Source                                     | Category / Description   | Consistency Analysis  |
|---|--|---|
| <b>Energy and Water</b>                             |  |   |
| California Renewables Portfolio Standard (RPS)      | SB 100 requires that the proportion of electricity from renewable sources be 60 percent renewable power by 2030 and 100 percent renewable power by 2045.   | <b>Consistent.</b> The proposed project's electricity will be provided by SMUD. SMUD is required to comply with SB 100 and the RPS.   |
| California Renewables Portfolio Standard and SB 350 | SB 350 requires that the proportion of electricity from renewable sources be 50 percent renewable power by 2030 (superseded by SB 100). It also requires the state to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. | <b>Consistent.</b> The proposed project's electricity will be provided through SMUD. SMUD is required to comply with both the RPS and SB 350 and will meet these standards. |

**TABLE 4.4-4 (CONTINUED)**  
**CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE**

| Sector / Source  | Category / Description   | Consistency Analysis  |
|--|--|---|
| <b>Energy and Water</b>  |  |   |
| California Building Efficiency Standards (CCR, Title 24, Part 6)             | Energy Efficiency Standards for Residential and Nonresidential Buildings.  | <b>Consistent.</b> Buildings constructed within the project site would be designed to comply with the applicable Title 24 Building Energy Efficiency Standards.   |
| California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen) | California's Green Building Standards (CALGreen) Code includes energy and water efficiency requirements, as well as waste management and other design regulations that apply to residential buildings.   | <b>Consistent.</b> Buildings constructed within the project site would comply with mandatory CalGreen measures.   |
| Senate Bill X7-7   | The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal.   | <b>Consistent.</b> Water delivered to the project site would be supplied by the City of Sacramento Department of Utilities, which is required to comply with SB X7-7 and would meet these standards.  |
| <b>Mobile Sources</b>  |  |   |
| Advanced Clean Cars Program (ACC) and Mobile Source Strategy (MSS)           | In 2012, CARB adopted the Advanced Clean Cars (ACC) program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC includes the that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. The Mobile Source Strategy (2106) calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) on the road by 2025, and 4.2 million ZEVs by 2030. | <b>Consistent.</b> The standards would apply to all vehicles used by the residents and employees of the proposed project, and to construction workers traveling to and from the project site as required by CalGreen. The proposed project would include 110-volt outlets for EV slow charging in each garage (84); 6 EV rapid charging stations, serving 12 parking spaces; and install underground electrical conduits in the parking lot allowing for the seamless future installation of another 20+ rapid charging stations, serving 40 parking spaces.  |
| SB 375 and the SACOG MTP/SCS   | SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector 2035. SACOG's MTP/SCS calls for GHG reductions from passenger vehicles and light-duty trucks of 19 percent below 2005 levels by 2035.  | <b>Consistent.</b> The proposed project appears to be consistent with SACOG MTP/SCS goals and objectives under SB 375 to implement "smart growth." The proposed project would provide multi-family residential units in a compact land-use pattern in close proximity to off-site employment opportunities in the City of Sacramento. The site provides a place where people can live in close proximity to work locations, and is located to provide access to convenient modes of transportation that provides options for reducing reliance on automobiles and minimizing associated air pollutant emissions. The proposed project is consistent with the smart growth land use pattern discussed in the MTP/SCS, and would therefore be conducive to meeting the SB 375 GHG reduction goal. |

**TABLE 4.4-4 (CONTINUED)**  
**CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE**

| Sector / Source  | Category / Description  | Consistency Analysis  |
|--|---|---|
| <b>Solid Waste</b>   |   |   |
| California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341 | The IWMA mandated that state agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50 percent of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020. | <b>Consistent.</b> The proposed project would be served by a solid waste collection and recycling service that may include mixed waste processing, and that yields waste diversion results comparable to source separation and consistent with Citywide recycling targets. The City of Sacramento has a goal to achieve 75 percent waste diversion by 2020 and zero waste to landfills by 2040. |
| SOURCE: ESA 2020.  |   |   |

### **Consistency with the California Integrated Waste Management Act**

As required for all State agencies under the California Integrated Waste Management Act, the proposed project would achieve a waste diversion rate of at least 50 percent, reducing the level of GHGs associated with solid waste.

### **Consistency with California Assembly Bill 1826**

Assembly Bill (AB) 1826 requires multi-family complexes that generate specified amounts of organic waste (compost) to arrange for organics collection service. If the proposed project were to generate four or more cubic yards of organic materials, the project applicant would arrange for organics collection, therefore, the project would be compliant with AB 1826.

### **Consistency with the City of Sacramento 2035 General Plan and Climate Action Plan**

As discussed above, the 2035 General Plan incorporated the City's Climate Action Plan strategies, measures, and actions that reduce GHG emissions. Those policies that are applicable to the construction and operation of the proposed project are listed in **Table 4.4-5**. As shown below, the proposed project would implement sustainability features and incorporate characteristics to reduce energy use, conserve water, and promote the use of alternative modes of transportation consistent with the City of Sacramento's policies. As a result, the project would not conflict with applicable 2035 General Plan and Climate Action Plan policies to reduce GHG emissions.

**TABLE 4.4-5**  
**CONSISTENCY WITH CITY OF SACRAMENTO GENERAL PLAN AND CLIMATE ACTION PLAN**

| General Plan Policy | Description   | Consistency Analysis   |
|---------------------|---|--|
| Policy LU 7.1.2     | <b>Housing in Employment Centers.</b> The City shall require compatible integration of housing in existing and proposed employment centers to help meet housing needs and reduce vehicle trips and commute times, where such development will not compromise the City's ability to attract and maintain employment-generating uses. | <b>Consistent.</b> The proposed project would develop approximately 266 residential units in close proximity to commercial retail development. As the proposed project would be built on underutilized land and would be located adjacent to SacRT's Pocket Road and Alma Vista Way bus stop, it would encourage the use of public transportation that could reduce vehicle trips and commute times. |
| Policy M 5.1.5      | <b>Motorists, Bicyclists, and Pedestrian Conflicts.</b> City shall develop safe and convenient bikeways, streets, roadways, and intersections that reduce conflicts between bicyclists and motor vehicles on streets, between bicyclists and pedestrians on multi-use trails and sidewalks, and between all users at intersections. | <b>Consistent.</b> The proposed project would provide access to the City's planned and approved Del Rio Trail, which is a 4.8-mile pedestrian and bicycle trail that would run through the Land Park, South Land Park, Freeport Manor, Z'Berg, Pocket, and Meadowview neighborhoods between Interstate 5 and Freeport Boulevard.   |
| Policy U 2.1.10     | <b>Water Conservation Standards.</b> The City shall achieve a 20 percent reduction in per-capita water use by 2020 consistent with the State's <i>20x2020 Water Conservation Plan</i> (California Water Resources Control Board, 2010).   | <b>Consistent.</b> The proposed project would be required to be consistent with the State's <i>20x2020 Water Conservation Plan</i> .   |
| Policy U 2.1.15     | <b>Landscaping.</b> The City shall continue to require the use of water-efficient and river-friendly landscaping in all new development, and shall use water conservation gardens (e.g., Glen Ellen Water Conservation Office) to demonstrate and promote water conserving landscapes.  | <b>Consistent.</b> Project landscaping would include plants that are drought tolerant, native to California or other Mediterranean climates, or other low water use species. High efficiency irrigation systems with water-efficient sprinkler heads, and smart controllers will be used.  |
| Policy U 6.1.16     | <b>Energy Efficiency Appliances.</b> The City shall encourage builders to supply Energy STAR appliances and HVAC systems in all new residential developments.   | <b>Consistent.</b> All residences would be equipped with Energy Star certified appliances (dishwashers and refrigerators). Energy efficient LED light fixtures would be installed within the residences and office suites and for exterior lighting.   |

SOURCE: ESA 2020.

### **Consistency with the Mayors' Commission on Climate's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report**

As discussed above, the Mayors' Commission on Climate published the Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report, which aims to reduce contributions to climate change by achieving "Carbon Zero" in the City of Sacramento and the City of West Sacramento. The report includes various recommendations, summarized in Table 4.4-1, which would reduce carbon emissions from the built environment and the transportation sector, as well as through community health and resiliency efforts. The proposed project would be consistent with the recommendations included in the Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report as it is characterized as infill development, located in close proximity to commercial retail development and alternative transit opportunities, including SacRT's Pocket Road and Alma Vista Way bus stop, and the City's proposed Del Rio Trail. In addition, the proposed project design includes landscaping which would contribute to urban

greening and forestry within the community. These project characteristics and project design features make the proposed project consistent with the applicable recommendations described in the Mayors' Commission on Climate's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report.

### Consistency with the City of Sacramento Pedestrian Master Plan

The City of Sacramento Pedestrian Master Plan includes goals and policies to improve the pedestrian environment throughout the City. The proposed project would provide a pedestrian network throughout the project site that would connect buildings, public spaces and parking facilities. In addition, the proposed project would connect to existing sidewalks offsite on Klotz Ranch Court and would provide a connection to the City's proposed Del Rio Trail. Therefore, the proposed project would not conflict with the goals to create a walkable pedestrian environment, increase walking awareness, and increase pedestrian safety; and the proposed project would be consistent with the Pedestrian Master Plan.

### Consistency with the City of Sacramento Bicycle Master Plan

As discussed in Section 4.4.2, Regulatory Setting, the Bicycle Master Plan includes four main goals to enhance the bikeway system throughout the City, encourage bicycle use, and decrease VMT per capita. **Table 4.4-6**, below, demonstrates the proposed project's consistency with the goals of the Bicycle Master Plan. The proposed project would not conflict with the four goals of the Bicycle Master Plan, therefore, the proposed project would be considered consistent with the Bicycle Master Plan.

**TABLE 4.4-6**  
**CONSISTENCY WITH THE CITY OF SACRAMENTO BICYCLE MASTER PLAN**

| Goal                  | Description  | Consistency Analysis   |
|-----------------------|--|--|
| Increase Ridership    | 7% bicycle mode share for commuting by 2020  | <b>Consistent.</b> As shown in the Bicycle Master Plan, the project site is located near dining, shopping, and jobs which attract bicycle ridership.   |
| Increase Safety       | Zero bicyclist fatalities by 2020  | <b>Consistent.</b> The proposed project is located an area with a low number of bicycle collisions, as shown in the Bicycle Master Plan. In addition, as discussed in Section 4.6, <i>Transportation and Circulation</i> , the proposed project design includes internal pathways and crosswalks which would provide adequate bicycle access and safe crossing opportunities for bicyclists. |
| Increase connectivity | Double the percentage of residents that can conveniently reach a continuous low-traffic-stress bikeway network by 2025 | <b>Consistent.</b> The proposed is located adjacent to the City's planned Del Rio Trail, which is a 4.8-mile pedestrian and bicycle trail that would run through the Land Park, South Land Park, Freeport Manor, Z'Berg, Pocket, and Meadowview neighborhoods between Interstate 5 and Freeport Boulevard. Therefore, the project would increase connectivity.                               |

**TABLE 4.4-6 (CONTINUED)**  
**CONSISTENCY WITH THE CITY OF SACRAMENTO BICYCLE MASTER PLAN**

| Goal            | Description  | Consistency Analysis   |
|-----------------|--|--|
| Increase equity | Equitable investments in bicycling facilities and programs for all neighborhoods by 2020 | <b>Consistent.</b> The Bicycle Master Plan prioritizes bicycle facility improvements to improve accessibility for all Sacramentans. As discussed in Section 4.6, <i>Transportation and Circulation</i> , the proposed project would not result in removal of any existing or planned bikeway/bike lane, and the proposed project may add bicycle demand within the project site and nearby vicinity. |

**SOURCE:**

City of Sacramento, 2018. *City of Sacramento Bicycle Master Plan*. Approved August 16, 2016; Amended August 14, 2018. Available at <http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Transportation/Active-Transportation/Sacramento-BMP-Amended-201808.pdf?la=en>. Accessed May 5, 2020.

ESA 2020.

### Consistency with the City of Sacramento Zoning Code for Bicycle Requirements

The City of Sacramento’s Zoning Code establishes bicycle parking requirements by both land use and parking district. The proposed project is located in the Pocket parking district, which identifies the project site as having a “traditional” urban form designation. According to the City of Sacramento City Council Zoning Code Parking Update Report, the proposed project would be required to provide 0.10 short-term bicycle parking spaces per dwelling unit on the project site.<sup>29</sup> The project would include the required amount of bicycle parking spaces, therefore, the proposed project would be consistent with the City of Sacramento Zoning Code for Bicycle Requirements.

### Summary

The proposed project would implement sustainability measures so that it would be consistent with all applicable GHG reduction strategies. Therefore, the impact would be considered **less than significant**.

### Mitigation Measure

None required.

## Cumulative Impacts

**Impact 4.4-3: Implementation of the proposed project, in combination with other development, would contribute to cumulative impacts associated with climate change and GHG emissions.**

GHG emissions and global climate change represent cumulative impacts of human activities and development projects locally, regionally, statewide, nationally, and worldwide. GHG emissions

<sup>29</sup> City of Sacramento, 2012. *Zoning Code Parking Update (LR11-005) (Passed for publication on 10-23-12, published on 10-26-12)*. Available at [https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Zoning/Council\\_Report\\_1031121.pdf?la=en](https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Zoning/Council_Report_1031121.pdf?la=en). Accessed April 1, 2020.

from all of these sources cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and its associated environmental impacts.

The analysis of the proposed project's impacts on climate change presented in Impacts 4.4-1 and 4.4-2 focuses on the proposed project's contribution to cumulatively significant GHG emissions. Given the project analysis has already been addressed in a cumulative context, this section does not include an additional cumulative impact assessment. As detailed under Impact 4.4-1, the proposed project would result in a **less-than-significant** cumulative impact relative to GHG emissions.

#### Mitigation Measures

None required.

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## 4.5 Noise

This section describes the existing noise environment near the project site and evaluates the potential for construction and operation of the proposed project to result in significant impacts associated with noise and vibration. The analysis included in this section was developed based on data provided in the City of Sacramento 2035 General Plan,<sup>1</sup> the City of Sacramento 2035 General Plan Master Environmental Impact Report,<sup>2</sup> the Federal Transit Administration's (FTA's) Transit Noise and Vibration Impact Manual,<sup>3</sup> Caltrans Transportation and Construction Vibration Guidance Manual,<sup>4</sup> the noise analysis prepared for the project,<sup>5</sup> and the traffic analyses prepared for the project.<sup>6</sup>

No comments pertaining to noise were submitted in response to the NOP.

### 4.5.1 Environmental Setting

#### Technical Background and Noise Terminology

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Sound pressure fluctuations can be measured in units of hertz, which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 hertz (Hz) and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 4.5-1**.

<sup>1</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015.

<sup>2</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.

<sup>3</sup> Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Manual*. September 2018.

<sup>4</sup> California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual*. September 2013.

<sup>5</sup> j.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017.

<sup>6</sup> National Data & Surveying Services, 2020. Peak Hour Turning Movement Counts for the Klotz Apartment Project. March 2020, and Kimley Horn, 2020, Existing (2020) plus Project Peak-Hour Traffic Volumes.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

This time-varying characteristic of environmental noise is described using statistical noise descriptors. The noise descriptors used in this analysis are summarized below:

$L_{eq}$ : the energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The  $L_{eq}$  is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

$L_{max}$ : the instantaneous maximum noise level for a specified period of time.

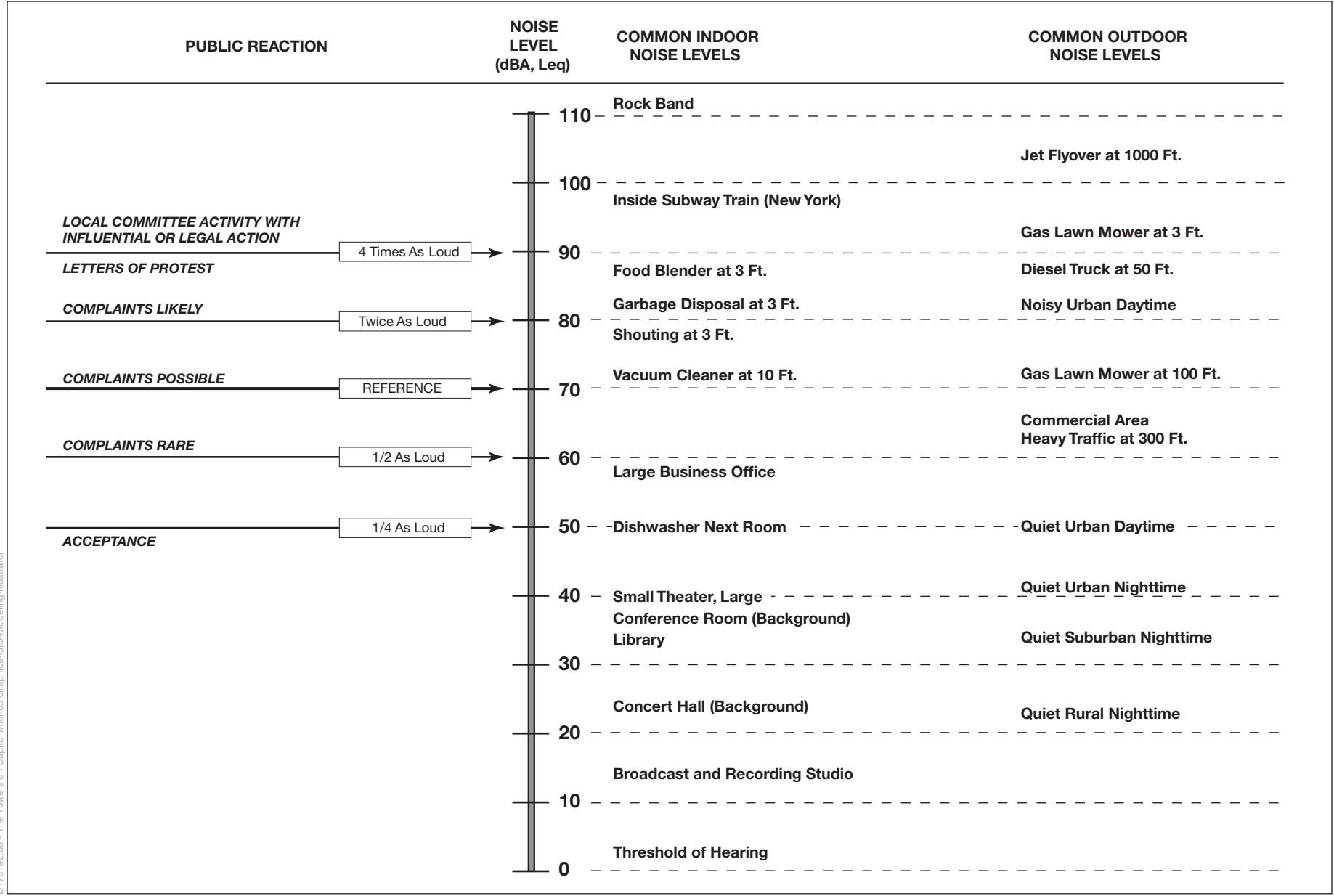
$L_{dn}$ : a 24-hour day and night A-weighted noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.

CNEL: similar to  $L_{dn}$ , the Community Noise Equivalent Level (CNEL) adds a 5-dB “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dB penalty between the hours of 10:00 p.m. and 7:00 a.m.

As a general rule, in areas where the noise environment is dominated by traffic, the  $L_{eq}$  during the peak-hour is generally within two decibels of the  $L_{dn}$  at that location.<sup>7</sup>

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<sup>7</sup> California Department of Transportation, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.



SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982; and modification by ESA

Klotz Ranch Apartments Project

Figure 4.5-1

Typical Noise Levels

### ***Effects of Noise on People***

When a new noise is introduced to an environment, human reaction can be predicted by comparing the new noise to the ambient noise level, which is the existing noise level comprised of all sources of noise in a given location. In general, the more a new noise exceeds the ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:<sup>8</sup>

- except in carefully controlled laboratory experiments, a change of 1-dB cannot be perceived;
- outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- a change in level of at least 5-dB is required before any noticeable change in human response would be expected; and
- a 10-dB change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

The perceived increases in noise levels shown above are applicable to both mobile and stationary noise sources. These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

### ***Noise Attenuation***

Sound level naturally decreases with more distance from the source. This basic attenuation rate is referred to as the *geometric spreading loss*. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate (lessen) at a rate of 6.0 dBA per doubling of distance from the source. In many cases, noise attenuation from a point source increases to 7.5 dBA for each doubling of distance due to ground absorption and reflective wave canceling. These factors are collectively referred to as *excess ground attenuation*. The basic geometric spreading loss rate is used where the ground surface between a noise source and a receiver is reflective, such as parking lots or a smooth body of water. The excess ground attenuation rate (7.5 dBA per doubling of distance) is used where the ground surface is absorptive, such as soft dirt, grass, or scattered bushes and trees.

Widely distributed noises such as a street with moving vehicles (a “line” source) would typically attenuate at a lower rate of approximately 3.0 dBA for each doubling of distance between the source and the receiver. If the ground surface between source and receiver is absorptive rather than reflective, the nominal rate increases to 4.5 dBA for each doubling of distance. Atmospheric effects, such as wind and temperature gradients, can also influence noise attenuation rates from

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<sup>8</sup> California Department of Transportation, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.

both line and point sources of noise. However, unlike ground attenuation, atmospheric effects are constantly changing and difficult to predict.

Trees and vegetation, buildings, and barriers reduce the noise level that would otherwise occur at a given receptor distance. However, for a vegetative strip to have a noticeable effect on noise levels, it must be dense and wide. For example, a stand of trees must be at least 100 feet wide and dense enough to completely obstruct a visual path to the roadway to attenuate traffic noise by 5 dBA.<sup>9</sup> A row of structures can shield more distant receivers depending upon the size and spacing of the intervening structures and site geometry. Similar to vegetative strips discussed above, noise barriers, which include natural topography and soundwalls, reduce noise by blocking the line of sight between the source and receiver. Generally, a noise barrier that breaks the line of sight between source and receiver will provide at least a 5-dBA reduction in noise.

### ***Fundamentals of Vibration***

As described in the FTA's *Transit Noise and Vibration Impact Assessment*, ground-borne vibration can be a serious concern for nearby neighbors, causing buildings to shake and rumbling sounds to be heard.<sup>10</sup> In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses, and heavy trucks on rough roads, and construction activities such as blasting, sheet pile-driving, and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal, which is measured in inches per second. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Sensitive receptors for vibration assessment include structures (especially older masonry structures), people who spend a lot of time indoors (especially residents, students, the elderly, and sick), and vibration sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by

<sup>9</sup> California Department of Transportation, 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013.

<sup>10</sup> Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Manual*. September 2018.

only a small margin. A vibration level that causes annoyance can be well below the damage threshold for normal buildings.

## Existing Conditions

### *Existing Noise-Sensitive Land Uses*

Noise sensitive land uses, where high noise levels can disrupt sleep or other activities, or where long-term exposure can result in health effects, are typically defined as places where people sleep such as residences, hotels, and hospitals. Noise sensitive land uses also include institutional land uses where relative quiet is important during daytime and evening hours such as schools, libraries, places of worship, and care centers. Sensitive land uses located near the project site consist of single-family and multi-family residences and a church. The nearest sensitive receptors to the project site consist of the following:

- Single-family residences along El Rito Way, approximately 400 feet southwest of the southwestern perimeter of the project site, across six lanes of I-5;<sup>11</sup>
- Multi-family residences, located at the corner of Pocket Road and Alma Vista Way, approximately 450 feet north of the northern perimeter of the project site;
- Single-family residences along Reenel Way, approximately 600 feet east of the southeastern perimeter of the project site; and
- The Antioch Progressive Church, located approximately 730 feet east of the project site.

### *Existing Noise Environment*

The ambient noise environment surrounding the project site is primarily influenced by vehicle traffic along Interstate 5 (I-5) and Pocket Road. To quantify the existing ambient noise levels, two type of noise surveys were conducted: 1) to characterize short-term daytime noise levels near the project site, and 2) to characterize long-term 24-hour noise levels at the project site.

ESA completed the short-term noise survey for locations near the project site on March 4, 2020. It consisted of six 15-minute short-term noise measurements. The locations of the short-term noise measurements are shown on **Figure 4.5-2**. The short-term measurements reflect the existing daytime noise levels at off-site sensitive receptor locations nearest to the project site that could be impacted by project construction activities or operations. The short-term noise measurements were collected using a Larson Davis LxT Sound Level Meter. The meter was calibrated before and after the noise measurement survey. The results of the short-term noise measurements are presented in **Table 4.5-1**. As shown in the table, noise levels in the vicinity of the project site ranged from an  $L_{eq}$  of 50 dBA to 70 dBA, and an  $L_{max}$  of 64 dBA to 81 dBA.

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<sup>11</sup> While this is, by distance, the closest sensitive receptor to the project site, it is located across Interstate 5, the traffic on which tends to mask noise from other distant sources.

**TABLE 4.5-1  
15-MINUTE SHORT-TERM AMBIENT NOISE MONITORING RESULTS**

| Monitor                                  | Start Time | L <sub>eq</sub> (dBA) | L <sub>max</sub> (dBA) | Primary Noise Source(s)                                       |
|--|------------|-----------------------|------------------------|---|
| ST-1: Myrtle Vista Avenue                | 9:46 a.m.  | 56                    | 73                     | Birds chirping, cars on I-5, helicopter                       |
| ST-2: Alma Vista Way and Pocket Road     | 10:19 a.m. | 70                    | 81                     | Cars passing by on Pocket Road, horns honking                 |
| ST-3: River Ranch Way                    | 10:30 a.m. | 57                    | 64                     | Distant sounds of cars on I-5, birds chirping                 |
| ST-4: El Morro Lona                      | 10:51 a.m. | 56                    | 70                     | Distant sounds of cars on I-5, birds chirping                 |
| ST-5: Reenel Way                         | 11:20 a.m. | 50                    | 64                     | Distant sounds of cars on I-5, birds chirping, backup warning |
| ST-6: Antioch Progressive Baptist Church | 11:39 a.m. | 55                    | 66                     | Distant sounds of cars, birds chirping                        |

SOURCE: ESA, 2020. Short-term Noise Survey for the Klotz Ranch Apartments Project, March 4, 2020; and j.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017.

J.c. brennan & associates, Inc. conducted the long-term noise survey at the project site from June 29<sup>th</sup> to June 30<sup>th</sup>, 2017. It consisted of continuous hourly ambient noise level measurements for a period of 24-hours. The location of the long-term noise measurement is shown on **Figure 4.5-2**. The long-term measurement was completed in order to establish the exterior noise exposure for the proposed residences associated with the project. The long-term noise level measurements were used to determine typical background L<sub>dn</sub>, as well as the day-time and night-time L<sub>eq</sub> and L<sub>max</sub> at the project site. The meter used for the long-term measurement was a Larson Davis Model 820 precision integrating sound level meter, which was calibrated in the field before and after use. The results of the long-term noise measurement are presented in **Table 4.5-2**.

**TABLE 4.5-2  
48-HOUR LONG-TERM AMBIENT NOISE (Dba) MONITORING RESULTS**

| Monitor            | Start Time | Daytime and Evening Average (7 a.m. – 10 p.m.) L <sub>eq</sub> | Nighttime Average (10 p.m. – 7 a.m.) L <sub>eq</sub> | L <sub>dn</sub> | L <sub>max</sub> |
|--------------------|------------|--|--|-----------------|------------------|
| LT-1: Project Site | 1:00 p.m.  | 61   | 59   | 66              | 73               |

NOTES: The primary noise sources at LT-1 consisted of vehicular traffic along Interstate 5.

SOURCE: J.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017.

## Baseline Conditions

The project site was previously graded and is currently vacant. Under baseline conditions, the project site generates no noise and is exposed to vehicular traffic noise similar as those discussed under the Existing Conditions, above.





SOURCE: ESA, 2020; Google Earth, 2019

Klotz Ranch Apartments

**Figure 4.5-2**  
Noise Monitoring Locations



### 4.5.1.1 Regulatory Setting

#### Federal

##### ***Federal Aviation Administration***

The Federal Aviation Administration (FAA) develops noise exposure maps that use average annual DNL noise contours around the airport as the primary noise descriptor. The FAA states that all land uses are considered compatible when aircraft noise effects are less than 65 decibels (dB) DNL. Sacramento Executive Airport is the closest airport to the project site and is located approximately two miles to the north. The project site is well outside the 65 CNEL noise contour for the Sacramento Executive Airport.<sup>12</sup>

#### State

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dBA. The State pass-by standard for light trucks and passenger cars (less than 4.8 tons, gross vehicle rating) is also 80 dBA at 15 meters from the roadway centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in Title 24 of the California Code of Regulations (CCR).

The State of California updated its Building Code requirements with respect to sound transmission, effective January 2014. Section 1207 of the California Building Code (CCR, Title 24) establishes material requirements in terms of sound transmission class rating of 50 for all common interior walls and floor/ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public area.<sup>13</sup> The previous code requirements (before 2014) set an interior performance standard of 45 dBA from exterior noise sources. This requirement was reinstated in July of 2015. Title 24 standards are enforced through the City of Sacramento's building permit application and inspection process.

<sup>12</sup> j.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017.

<sup>13</sup> The sound transmission class is used as a measure of a materials ability to reduce sound. The sound transmission class is equal to the number of decibels a sound is reduced as it passes through a material.

## Local

### City of Sacramento 2035 General Plan

The following noise and vibration-related goal and policies identified in the Environmental Constraints Element of the *City of Sacramento 2035 General Plan* are relevant to the proposed project.<sup>14</sup>

**Goal EC 3.1: Noise Reduction.** Minimize noise impacts on human activity to ensure the health and safety of the community.

**Policy EC 3.1.1: Exterior Noise Standards.** The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in **Table 4.5-3** (Table EC 1 in the 2035 General Plan), to the extent feasible.

**TABLE 4.5-3**  
**EXTERIOR NOISE COMPATIBILITY STANDARDS FOR VARIOUS LAND USES**

| Land Use Type   | Highest Level of Noise Exposure that is Regarded as "Normally Acceptable" <sup>a</sup> (L <sub>dn</sub> <sup>b</sup> or CNEL <sup>c</sup> ) |
|---|---|
| Residential—Low Density Single Family, Duplex, Mobile Homes                 | 60 dBA <sup>d,e</sup>   |
| Residential—Multi-family <sup>g</sup>                                       | 65 dBA  |
| Urban Residential Infill <sup>h</sup> and Mixed-Use Projects <sup>i,j</sup> | 70 dBA  |
| Transient Lodging—Motels, Hotels  | 65 dBA  |
| Schools, Libraries, Churches, Hospitals, Nursing Homes                      | 70 dBA  |
| Auditoriums, Concert Halls, Amphitheaters                                   | Mitigation based on site-specific study   |
| Sports Arena, Outdoor Spectator Sports                                      | Mitigation based on site-specific study   |
| Playgrounds, Neighborhood Parks   | 70 dBA  |
| Golf Courses, Riding Stables, Water Recreation, Cemeteries                  | 75 dBA  |
| Office Buildings—Business, Commercial and Professional                      | 70 dBA  |
| Industrial, Manufacturing, Utilities, Agriculture                           | 75 dBA  |

**NOTES:**

- a As defined in the *State of California General Plan Guidelines*, "Normally Acceptable" means that the "specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements."
  - b L<sub>dn</sub> or Day Night Average Level is an average 24-hour noise measurement that factors in day and night noise levels.
  - c CNEL or Community Noise Equivalent Level measurements are a weighted average of sound levels gathered throughout a 24-hour period.
  - d Applies to the primary open space area of a detached single-family home, duplex, or mobile home, which is typically the backyard or fenced side yard, as measured from the center of the primary open space area (not the property line). This standard does not apply to secondary open space areas, such as front yards, balconies, stoops, and porches.
  - e dBA or A-weighted decibel scale is a measurement of noise levels.
  - f The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.
  - g Applies to the primary open space areas of townhomes and multi-family apartments or condominiums (private year yards for townhomes; common courtyards, roof gardens, or gathering spaces for multi-family developments). These standards shall not apply to balconies or small attached patios in multistoried multi-family structures.
  - h With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).
  - i All mixed-use projects located anywhere in the City of Sacramento.
  - j See notes d and g above for definition of primary open space areas for single-family and multi-family developments.
- SOURCE: City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015. p. 2-350.

<sup>14</sup> City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015.

**Policy EC 3.1.2: Exterior Incremental Noise Standards.** The City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in **Table 4.5-4** (Table EC 2 in the General Plan), to the extent feasible.

**Policy EC 3.1.3: Interior Noise Standards.** The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA  $L_{dn}$  for residential, transient lodgings, hospitals, nursing homes, and other uses where people normally sleep; and 45 dBA  $L_{eq}$  (peak hour) for office buildings and similar uses.

**Policy EC 3.1.4: Interior Noise Review for Multiple, Loud Short-Term Events.** In cases where new development is proposed in areas subject to frequent, high-noise events (such as aircraft over-flights, or train and truck pass-by events), the City shall evaluate noise impacts on any sensitive receptors from such events when considering whether to approve the development proposal, taking into account potential for sleep disturbance, undue annoyance, and interruption in conversation, to ensure that the proposed development is compatible within the context of its surroundings.

**TABLE 4.5-4  
EXTERIOR INCREMENTAL NOISE IMPACT STANDARDS FOR NOISE-SENSITIVE USES (dBA)**

| Residences and Buildings where People Normally Sleep <sup>a</sup> |                           | Institutional Land Uses with Primarily Daytime and Evening Uses <sup>b</sup> |                           |
|---|---------------------------|--|---------------------------|
| Existing $L_{dn}$   | Allowable Noise Increment | Existing Peak Hour $L_{eq}$  | Allowable Noise Increment |
| 45  | 8                         | 45   | 12                        |
| 50  | 5                         | 50   | 9                         |
| 55  | 3                         | 55   | 6                         |
| 60  | 2                         | 60   | 5                         |
| 65  | 1                         | 65   | 3                         |
| 70  | 1                         | 70   | 3                         |
| 75  | 0                         | 75   | 1                         |
| 80  | 0                         | 80   | 0                         |

NOTES:

a This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.

b This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

SOURCE: City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015. p. 2-351.

**Policy EC 3.1.5: Interior Vibration Standards.** The City shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or Federal Transit Administration (FTA) criteria.

**Policy EC 3.1.10: Construction Noise.** The City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

**Policy EC 3.1.11: Alternatives to Sound Walls.** The City shall encourage the use of design strategies and other noise reduction methods along transportation corridors in lieu of sound walls to mitigate noise impacts and enhance aesthetics.

### **Sacramento City Code (Noise Control Ordinance)**

The Sacramento City Code includes noise regulations in Title 8 – Health and Safety, Chapter 8.68 – Noise Control (referred to generally as the Noise Control Ordinance). Of the regulations in Chapter 8.68, the following regulations would be applicable to the proposed project:

**Section 8.68.080** exempts certain activities from Chapter 8.68, including “noise sources due to the erection (including excavation), demolition, alteration, or repair of any building or structure” as long as these activities are limited to between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday, and between the hours of 9:00 a.m. and 6:00 p.m. on Sunday. The use of exhaust and intake silencers for internal combustion engines is also required. Construction work can occur outside of the designated hours if the work is of urgent necessity and in the interest of public health and welfare for a period not to exceed 3 days. Section 8.68.080 also exempts noise from any mechanical device, apparatus, or equipment related to or connected with emergency activities or emergency work from Chapter 8.68 requirements.

**Section 8.68.060** sets standards for exterior noise levels at residential and agricultural properties, including exterior noise standards of 55 dBA from 7:00 a.m. to 10:00 p.m., and 50 dBA from 10:00 p.m. to 7:00 a.m. Per Section 8.68.060(b), the allowable decibel increase above the exterior noise standards in any one hour are:

1. 0 dB for cumulative period of 30 minutes per hour;
2. 5 dB for cumulative period of 15 minutes per hour;
3. 10 dB for cumulative period of 5 minutes per hour;
4. 15 dB for cumulative period of 1 minutes per hour; or
5. 20 dB not to be exceeded for any time per hour.

In addition, per Section 8.68.060(c), each of the noise limits above shall be reduced by 5 dB for impulsive or simple tone noises, or for noises consisting of speech or music. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection (b) above, the allowable noise limit shall be increased in 5 dB increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

## **4.5.1.2 Analysis, Impacts and Mitigation**

### **Significance Criteria**

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts with respect to noise and/or ground-borne vibration may be considered significant if implementation of the proposed project would result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies;
- Generation of excessive ground-borne vibration or ground-borne noise levels;
- Exposure of people residing or working in the Project area to excessive noise levels for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

### Issues or Potential Impacts Not Discussed Further

The project is not located within an airport land use plan, or within two miles of a public airport or public use airport where such a plan has not been adopted. The project site is located well outside the 65 CNEL noise contour for the Sacramento Executive Airport.<sup>15</sup> Additionally, the project is not located within two miles of a private airstrip; Sacramento Executive Airport is the closest airport and is located approximately two miles north of the project site.<sup>16</sup> Thus, the project would not result in noise impacts related to the exposure of people residing or working in the project area to excessive aircraft-related noise levels. This issue is not discussed further in this EIR.

In addition, pursuant to the California Supreme Court case *CBIA v. BAAQMD*, this analysis properly focuses on the project's impacts on the environment (i.e., existing sensitive receptors) and the analysis does not consider the environment's impact on the project (i.e. the impact of existing noise sources, such as I-5, on new project residents). However, a land use compatibility analysis of the project has been completed and it found that the project residences would be exposed to noise levels that would be in compliance with the U.S. Department of Housing and Urban Development and City of Sacramento exterior and interior noise level requirements provided that the project design includes incorporation of certain recommendations.<sup>17</sup>

### Methodology and Assumptions

Construction noise impacts are assessed relative to the increase in noise levels that could result from the operation of specified construction equipment compared to existing noise level conditions. Analysis of the project's temporary construction noise effects is based on specific reference noise level estimates for construction equipment and duration of use from the project applicant. The analysis accounted for attenuation of noise levels due to distances between the construction activity and the sensitive land uses in the site vicinity. Construction noise levels at nearby sensitive land uses that would be associated with the proposed project were estimated using the FHWA's *Roadway Construction Noise Model*.<sup>18</sup> The FTA's Transit Noise and

<sup>15</sup> j.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017.

<sup>16</sup> j.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017.

<sup>17</sup> j.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017.

<sup>18</sup> Federal Highway Administration, 2006. *FHWA Roadway Construction Noise Model, Version 1.1.1*. January 2008.

Vibration Impact Manual provides guidelines for reasonable criteria for assessment of construction noise.<sup>19</sup>

For the purposes of the assessment of potential vibration impacts, the methodology described in the Caltrans' *Transportation and Construction Vibration Guidance Manual* was used to evaluate project-related vibration effects to structures and nearby sensitive land uses.<sup>20</sup> The Caltrans guidance manual focuses entirely on addressing vibration from construction activities. Ground disturbance by heavy equipment during construction activities can be considered a continuous/frequent intermittent source. Caltrans' guidance identifies that vibration levels from continuous/frequent intermittent sources in excess of 0.4 PPV (in/sec) would result in a severe human response. As for structural damage, an older residential and modern industrial building exposed to a vibration level of 0.3 PPV (in/sec) and 0.5 PPV (in/sec), respectively, could result in building damage.<sup>21</sup> As noted in Section 4.2, *Cultural and Tribal Cultural Resources*, there are no historical architectural or structural resources in the immediate vicinity of the project area. Off-site sensitive receptors exposed to construction vibration levels that would exceed 0.4 PPV (in/sec) would be considered to result in a significant impact. Buildings that would be exposed to construction vibration levels that would exceed the former of these thresholds would also be considered to result in a significant impact.

Roadside noise level increases associated with project operational traffic were calculated for street segments near sensitive land uses within the project vicinity based on peak hour traffic information provided in the traffic analysis presented in Section 4.6, *Transportation*. The street segments selected for analysis are those expected to be most directly impacted by project-related traffic, which, for the purpose of this analysis, are the streets that are nearest to the project site that also experience the highest traffic volumes. These streets are forecast to experience the greatest percentage increase in traffic generated by the proposed project. The traffic noise levels have been calculated using algorithms from the FHWA's *Traffic Noise Model Technical Manual* and baseline and baseline plus project peak hour traffic volumes provided by National Data & Surveying Services and Kimley Horn, respectively (see Appendix G).<sup>22</sup> Future traffic noise levels that are found to exceed the allowed City of Sacramento's exterior incremental noise impact standards (see Table 4.5-4) would result in a significant impact.

Non-transportation operational noise sources at the project site would include operation of heating, ventilation, and air-conditioning systems (HVAC) units. Referenced sound power levels that would be generated during these operations (i.e., HVAC) were used to calculate an  $L_{eq}$  at the nearest sensitive receptor, which was compared to the City of Sacramento's nighttime noise standard of 50 dBA  $L_{eq}$ .

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<sup>19</sup> Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual. September 2018.

<sup>20</sup> California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual*. September 2013.

<sup>21</sup> California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual*. September 2013.

<sup>22</sup> National Data & Surveying Services, 2020. Peak Hour Turning Movement Counts for the Klotz Apartment Project. March 2020, and Kimley Horn, 2020, Existing (2020) plus Project Peak-Hour Traffic Volumes.

## Impacts and Mitigation Measures

### **Impact 4.5-1: Construction of the project would generate noise that could conflict with City of Sacramento's noise standards.**

Construction of the project would occur entirely within the City of Sacramento. Section 8.68.080 of the Sacramento City Code exempts construction activities provided all construction equipment are equipped with the appropriate exhaust and intake silencers for internal combustion engines and activities occur between the hours of 7:00 am and 6:00 pm Monday through Saturday, and between the hours of 9:00 am and 6:00 pm on Sunday. Construction activities associated with site preparation, building construction, and paving would occur within the allowed hours specified in the Sacramento City Code. All construction equipment would be installed with required exhaust and intake silencers per Sacramento City Code Section 8.68.080. Therefore, project-related construction activities would not conflict with the Sacramento City Code and potential conflicts with the City's noise standards would result in a **less-than-significant** impact.

#### Mitigation Measure

None required.

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### **Impact 4.5-2: Construction of the project could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

Noise levels from construction activity at nearby sensitive receptors would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. A passing haul truck can result in a noise level of 77 dBA  $L_{max}$  at 50 feet.<sup>23</sup> **Table 4.5-5** shows typical noise levels produced by the types of construction equipment that would likely be used during the construction of the project.

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<sup>23</sup> Federal Highway Administration, 2008. *FHWA Roadway Construction Noise Model, Version 1.1*, December 2008.

**TABLE 4.5-5  
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS  
(50 FEET FROM SOURCE)**

| Type of Equipment | L <sub>max</sub> , dBA | Hourly L <sub>eq</sub> , dBA/% Use |
|-------------------|------------------------|------------------------------------|
| Backhoe           | 78                     | 74/40%                             |
| Grader            | 85                     | 81/40%                             |
| Scraper           | 84                     | 80/40%                             |
| Crane             | 81                     | 73/16%                             |
| Dozer             | 82                     | 78/40%                             |
| Paver             | 77                     | 74/50%                             |
| Roller            | 80                     | 73/20%                             |
| Loader            | 78                     | 74/40%                             |
| Air Compressor    | 78                     | 74/40%                             |
| Excavator         | 81                     | 77/40%                             |

SOURCE: Federal Highway Administration, 2008. *FHWA Roadway Construction Noise Model, Version 1.1*, December 2008.

The operation of each piece of equipment would not be constant throughout the day, as equipment would be turned off when not in use. Over a typical workday, the equipment would be operating at different locations and all the equipment would not operate concurrently at the same location of the proposed project. To quantify construction-related noise exposure that would occur at the nearest sensitive receptors, it was assumed that the two loudest pieces of construction equipment would operate at the closest location on the project site to the nearest off-site sensitive receptors. The combined L<sub>eq</sub> noise level associated with the two loudest pieces of construction equipment (i.e., grader and scraper) would be approximately 84 dBA at 50 feet.

The City of Sacramento General Plan does not contain noise level standards that are applicable to short-term construction activities. City Code section 8.68.080 exempts construction-related noise between the hours of 7:00 a.m. and 6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday. Although there are no applicable local policies or standards available to judge the significance of short-term daytime construction noise levels, the FTA's *Transit Noise and Vibration Impact Manual* has identified a daytime 1-hour L<sub>eq</sub> level of 90 dBA as a noise level where adverse community reaction could occur at residential land uses. This noise level is used here to assess whether construction-related noise levels would cause a substantial temporary or periodic increase in ambient noise levels at sensitive receptor locations.

As previously discussed, there are residences located approximately 400 feet southwest of the project site perimeter; however, these residences are on the opposite side of I-5, a six-lane high volume freeway. Assuming a grader and scraper would operate at the closest point to this residence, the closest residences to the project would be exposed to a construction noise level of approximately 65 dBA L<sub>eq</sub> or less. As shown in Table 4.5-1, daytime noise levels in the vicinity of the project site range from 50 dBA to 70 dBA L<sub>eq</sub>. Although project construction-related noise levels may be audible at the nearest sensitive receptor locations, the noise levels would be well below the applied 90 dBA L<sub>eq</sub> criteria. Additionally, traffic along I-5 would further mask



construction noise at the sensitive receptors to the southwest and intervening structures would further attenuate noise at sensitive receptors to the north. Therefore, the worst-case temporary increase in ambient noise levels from construction would cause a **less-than-significant** impact.

#### Mitigation Measure

None required.

#### **Impact 4.5-3: Operation of the project could increase local traffic that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity or conflict with the City of Sacramento noise standards.**

Most of the long-term noise that would result due to the implementation of the proposed project would primarily be generated by vehicle traffic on local roadways. The proposed project would contribute to an increase in local traffic volumes, resulting in higher traffic noise levels along local roadways. Traffic noise levels were estimated for roadway segments near the project site under baseline and baseline plus project conditions. Roadway segments analyzed were selected based on proximity to the project site and the presence of noise-sensitive land uses. See [Appendix D](#) for noise modeling details. The roadway segments analyzed and the associated results of the modeling are shown in **Table 4.5-6**.

**TABLE 4.5-6  
BASELINE AND PROJECTED L<sub>DN</sub> TRAFFIC NOISE LEVELS AT SENSITIVE RECEPTORS ALONG  
STREETS IN THE PROJECT VICINITY**

| Roadway Segment                     | Traffic Noise Level, dBA, L <sub>dn</sub> <sup>1</sup> |                              |                      |  |
|-------------------------------------|--|------------------------------|----------------------|--|
|                                     | Baseline (2020)  | Baseline (2020) plus Project | Incremental Increase | Significant Increase at Sensitive Land Uses <sup>2</sup> |
| <b>Pocket Road</b>                  |  |                              |                      |  |
| East of Greenhaven Drive            | 68.8   | 68.8                         | 0.0                  | No   |
| East of I-5 Northbound Ramp         | 69.8   | 69.9                         | 0.1                  | No   |
| East of Klotz Circle/Alma Vista Way | 68.7   | 68.8                         | 0.1                  | No   |
| <b>Greenhaven Drive</b>             |  |                              |                      |  |
| North of Pocket Road                | 66.6   | 66.6                         | 0.0                  | No   |
| South of Pocket Road                | 57.6   | 57.6                         | 0.0                  | No   |
| <b>I-5 Northbound Onramp</b>        |  |                              |                      |  |
| North of Pocket Road                | 65.3   | 65.4                         | 0.1                  | No   |

**NOTES:**

- Noise levels were determined using methodology described in FHWA Traffic Noise Model Technical Manual. See Appendix D for details.
- Existing land uses exposed to traffic noise that result in a noise increase greater than what is allowed in the City of Sacramento General Plan Policy EC 3.1.2 is considered a significant impact.

SOURCE: ESA, 2020

According to the City of Sacramento General Plan Policy EC 3.1.2, residences exposed to future traffic noise levels that exceed the allowable incremental noise increases detailed in Table 4.5-4 is considered a significant impact requiring mitigation. It should be noted that use of the FHWA noise modeling methods has been shown to overestimate traffic noise levels;<sup>24</sup> however, for the purposes of a conservative analysis relative to the City's allowable incremental noise increase thresholds, the modelled traffic noise levels have not been adjusted.

As shown in Table 4.5-6, none of the sensitive land uses along roadway segments in the vicinity of the project would be exposed to an increase in traffic noise that would exceed the City of Sacramento General Plan Policy EC 3.1.2. Therefore, the increase in vehicular traffic along local roadways would not result in the exposure of adjacent existing sensitive land uses to a substantial increase in traffic noise, and this increase would result in a **less-than-significant** impact.

#### Mitigation Measure

None required.

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#### **Impact 4.5-4: Operation of the project could introduce new stationary noise sources that could conflict with the City of Sacramento noise standards.**

The HVAC systems for maintaining comfortable temperatures within the proposed apartment buildings would consist largely of packaged air conditioning systems. The precise locations of HVAC systems are unknown at this time. Possible HVAC system locations would include street level and rooftops. HVAC units can generate sound power levels of 80 dBA, which translates to a sound pressure, or noise level, of approximately 64 dBA  $L_{eq}$  at a reference distance of 50 feet from the operating units during maximum heating or air conditioning operations.<sup>25</sup>

As discussed above, the closest sensitive land uses are located approximately 400 feet to the southwest of the project site, and the HVAC systems would be setback at least 100 feet from the site's southwest perimeter. At this distance, noise levels from the project's HVAC units would be less than 40 dBA, which would be below the City of Sacramento's nighttime noise standard of 50 dBA  $L_{eq}$ . Additionally, traffic along I-5 would further mask HVAC noise at the sensitive receptors to the southwest and intervening structures would further attenuate noise at sensitive receptors to the north. Therefore, operation of HVAC units at the project site would not expose nearby sensitive land uses to substantial noise levels, and thus the impact would be **less than significant**.

#### Mitigation Measure

None required.

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<sup>24</sup> j.c. brennan & associates, Inc. 2017. Pocket Area Apartments Sacramento & HUD Noise Analysis, August 16, 2017, page 17.

<sup>25</sup> Puron, 2005. *48PG03-28 Product Data*. pp. 10–11.

**Impact 4.5-5: Operation of the project could result in interior noise levels of 45 dBA  $L_{dn}$  or greater at nearby residential uses.**

Operational traffic as a result of the proposed project would increase traffic noise levels at existing land uses in the projects' vicinity, as described above in Impact 4.5-3. A typical building can reduce noise levels by approximately 25 dB with the windows closed.<sup>26</sup> Assuming an outdoor to indoor attenuation of 25 dB, residential buildings exposed to an exterior noise level of 70 dBA  $L_{dn}$  would result in interior noise levels of 45 dBA  $L_{eq}$ . As shown in Table 4.5-6, the total roadway noise under baseline plus project conditions would not exceed the 70 dBA  $L_{dn}$  standard at existing residential uses along Pocket Road, Greenhaven Drive, or the I-5 northbound onramp. Therefore, operation of the project would not generate traffic volumes along roadways within the area that would exceed the City of Sacramento's exterior noise standard to the extent that interior noise levels at existing residential uses adjacent to these roadway segments would increase above 45 dBA  $L_{dn}$ , and this impact would be **less than significant**.

Mitigation Measure

None required.

**Impact 4.5-6: Construction of the proposed project could expose existing and/or planned buildings, and persons within, to vibration that could disturb people and damage buildings.**

Since the operation of the project would not include any sources or activities that generate noticeable vibration, it is not expected that the operation of the proposed project would expose the nearest sensitive receptors or structures to vibration levels that would result in human annoyance or building damage. Therefore, only vibration impacts from onsite construction activities are evaluated.

Construction of the project would require the use of equipment and vehicles that could expose nearby sensitive receptors to vibration levels that may result in an annoyance or building damage. According to the Caltrans' *Transportation and Construction Vibration Guidance Manual*, an exposure to a vibration level of 0.4 PPV (in/sec) would cause a "severe" human response.<sup>27</sup> As for structural damage, an older residential and modern industrial building exposed to vibration levels of 0.3 PPV (in/sec) and 0.5 PPV (in/sec), respectively, could result in building damage.<sup>28</sup> A more restrictive threshold for damage to historic buildings is not used in this analysis because there are no historic structures located in the vicinity of the project site.

Ground-borne vibration from onsite equipment, such as vibratory rollers used for compaction, could produce vibration at nearby sensitive receptors, including structures themselves. The

<sup>26</sup> U.S. Environmental Protection Agency, 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March 1974.

<sup>27</sup> California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual*. September 2013.

<sup>28</sup> California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual*. September 2013.

typical reference vibration level for a vibratory roller is 0.21 PPV (in/sec) at 25 feet.<sup>29</sup> The nearest residence is located approximately 400 feet southwest of the project site and the nearest building is located more than 100 feet north of the project site. Attenuated vibration levels at these receptors locations would be substantially less than the vibration thresholds discussed above; and the impact of the proposed project with respect to vibration exposure would be **less than significant**.

#### Mitigation Measure

None required.

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### **Cumulative Impacts**

The geographic context for changes in the noise and vibration environment due to development of the proposed project would be localized in a suburban area of the City of Sacramento, as well as along roadways that would serve the project. In order to contribute to a cumulative construction noise impact, another projects in close proximity would have to be constructed at the same time as the proposed project. There are two other projects in various stages of development and planning near the proposed project site that would be constructed and operational in the foreseeable future. These include Delta Shores and an unnamed apartment complex. Delta Shores is a large development project located 1 mile to the south of the project site. The commercial portion of the development has been constructed and is operational, while the residential (675 multi-family units and 4,089 single family units) and mixed-use town center (458 units and 161,000 square feet retail) portions have yet to be constructed. The unnamed apartment complex would include 150 units and would be located about 2 miles northeast of the site at the corner of Florin Road and 29<sup>th</sup> Street.

#### **Impact 4.5-7: The project could result in exposure of people to cumulative increases in construction noise levels.**

As previously discussed in Impact 4.5-2, due to the long distance between the project and nearest sensitive land use, project-related construction noise would not result in a substantial temporary increase in the existing ambient noise environment. Both of the cumulative projects identified above are located at least 1 mile from the receptors identified for the proposed project. As a result, noise generated from the construction of these projects would not combine with noise generated from construction of the proposed project to negatively affect these receptors. For this reason, the cumulative impact would be **less than significant**.

#### Mitigation Measure

None required.

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<sup>29</sup> Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment. May 2006, Table 12-2, p. 12-12.

**Impact 4.5-8: The proposed project could contribute to cumulative increases in traffic noise levels.**

On-road traffic associated with the full build-out of the proposed project would be the primary operational noise source that would contribute to the cumulative noise environment. Noise projections were made using traffic noise prediction equations found in the FHWA's *Traffic Noise Model Technical Manual* for existing, cumulative, and cumulative plus project conditions using roadway traffic volumes.<sup>30</sup> The segments analyzed and results of the modeling are shown in **Table 4.5-7**.

**TABLE 4.5-7**  
**CUMULATIVE L<sub>DN</sub> TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY**

| Roadway Segment                     | Traffic Noise Level at Closest Sensitive Receptors, dBA, L <sub>dn</sub> <sup>1</sup> |                                   |                                |  |  |  |  |
|-------------------------------------|---|-----------------------------------|--------------------------------|--|--|--|--|
|                                     | Baseline (2020)   | Cumulative (2035) without Project | Cumulative (2035) with Project | Cumulative(2035) with Project incremental increase above Baseline Conditions | Cumulative (2035) with Project incremental decrease below Cumulative | Cumulatively Significant? (Yes or No) <sup>2</sup> | Project's Contribution Significant? (Yes or No) <sup>2</sup> |
| <b>Pocket Road</b>                  |   |                                   |                                |  |  |  |  |
| East of Greenhaven Drive            | 68.8  | 69.2                              | 69.0                           | 0.2  | -0.2   | No   | No   |
| East of I-5 Northbound Ramp         | 69.8  | 70.5                              | 69.9                           | 0.1  | -0.6   | No   | No   |
| East of Klotz Circle/Alma Vista Way | 68.7  | 69.5                              | 68.9                           | 0.2  | -0.6   | No   | No   |
| <b>Greenhaven Drive</b>             |   |                                   |                                |  |  |  |  |
| North of Pocket Road                | 66.6  | 67.2                              | 67.1                           | 0.5  | -0.1   | No   | No   |
| South of Pocket Road                | 57.6  | 58.3                              | 58.1                           | 0.5  | -0.2   | No   | No   |
| <b>I-5 Northbound Ramp</b>          |   |                                   |                                |  |  |  |  |
| North of Pocket Road                | 65.3  | 65.9                              | 65.4                           | 0.1  | -0.5   | No   | No   |

NOTES:

- Noise levels were determined using methodology described in FHWA Traffic Noise Model Technical Manual.
- Existing sensitive land uses exposed to traffic noise that result in a noise increase greater than what is allowed in the City of Sacramento General Plan Policy EC 3.1.2 is considered a significant impact.

SOURCE: ESA, 2020

<sup>30</sup> National Data & Surveying Services, 2020. Peak Hour Turning Movement Counts for the Klotz Apartment Project. March 2020, and Kimley Horn, 2020, Cumulative (2035) plus Project Peak-Hour Traffic Volumes.

Cumulative traffic noise level significance is determined by a two-step process. First, a comparison is made of the increase in noise levels between cumulative conditions with the proposed project and baseline conditions to the incremental threshold established in the City of Sacramento's General Plan Policy EC 3.1.2 (Table 4.5-4). If the roadside noise levels would exceed this incremental threshold, a cumulative noise impact would be identified.

The second step of the cumulative roadside noise analysis (if a cumulative noise impact is predicted) is to evaluate if the contribution of the proposed project to roadside noise levels is cumulatively considerable. This second step (if necessary) involves assessing whether the proposed project contribution to roadside noise levels (i.e., the difference between cumulative conditions and cumulative plus project conditions) would exceed the incremental threshold established in the City of Sacramento's General Plan Policy EC 3.1.2 (Table 4.5-4). The roadway segments analyzed and the results of the noise increases resulting from modeling are shown in Table 4.5-7.

As can be seen in Table 4.5-7, none of the roadway segments analyzed under cumulative plus project conditions would experience an increase in traffic noise levels over either the baseline or cumulative with no project conditions that would exceed the incremental threshold established in the City of Sacramento's General Plan Policy EC 3.1.2 (Table 4.5-4). The cumulative without project scenario assumes the previously approved commercial land use mix on the project site would be developed, which would have generated more trips than the apartments that are now proposed for the site under this project. Therefore, the cumulative with project scenario would result in an incremental noise level decrease below noise levels that would have occurred under the cumulative scenario. Consequently, the cumulative noise impact would be **less than significant**.

#### Mitigation Measure

None required.

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## 4.6 Transportation and Circulation

This section summarizes the findings of the traffic circulation, Vehicle Miles Traveled (VMT), pedestrian, bicycle, transit, and construction impact analysis that determined the effect of the addition of the proposed project on the adjacent transportation system. The analysis considers both short-term and long-term impacts of the proposed project. The analysis was prepared in accordance with criteria set forth by the City of Sacramento (City).

After publishing the Notice of Preparation (NOP), the project applicant received comment letters from the Freeport Citizens Community (January 6, 2020), South Land Park Neighborhood Association (SLPNA) (February 11, 2020), Caltrans (January 3, 2020), and numerous letters from the community. The Caltrans letter requested that VMT be studied, off-ramp queuing was studied, and that freeway facilities were studied. The SLPNA letter requested that a project connection to the approved Del Rio Trail be added to the project's development plans. The Freeport Citizens Community letter requested that impacts from the addition of the proposed project be studied in the area surrounding the proposed project. The Transportation and Circulation section of this EIR addresses the CEQA impacts and mitigation measures as it relates to all modes of transportation, including vehicular, pedestrian, bicycle, and transit. It should be noted that vehicular queuing and densities on City of Sacramento and Caltrans facilities, level of service (LOS), and site access considerations are not required to be analyzed under CEQA, and are addressed in a separate memorandum in the Staff Report.

### 4.6.1 Environmental Setting

#### Roadways

The Sacramento 2035 General Plan (General Plan) identifies functional roadway classifications, which govern engineering design standards.

- **Major Arterial:** A four to six-lane street that serves longer distance trips and serves as the primary route for moving traffic through the city connecting urban centers, residential neighborhoods, and commercial centers to one another, or to the regional transportation network. Movement of people and goods, also known as “mobility,” rather than access to adjacent land uses, is the primary function of an arterial street. These streets carry moderate-to-heavy vehicular movement, low-to-high pedestrian and bicycle movements, and moderate-to-high transit movement. Typical major arterials have right-of-way widths of 80 to 150 feet. Arterials configured as boulevards have right-of-way widths of 90 to 180 feet.
- **Minor Arterial:** A two-lane street that serves longer distance trips and provides access to the regional transportation system. These streets carry low-to-moderate vehicular movement, low-to-high pedestrian and bicycle movements, and moderate-to-high transit movement. These roadways typically have high levels of access control. Typical minor arterial streets have right-of-way widths of 50 to 90 feet.
- **Major Collector:** A two-to four-lane street that primarily provides travel between arterial streets and collector or local streets and, secondarily, provides access to abutting properties. These streets carry low-to-moderate vehicular movement, low-to-heavy pedestrian movement, moderate-to-heavy bicycle movement, and low-to-moderate transit movement.

These roadways have medians and moderate access control. Typical major collector streets have right-of-way widths of 60 to 120 feet.

- **Minor Collector:** A two-lane street that connects residential uses to the major street system. These roadways are undivided and have lower levels of access control to abutting properties control than arterials or major collectors. Typical minor collector streets have right-of-way widths of 40 to 80 feet.
- **Local:** A two-lane street that provides direct access to abutting land uses. Local streets serve the interior of a neighborhood. These streets carry low vehicular movement, low-to-heavy pedestrian movement, and low-to- moderate bicycle movement. Typical local streets have right-of-way widths of 40 to 60 feet.

The project location is shown in **Figure 4.6-1**. Roadways that provide primary circulation near the project site are listed below.

- **Interstate 5 (I-5)** is a north-south interstate facility located adjacent to the proposed project site and accessible via the Pocket Road interchange. I-5 serves as a north-south connection along the western portion of Sacramento County. Near Pocket Road, I-5 carries approximately 114,000 vehicles per day<sup>1</sup> with three lanes in each direction.
- **Pocket Road** is an east-west major arterial roadway located just north of the proposed project site. Within the project vicinity, Pocket Road has two lanes in each direction and turns into Meadowview Road east of Freeport Boulevard. Pocket Road would serve as the main connection from the proposed project site to the surrounding roadway network. The posted speed limit is 40 miles per hour (mph); on-street parking is prohibited in the project area.
- **Freeport Boulevard** is a north-south major arterial roadway bordering the eastern edge of the project site. North of the project site, Freeport Boulevard has two lanes in each direction and is separated by a raised concrete median. South of the project site, Freeport Boulevard becomes undivided with one lane in each direction. The posted speed limit is 50 mph; on-street parking is prohibited in the project area.
- **Greenhaven Drive** is a north-south major collector located west of the project site and across the I-5 interchange. North of Pocket Road, Greenhaven Drive provides two lanes in each direction that are separated by a raised concrete median. South of Pocket Road, Greenhaven Drive becomes a residential roadway with direct access to residential driveways. The posted speed limit is 35 mph north of Pocket Road and 25 mph south of Pocket Road; on-street parking is prohibited in the project area.
- **Klotz Ranch Court** is an existing driveway located south of Pocket Road. Klotz Ranch Court would be extended with the proposed project and would serve all traffic accessing the project site. North of Pocket Road, Klotz Ranch Court becomes Alma Vista Way and functions as a local residential street. Although there is no posted speed limit, vehicles general travel at approximately 25 mph. On-street parking is prohibited on Klotz Ranch Court.

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<sup>1</sup> Caltrans Traffic Counts, 2017. <https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-5-6>.





SOURCE: Kimley-Horn, 2020

Klotz Ranch Apartments

**Figure 4.6-1**  
Project Vicinity Map

## Bicycle and Pedestrian Facilities

Bicycle facilities are typically classified as follows:

- ***Bicycle paths*** (Class I) provide a completely separate right-of-way and are designated for the exclusive use bicycles and pedestrians with vehicle cross-flow minimized.
- ***Bicycle lanes*** (Class II) provide a restricted right-of-way and are designated for the use of bicycles for one-way travel with a striped lane on a street or highway. Bicycle lanes are generally a minimum of five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted.
- ***Bicycle routes*** (Class III) provide right-of-way designated by signs or pavement markings for shared use with motor vehicles. These include “sharrows” or “shared-lane markings” to highlight the presence of bicyclists.
- ***Bikeways*** (Class IV) cycle tracks or “separated” bikeways provide a right-of-way designated exclusively for bicycle travel within a roadway and are protected from other vehicle traffic by physical barriers, including but not limited to grade separation, flexible posts, inflexible vertical barriers such as raised curbs, or parked cars.

Within the study area, Class II bicycle lanes are provided on both sides of Pocket Road east of Greenhaven Drive and on both sides of Pocket Road west of Klotz Ranch Court. On Pocket Road between Greenhaven Drive and the I-5 Southbound Off-ramps, there is a Class II bicycle lane provided for the westbound direction. North of Pocket Road, there are Class II bicycle lanes provided on both sides of Greenhaven Drive. South of Pocket Road, a Class III bike route is provided for both sides of Greenhaven Drive. As described in the City’s Bicycle Master Plan,<sup>2</sup> proposed bicycle facilities include a separated bikeway along Pocket Road between Greenhaven Drive and Freeport Boulevard and a bike trail just west of and parallel to Freeport Boulevard.

**Figure 4.6-2** provides a detailed map of the bicycle facilities within the project vicinity.

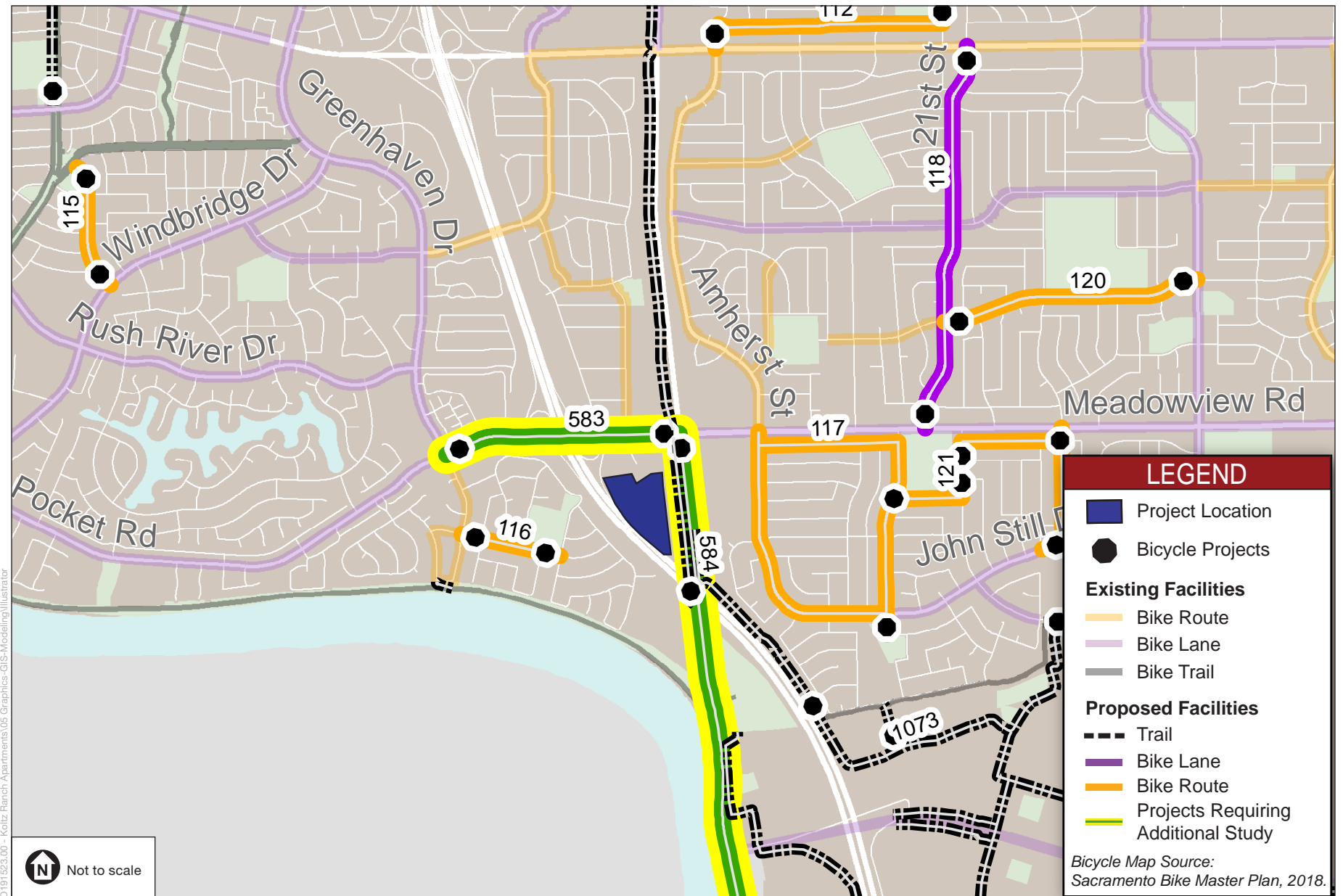
Pedestrian facilities include sidewalks, pathways, crosswalks, and pedestrian signals. Sidewalks are provided along all roadways in the study area including Pocket Road, Meadowview Road, Greenhaven Drive, Klotz Ranch Court, on the east side of Alma Vista Way, and on the east side of Freeport Boulevard within the project vicinity. On the south side of Pocket Road, between Klotz Ranch Court and Freeport Boulevard, the sidewalk is not continuously paved. At the intersection of Pocket Road and Klotz Ranch Court/Alma Vista Way, three striped crosswalks are provided with corresponding pedestrian signal heads. Similarly, at the intersections of Pocket Road with Greenhaven Drive and Freeport Boulevard, four striped crosswalks are provided with corresponding pedestrian signal heads. Existing and proposed pedestrian facilities are contained in the City’s *Pedestrian Master Plan*.<sup>3</sup>

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<sup>2</sup> *Bicycle Master Plan*, City of Sacramento. August 2018.

<sup>3</sup> *Pedestrian Master Plan*, City of Sacramento Department of Transportation, September 2006.





SOURCE: Kimley-Horn, 2020

Klotz Ranch Apartments

**Figure 4.6-2**  
City Bicycle Master Plan

## Transit Facilities

Sacramento Regional Transit District (SacRT) provides transit service in the greater Sacramento metropolitan area.

SacRT bus service provides local and express bus services for the Sacramento region. **Figure 4.6-3** depicts the Bus Route 56 within the project vicinity. Route 56 operates as a standard local bus service. Near the project site, there are stops on Pocket Road east of Greenhaven Drive and east of Klotz Ranch Court. Additionally, there is a stop on Greenhaven Drive north of Pocket Road.<sup>4</sup>

SacRT GO Paratransit Service is a complementary transportation service required by the federal Americans with Disabilities Act (ADA) for individuals with disabilities who are unable to use fixed route transportation systems. SacRT GO Paratransit provides a shared ride, door to door bus service by advance appointment. The service is provided within  $\frac{3}{4}$  of one mile of a bus route or rail station, during the same hours and days of operation as the bus and light rail services.

SacRT light rail service encompasses a three-line light rail network serving the Sacramento region. The Blue Line offers daily service between Watt I-80 and Cosumnes River College. The Meadowview Light Rail Station is located at 209 River Isle Way approximately 2.25 miles from the project site. Parking is available at the Meadowview Light Rail Station.

## Existing Conditions

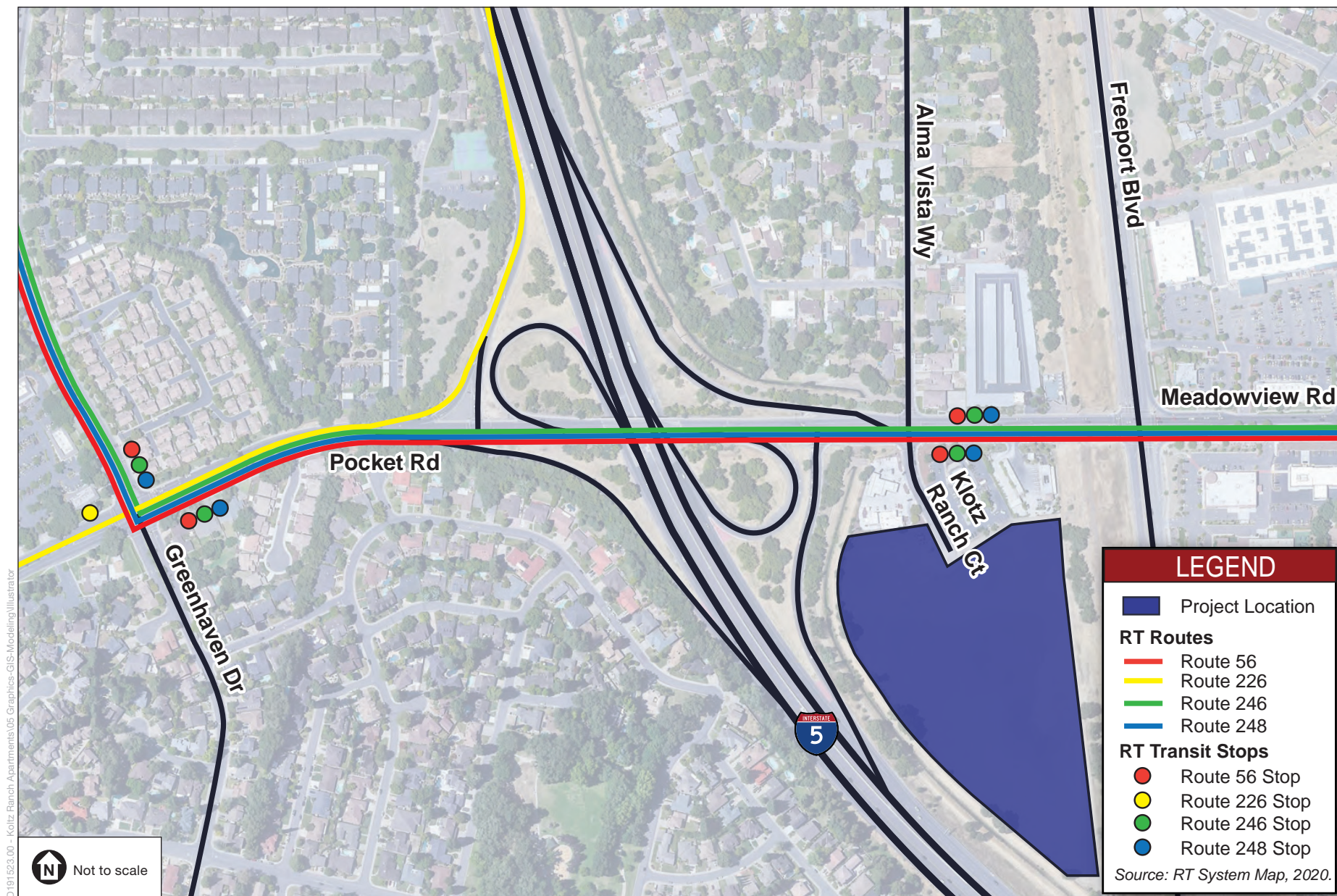
As shown in Figure 4.6-1, the proposed project site is currently a vacant lot located at the southern terminus of Klotz Ranch Court, just west of the Pocket Road/Meadowview Road intersection with Freeport Boulevard. The project proposes to construct six, four-story multi-family residential buildings totaling 266 units and a two-story, 6,300 square-foot clubhouse at the project site. The proposed project's residential development will represent a change in land use as the location was previously approved for the Klotz Ranch Commercial Planned Unit Development (P.U.D.). The zoning on the project site permits multifamily residential.

Included in the following analysis is a consideration of VMT. **Table 4.6-1** presents the baseline VMT for the project area.

**TABLE 4.6-1**  
**VEHICLE MILES TRAVELED – EXISTING CONDITIONS**

| Regional Daily Vehicle Miles Traveled | Freeways and Rural Roads | Urban Streets | Total      |
|---------------------------------------|--------------------------|---------------|------------|
| Existing                              | 33,105,119               | 28,614,263    | 61,719,382 |

<sup>4</sup> Sacramento Regional Transit District, <http://www.sacrt.com/systemmap/>.



SOURCE: Kimley-Horn, 2020

Klotz Ranch Apartments

**Figure 4.6-3**  
Sacramento RT Transit System Map



## 4.6.2 Regulatory Setting

### Federal

There are no federal regulations applicable to the proposed project.

### State

#### ***California Department of Transportation***

The California Department of Transportation (Caltrans) owns and operates the State highway system, which includes the freeways and State routes within California. In Sacramento, Caltrans maintains the freeways (I-5 and I-80), SR-99, and SR-160. The Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002) provides guidance on the evaluation of traffic impacts to State highway facilities. The document outlines when a traffic impact study is needed and what should be included in the scope of the study. Caltrans is in the process revising the guidelines to comply with the requirements set in SB 743.

#### ***Senate Bill 743***

Senate Bill 743 (SB 743), passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." OPR recently updated its CEQA Guidelines to implement SB 743 to require that vehicle miles traveled (VMT) be the primary metric used to identify transportation impacts. The VMT standard for evaluating transportation impacts under CEQA became mandatory statewide on July 1, 2020.

VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT is a measure of the use and efficiency of the transportation network. VMT is calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round trip) travel and is estimated for a typical weekday to measure transportation impacts. The City of Sacramento's draft transportation impact guidelines is consistent with OPR's recommendation of using VMT as a metric.

The enactment of SB 743 established CEQA exemptions for certain qualifying projects. Specifically, Public Resource Code section 21155.4 states the following:

"(a) Except as provided in subdivision (b), a residential, employment center, as defined in paragraph (1) of subdivision (a) of Section 21099, or mixed use development project, including any subdivision, or any zoning change, that meets all of the following criteria is exempt from the requirements of this division:

- 1) The project is proposed within a transit priority area, as defined in subdivision (a) of Section 21099.

2) The project is undertaken to implement and is consistent with a specific plan for which an environmental impact report has been certified.

3) The project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy for which the State Air Resources Board, pursuant to subparagraph (H) of paragraph (2) of subdivision (b) of Section 65080 of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emissions reduction targets.

(b) Further environmental review shall be conducted only if any of the events specified in Section 21166 have occurred."

Public Resources Code (PRC) Section 21099 defines a transit priority area as follows:

- "Transit Priority Area" is an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.

PRC Section 21064.3 defines a major transit stop as follows:

- "Major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. The City of Sacramento is currently engaged in a process to update the transportation performance metrics and thresholds used to measure transportation system impacts of discretionary projects as part of its 2040 General Plan. For the purposes of this EIR, the transportation analysis evaluates transportation impacts using both VMT and LOS.

### **SACOG MTP/SCS**

The Sacramento Area Council of Governments (SACOG) is responsible for the preparation of, and updates to, the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP/SCS was adopted by the SACOG board in 2019.

## **Local**

### **Sacramento 2035 General Plan**

On March 3, 2015, the City of Sacramento City Council adopted the *2035 General Plan*. The Mobility Element of the City of Sacramento's *2035 General Plan* outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following multimodal system goal and policies are relevant to this study:

**Goal M 1.2: Multimodal System.** Increase multimodal accessibility (i.e., the ability to complete desired personal or economic transactions via a range of transportation modes and routes) throughout the city and region with an emphasis on walking, bicycling, and riding transit.

**Policy M 1.2.3: Transportation Evaluation.** The City shall evaluate discretionary projects for potential impacts to traffic operations, traffic safety, transit service, bicycle facilities, and pedestrian facilities, consistent with the City's Traffic Study Guidelines.

**Policy M 1.2.3: Multimodal Access.** The City shall facilitate the provision of multimodal access to activity centers such as commercial centers and corridors, employment centers, transit stops/stations, airports, schools, parks, recreation areas, medical centers, and tourist attractions.

### ***I-5 Freeway Subregional Corridor Mitigation Program***

The I-5 Freeway Subregional Corridor Mitigation Program (SCMP) is a voluntary development impact fee for new developments within the I-5 corridor between Elk Grove, Downtown Sacramento, and West Sacramento that is intended to be used to construct a set of transportation improvements identified in the SACOG 2016 MTP/SCS. Under the SCMP, a project applicant whose project would generate vehicle trips over the threshold could choose to either pay the fee, which would constitute mitigation of their development project's impacts on the freeway mainline, or conduct a Traffic Impact Study, which would evaluate that project's impact on the freeway system and identify mitigation for those impacts.

According to the Draft Final Nexus Study for the I-5 Freeway Subregional Corridor Mitigation Program (DKS Associates January 2016), the following roadway improvements would be partially funded by the plan (with the remainder coming from other sources):

- extension of light rail from the Township 9/Richards station to Natomas Center,
- new bridge across the American River,
- two new bridges across the Sacramento River,
- reconstruction of I-5/Richards Boulevard Interchange,
- construction of HOV lanes on I-5 from Elk Grove to US 50, and
- construction of a transition lane on I-5 between the Garden Highway off- and on-ramps.

Page 36 of the study specifies that "Caltrans would consider the fees as an adequate mitigation for freeway mainline impacts." Table 18 on page 32 of the Nexus Study shows the proposed fee per dwelling unit, and per thousand square feet of non-residential space.

## **4.6.3 Analysis, Impacts and Mitigation**

### **Significance Criteria**

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant, adverse impacts on the environment. For purposes of this analysis, an impact is



considered significant if implementation of the proposed project would have the effects described below. The standards of significance in this analysis are based upon current practice of the City of Sacramento.

### ***Vehicle Miles Traveled (VMT)***

Transportation impacts are considered significant if the proposed project would:

- Result in a VMT per capita above 85% of the regional average.

### ***Transit***

Impacts to the transit system are considered significant if the proposed project would:

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

### ***Bicycle Facilities***

Impacts to bicycle facilities are considered significant if the proposed project would:

- Adversely affect existing or planned bicycle facilities; or
- Fail to adequately provide for access by bicycle.

### ***Pedestrian Circulation***

Impacts to pedestrian circulation are considered significant if the proposed project would:

- Adversely affect existing or planned pedestrian facilities; or
- Fail to adequately provide for access by pedestrians.

### ***Construction-Related Traffic Impacts***

The project would have a temporarily significant impact during construction if it would:

- Cause inconveniences to motorists due to prolonged road closures; or
- Result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists.

## **Methodology and Assumptions**

### ***Traffic Study Area***

The traffic study area was selected in consultation with City of Sacramento staff based on a review of the project location and the amount of traffic that could be added to transportation network components in the area.

## Study Scenarios

The traffic study area has been analyzed for the following scenarios:

- **Existing (2020) Conditions.** Scenario was evaluated using counts collected on Thursday, October 17, 2019 and on Wednesday, February 19, 2020.
- **Existing (2020) plus Proposed Project Conditions.** Scenario was evaluated by manually adding the proposed project's trips to the Existing (2020) Conditions.
- **Cumulative (2035) Conditions.** Scenario was evaluated assuming the site is developed in a manner consistent with its 2035 General Plan land use (Regional Commercial). SACOG's travel demand model was used to determine the trip distribution associated with the Regional Commercial land use.
- **Cumulative (2035) plus Proposed Project Conditions.** Scenario was evaluated by manually adding the proposed project's trips (difference between the trips generated by the apartments and regional commercial and incorporate distribution differences) to the Cumulative (2035) Conditions.

## Traffic Impact Analysis Methodology

### Vehicle Miles Traveled Analysis Methodology

According to the draft City of Sacramento guidelines and the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA,<sup>5 6</sup> the recommended threshold for residential projects is 15 percent below the existing VMT per capita. Achieving 15 percent lower per capita (residential) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals.<sup>7</sup> The existing VMT per capita may be measured as regional VMT per capita. **Table 4.6-2** tabulates regional VMT per capita and the threshold.

**TABLE 4.6-2  
REGIONAL VMT PER CAPITA AND THRESHOLD**

| Region | Threshold <sup>1</sup> |
|--------|------------------------|
| 17.91  | 15.22                  |

NOTES:

1. Based on 15% below the Regional VMT Average.

SOURCE: Linscott, Law and Greenspan 2020; VMT per Resident information obtained from <http://sb743-sacog.opendata.arcgis.com/>

<sup>5</sup> Governor's Office of Planning and Research, 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December.

<sup>6</sup> As stated on page 15 of the OPR Technical Advisory, a recommended numeric threshold for residential development is provided. "Recommended threshold for residential projects: A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS for that city, and should be consistent with the SCS."

<sup>7</sup> Governor's Office of Planning and Research, 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December. Page 12.

In order to quantify a project's VMT, City staff has identified the latest edition of the California Air Pollution Control Officers Association's *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Green Gas Mitigation Measures* report (CAPCOA Report) to quantify the reduction in VMT associated with a particular measure. The CAPCOA Report provides a methodology to quantify the reductions in VMT for a variety of measures.

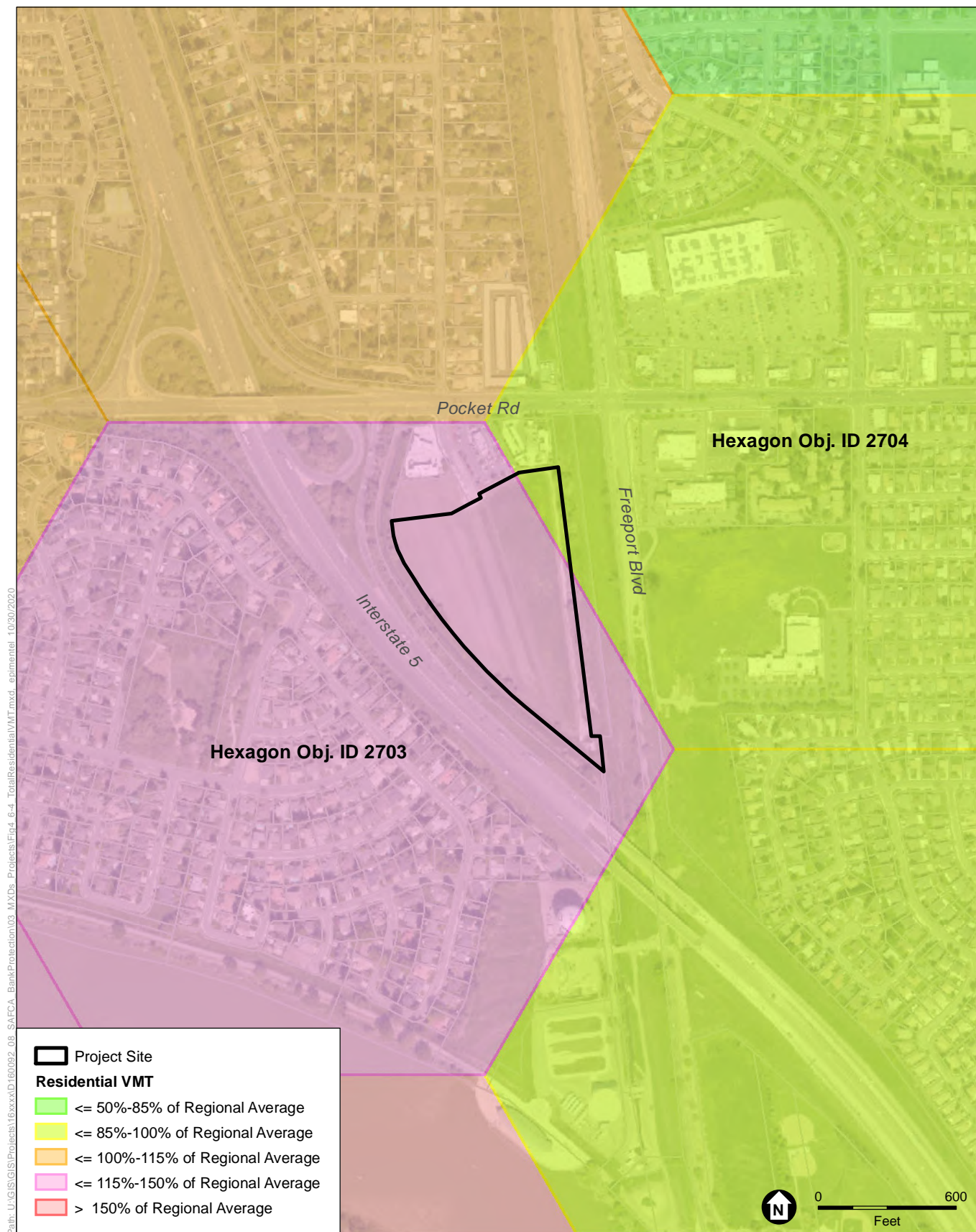
The proposed project's VMT was determined using the residential VMT SACOG maps, which utilizes SACOG's travel demand model, known as SACSIM. These maps use hexagonal shaped geographic areas (HEX) to establish a VMT per capita for a particular area by tallying all household VMTs generated by the residents living in the HEX and dividing by the total population in the HEX. Each HEX is assigned an associated ID number. The project site lies within two hexagons.

The Klotz Ranch Apartments project is situated such that it is located within Hexagon Obj. ID 2703 and Hexagon Obj. ID 2704, as shown on **Figure 4.6-4**. Since the project is bisected by two hexagons, it is necessary to analyze the project's VMT traffic impacts using the hexagon that has characteristics most similar to the Klotz Ranch Apartments project. Following is an analysis that compares the Klotz Ranch Apartments project to both Hexagon Obj. ID 2703 and Hexagon Obj. ID 2704.

#### Hexagon Obj. ID 2703

Hexagon Obj. ID 2703 covers the southwestern portion of the project site and has a 23.91 residential VMT per capita calculation. The higher residential VMT per capita associated with this hexagon can be attributed to the landlocked nature of the area within the hexagon, which is bounded on three sides by the Sacramento River, Interstate 5 and the Freeport Water Intake Facility, forcing traffic from all areas of the hexagon to travel to the same access point. Hexagon Obj. ID 2703 is virtually all residential in nature. Coupled with the landlocked nature of the residential area within this hexagon, the higher residential VMT per capita of this hexagon is also attributed to the lack of close bus access, lack of close freeway access, a lack of land use diversity, poor walkability, and minimal opportunities for alternate modes of transportation. While the majority of the area within Hexagon Obj. ID 2703 is landlocked and share the above mentioned characteristics, the Klotz Ranch Apartments project is physically separated by Interstate 5 from the vast majority of the area of the hexagon that have these characteristics. Consequently, the Klotz Ranch Apartments project does not share the characteristics that are inherent to Hexagon Obj. ID 2703 and contribute to its residential VMT per capita calculation.

1. **Bus Access** – The majority of the area within Hexagon Obj. ID 2703 is located west of Interstate 5 and includes no bus stops within 1/4 mile to serve the residential neighborhood. A small portion of the area located within the hexagon on the east side of Interstate 5 includes a single bus stop located near the intersection of Klotz Ranch Court and Meadowview Road near the project. Consequently, the limited bus service associated with the area west of Interstate 5, which makes up the majority of the hexagon, does not match the characteristics of the area adjacent to the project on the east side of Interstate 5. The lack of bus service associated with Hexagon Obj. ID 2703 is not indicative of the area near the Klotz Ranch Apartments project.



SOURCE: Esri, 2018; City of Sacramento, 2018; SACOG, 2020; ESA, 2020.

Klotz Ranch Apartments Project

**Figure 4.6-4**  
Total Residential VMT

2. Freeway/Arterial Roadway Access - Hexagon Obj. ID 2703 does not provide close and direct access to Interstate 5 or major arterial roadways. The residential neighborhood that makes up most of the area within the hexagon is estimated to be on average 0.8 miles to Interstate 5, which is dissimilar to the project, which is located in close proximity to Interstate 5.
3. Mix of Land Uses – Hexagon Obj. ID 2703 lacks a diversity of land uses. Except for one park, the vast majority of the hexagon is located on the west side of Interstate 5 and is almost entirely residential in nature. The Klotz Ranch Apartments project site is separated from this residential area by Interstate 5 and is located near many different land uses within Hexagon Obj. ID 2704.
4. Walkability – Walkability is not supported in Hexagon Obj. ID 2703 due to the lack of diverse land uses as discussed above. The closest commercial, retail, employment and recreational opportunities are located east of Interstate 5 in Hexagon Obj. ID 2704, which is a 1.3-mile walk from the residential area that comprises most of the area within Hexagon Obj. ID 2703. The Klotz Ranch Apartments project is located near many land uses that are easily accessible by walking or biking.
5. Alternative Modes of Transportation – While the Klotz Ranch Apartments project is located adjacent to the future planned Del Rio Trail alignment, only a small portion of the Del Rio Trail alignment is located within Hexagon Obj. ID 2703, and that portion is separated by Interstate 5 from the residential area that comprises the majority of the area within the hexagon.

#### Hexagon Obj. ID 2704

Hexagon Obj. ID 2704 covers the northeastern portion of the project site and has a 15.74 residential VMT per capita calculation. The lower VMT per capita associated with this hexagon can be attributed to many factors including the availability of close bus access, close freeway access, mixture of land uses, walkability and availability of alternate modes of transportation. Therefore, the Klotz Ranch Apartments project is most similar to Hexagon Obj. ID 2704 as the project is consistent with the characteristics inherent in Hexagon Obj. ID 2704.

1. Bus Access – Hexagon Obj. ID 2704 includes close immediate access to bus transit opportunities. In addition to the three nearby bus stops located along Meadowview Road, there is a bus stop located immediately adjacent to the project entrance at Klotz Ranch Court and Meadowview Road.
2. Freeway/Arterial Roadway Access - Hexagon Obj. ID 2704 provides close and direct access from the project to Interstate 5 and major arterial roadways. The project entrance is 0.2 miles from Interstate 5, which demonstrates minimal distance necessary for automobile travel from the project to the Interstate.
3. High Mix of Land Uses - Hexagon Obj. ID 2704 is comprised of a mixture of residential, commercial and employment land uses. Additionally, there are places of worship, parks and schools located within this hexagon that further add to the diversity of land uses within close proximity of the project.
4. Walkability - The mixture of land uses contained in Hexagon Obj. ID 2704 discussed above are located in close proximity to the project. In fact, significant commercial and employment opportunities are located 0.3 miles from the project entrance. Such close proximity of uses allows residents and guests to walk or bike, reducing the need for automobile travel.

5. **Alternate Modes of Transportation** – A portion of the future Del Rio Trail alignment is located within Hexagon Obj. ID 2704, along the project’s eastern boundary. The Del Rio Trail, which will ultimately connect to Downtown Sacramento, has long been planned and is now funded. The project has been planned to connect to the Del Rio Trail in order to encourage residents and guests to utilize the trail for commuting and recreational opportunities. In addition to simply providing access to the Del Rio Trail, the project will provide extensive bicycle storage facilities and bicycle cafes that offer residents a place to repair and maintain their bicycles. The future utilization of the Del Rio Trail will reduce automobile travel associated with the project.

Hexagon Obj. ID 2703 has a relatively high residential VMT per capita of 23.91, which can be attributed to the fact that most of the area located within this hexagon is residential in nature and is landlocked. Moreover, the majority of the area within Hexagon Obj. ID 2703 suffers from a lack of direct transit access, a lack of close direct access to the freeway, a lack of land use diversity, poor walkability and minimal opportunities for alternate mode of transportation. The Klotz Ranch Apartments project does not share these characteristics and is located in a geographically distinct area that is separated by Interstate 5 from the vast majority of the area comprising this hexagon. Consequently, the Klotz Ranch Apartments project should not be analyzed using Hexagon Obj. ID 2703.

Hexagon Obj. ID 2704, which has a relatively lower residential VMT per capita of 15.74, is comprised of several VMT-reducing characteristics including direct proximity to transit, close proximity to the freeway, significant diversity of land uses, good walkability and opportunities for alternate modes of transportation. All of these characteristics are a match for the nature, character and location of the Klotz Ranch Apartments project. In addition, the Caltrans Statewide Travel Demand Model, as well as the Big Data Analytics for the census tracts, which includes the project site further supports the VMT per capita associated with Hexagon Obj. ID 2704. Consequently, Hexagon Obj. ID 2704 is the appropriate hexagon to use for analyzing the project VMT.

#### Project Feature VMT Reduction

One resource that has been identified by the Governor’s Office of Planning and Research (OPR)<sup>8</sup> and City staff to quantify the reduction in VMT associated with a particular measure is the latest edition of the California Air Pollution Control Officers Association’s *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Green Gas Mitigation Measures* report (CAPCOA Report). The CAPCOA Report provides a methodology to quantify the reductions in VMT for a variety of measures. This report further describes how jurisdictions and projects can account for specific project features to demonstrate VMT reduction, resulting in a per capita VMT that is below the HEX average.

#### *Analysis Approach*

The Project Feature VMT reduction approach considers the following factors in the calculations.

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<sup>8</sup> Governor’s Office of Planning and Research, 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December.

**Baseline Conditions:** The proposed project's VMT was determined using the residential VMT SACOG maps, which utilize SACOG's travel demand model, known as SACSIM. These maps use HEX geography to establish a VMT per capita for a particular area by tallying all household VMTs generated by the residents living in the HEX and dividing by the total population in the HEX. The household VMTs are based on many factors such as land use, transportation system data, employment opportunities (e.g., average distance to downtown), etc.

Since the model has already considered the existing land uses and other characteristics that would contribute to the residential VMT/capita for Hexagon Obj. ID 2704, the analysis should only consider the characteristics of the proposed project that differ from the model to calculate the project's VMT reduction. In other words, to the extent the characteristics of the proposed project are consistent with the household VMTs used to generate the average for that HEX, no changes need to be made to the model to calculate the proposed project's VMT. In this case, the Project has some characteristics which differ from the land use assumptions used in calculating the VMT.

For example, the households in Hexagon Obj. ID 2704 are on average 9.2 miles from Downtown Sacramento, but the project site is 8.7 miles from Downtown Sacramento. Proximity to downtown contributes to reduced VMT. Therefore, the model input accounting for the average distance from downtown is reduced by 0.5 miles (9.2 minus 8.7).

**Multiplicative:** Measures are frequently implemented together with other measures, and the effects of combining measures are not straightforward. The CAPCOA Report recommends that reductions be multiplied unless the project applicant can provide substantial evidence indicating that the reductions are independent of one another.

As such, the following equation was utilized to calculate the total VMT reduction of the selected measures.

$$\text{Total VMT Reduction} = 1 - [(1 - A) \times (1 - B) \times (1 - C)] \cdots$$

Where A, B, C... = Individual Measure Reduction Percentages

As an example, if two measures were proposed with corresponding VMT reductions of 20 percent and 5 percent, the equation would be  $1 - [(1 - 0.20) \times (1 - 0.05)]$ , which equates to a 24 percent reduction rather than a 25 percent reduction that would otherwise be calculated with a direct sum.

**Maximums:** There are three types of maximums or caps that are established per the CAPCOA Report. The first sets a global maximum within the transportation category, the second sets a cross-category maximum when combining measures from different subcategories, and the third sets a maximum when combining measures from the same subcategory.

### Adjustment Calculations

The following CAPCOA measures apply to the project since the proposed project's features meet the measure's description and applicability criteria. A brief description of each mitigation measure is provided below.

**LUT-1 Increase Density:** Designing the project with increased densities (i.e., dwellings per unit area). Increased density affects the distance people travel and provides greater options for the mode of travel they choose. This measure is applicable for residential projects in a suburban area. The average residential density of the proposed project is 20.94 housing units per acre and the average residential density of Hexagon Obj. ID 2704 is 9.29.

**LUT 4 Increase Destination Accessibility:** Locating the project in an area with high accessibility to destinations (i.e., downtown or a major job center). This measure is applicable for residential projects in a suburban area. The distance from the project driveway to Downtown Sacramento is 8.7 miles and the average distance from dwelling units in Hexagon Obj. ID 2704 to Downtown Sacramento is of 9.2 miles. This places the project site 0.5 mile closer to Downtown Sacramento than dwelling units in Hexagon Obj. ID 2704.

Based on this approach, **Table 4.6-3** tabulates the VMT reduction for each mitigating factor and the final VMT reduction.

**TABLE 4.6-3  
PROJECT FEATURE VMT ADJUSTMENTS**

| CAPCOA Measure                                       | Calculated VMT Reduction |
|--|--------------------------|
| LUT 1 – Increase Density                             | 10.7%                    |
| LUT 4 – Increase Destination Accessibility           | 0.8%                     |
| <i>Total VMT Adjustment<sup>1</sup></i>              | <i>11.4%</i>             |
| <i>Land Use/Location Subcategory Cap<sup>2</sup></i> | <i>5.0%</i>              |
| <b>Final VMT Reduction</b>                           | <b>5.0%</b>              |

NOTES:

1. The total adjustment is calculated based on a multiplicative basis.
2. Based on a suburban geographical area.

SOURCE: Linscott, Law and Greenspan 2020

As seen in Table 4.6-3, the total VMT reduction is 11.4 percent. This is greater than the cap of 5 percent established for the land use/location subcategory. Therefore, the final VMT reduction is 5 percent. Using the final reduction and the residential VMT per capita for Hexagon Obj. ID 2704, the proposed project's residential VMT per capita is calculated below.

$$\text{Project's Residential VMT per Capita} = 15.74 - (15.74 \times 0.05) = 14.953^9$$

<sup>9</sup> Linscott, Law and Greenspan, Engineers, 2020. Klotz Ranch Apartments Project VMT Adjustment Analysis. August 26.



## Conclusion

As shown in **Table 4.6-4**, the proposed project's residential VMT per capita is calculated to be less than the threshold established. Therefore, the proposed project has no transportation impact and no mitigation measures are needed.

**TABLE 4.6-4  
VMT PER RESIDENT COMPARISON**

| Region <sup>1</sup> | Threshold <sup>2</sup> | Proposed Project | Transportation Impact? |
|---------------------|------------------------|------------------|------------------------|
| 17.91               | 15.22                  | 14.95            | No                     |

NOTES:

1. VMT per Resident information is obtained from <http://sb743-sacog.opendata.arcgis.com/>
2. Based on 15 percent below the Regional VMT average.

SOURCE: Linscott, Law and Greenspan 2020

## Trip Generation

The number of trips anticipated to be generated by the proposed project was approximated using data included in the *Trip Generation Manual, 10<sup>th</sup> Edition*, published by the Institute of Transportation Engineers (ITE). ITE Land Use Code 221 (Multifamily Housing (Mid-Rise)) was used to represent the apartment development as shown in **Table 4.6-5**. The average rate was used to estimate the number of trips generated by the proposed project. In addition, the previously approved commercial development was broken down by its individual land uses and their respective land use codes including Office (ITE Land Use Code 710), Hotel (ITE Land Use Code 310), Sit Down Restaurants (ITE Land Use Code 932), and Fast Food Restaurants (ITE Land Use Code 934). The fitted curve equation was used to estimate the number of trips generated by this development. The trips generated by the proposed project and a comparison to the previously approved commercial development are presented in **Table 4.6-6**.

**TABLE 4.6-5  
PROPOSED PROJECT TRIP GENERATION**

| Land Use (ITE Code)                 | Size<br>(ksf/Dwelling<br>Units) | Daily<br>Trips | AM Peak-Hour   |     |       |     | PM Peak-Hour |                |     |       |     |       |
|-------------------------------------|---------------------------------|----------------|----------------|-----|-------|-----|--------------|----------------|-----|-------|-----|-------|
|                                     |                                 |                | Total<br>Trips | In  |       | Out |              | Total<br>Trips | In  |       | Out |       |
|                                     |                                 |                |                | %   | Trips | %   | Trips        |                | %   | Trips | %   | Trips |
| Multifamily Housing, Mid-Rise (221) | 266                             | 1,448          | 96             | 26% | 25    | 74% | 71           | 117            | 61% | 71    | 39% | 46    |
| Net New External Trips:             |                                 | 1,448          | 96             |     | 25    |     | 71           | 117            |     | 71    |     | 46    |

Source: Trip Generation Manual, 10th Edition.

Source: *Trip Generation Manual, 10th Edition*.

**TABLE 4.6-6  
TRIP GENERATION COMPARISON OF APPROVED P.U.D. AND PROPOSED PROJECT**

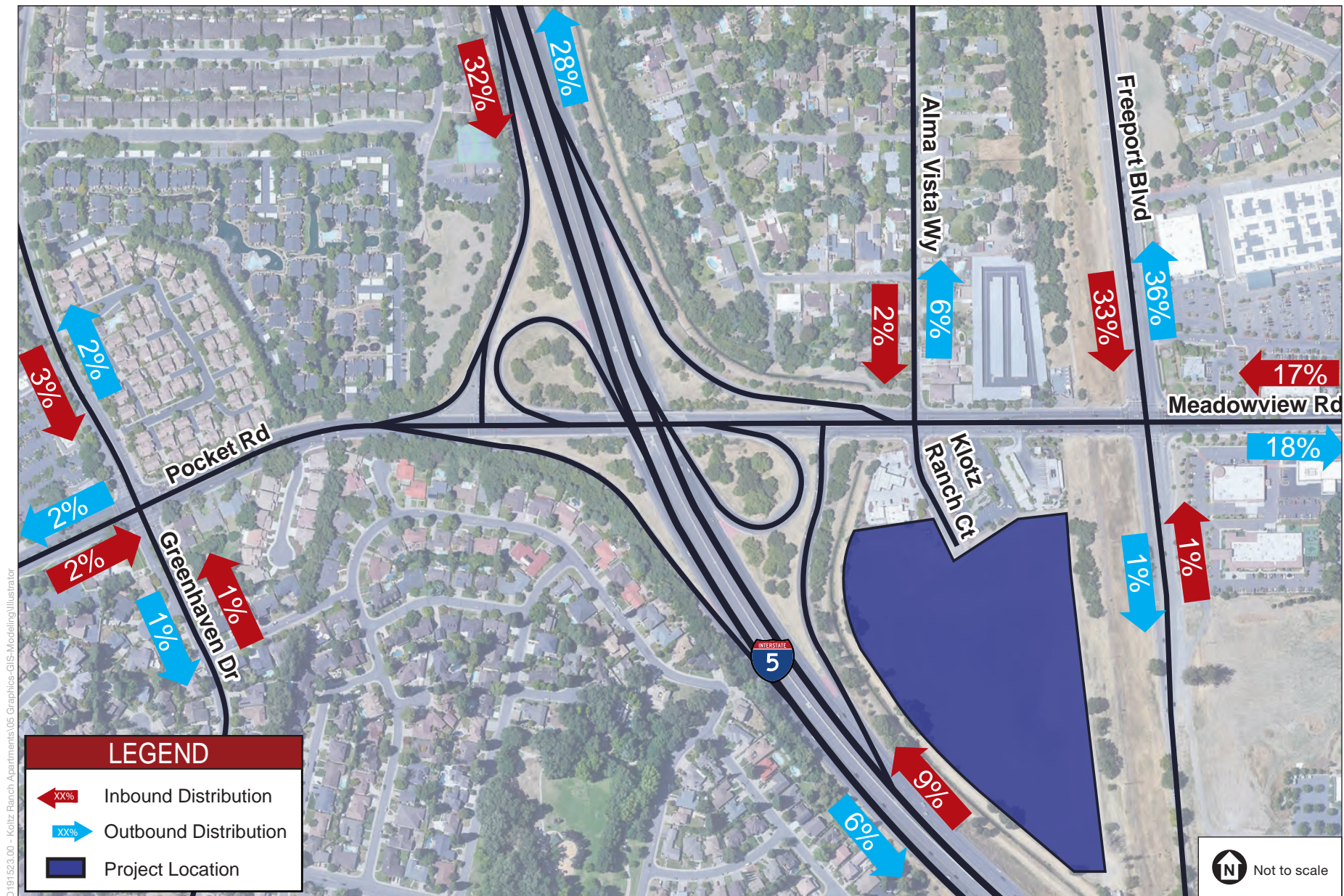
| Land Use (ITE Code)   | Size<br>(ksf/Rooms) | Daily<br>Trips | AM Peak-Hour   |     |       |     |       | PM Peak-Hour   |     |       |     |       |
|---|---------------------|----------------|----------------|-----|-------|-----|-------|----------------|-----|-------|-----|-------|
|   |                     |                | Total<br>Trips | In  |       | Out |       | Total<br>Trips | In  |       | Out |       |
|   |                     |                |                | %   | Trips | %   | Trips |                | %   | Trips | %   | Trips |
| Previous Zoning for Approved P.U.D.   |                     |                |                |     |       |     |       |                |     |       |     |       |
| General Office Building (710)   | 40                  | 438            | 64             | 86% | 55    | 14% | 9     | 48             | 17% | 8     | 83% | 40    |
| Hotel (310)   | 200                 | 1,832          | 95             | 59% | 56    | 41% | 39    | 124            | 51% | 63    | 49% | 61    |
| High-Turnover Restaurant (Sit Down)<br>(932)  | 15                  | 1,628          | 144            | 55% | 79    | 45% | 65    | 142            | 62% | 88    | 38% | 54    |
| Fast-Food Restaurant (with Drive-Thru)<br>(934)   | 15                  | 7,066          | 603            | 51% | 308   | 49% | 295   | 490            | 52% | 255   | 48% | 235   |
| Internal Capture Reduction <sup>1</sup> :<br>Daily (11%), AM Peak-Hour (4%), PM Peak-Hour (10%) |                     | -1,206         | -36            |     | -20   |     | -16   | -80            |     | -41   |     | -39   |
| Subtotal of Trips   |                     | 9,758          | 870            |     | 478   |     | 392   | 724            |     | 373   |     | 351   |
| Proposed Project (Apartments)   |                     |                |                |     |       |     |       |                |     |       |     |       |
| Multifamily Housing, Mid-Rise (221)   | 266                 | 1,448          | 96             | 26% | 25    | 74% | 71    | 117            | 61% | 71    | 39% | 46    |
| P.U.D. - Proposed Project (Apartments):   |                     | -8,310         | -774           |     | -453  |     | -321  | -607           |     | -302  |     | -305  |

Source: Trip Generation Manual, 10th Edition.  
<sup>1</sup> National Cooperative Highway Research Program (NCHRP) Report 684, Enhancing Internal Trip Capture Estimation for Mixed-Use Developments 2011.  
Chapter 7: Multi-Use Development. ITE Trip Generation Handbook, 2nd Edition, 2004.

As shown in Table 4.6-5, the proposed project is estimated to generate 1,448 new daily trips, with 96 and 117 trips occurring during the AM and PM peak-hours, respectively. In comparison to the previously approved commercial development, the proposed residential project generates fewer daily, AM peak-hour, and PM peak-hour trips. Specifically, a reduction of 8,310 daily trips, 774 AM peak-hour trips, and 607 PM peak-hour trips is anticipated when comparing the proposed apartment land use to the commercial land use. It should be noted that trip reduction percentages were applied to account for internal capture, or trips made between the land uses such as from the office building to the restaurants and back.

### Trip Distribution

Project trip distribution was developed using knowledge of local traffic patterns, SACOG's travel demand model (SACSIM), and professional judgement. The proposed project trip distribution percentages were developed for both Existing and Cumulative Conditions and are illustrated in **Figure 4.6-5** and **Figure 4.6-6**. As shown in Figure 4.6-5 and Figure 4.6-6, all inbound and outbound traffic generated by the proposed project is assumed to access the site via Klotz Ranch Court.

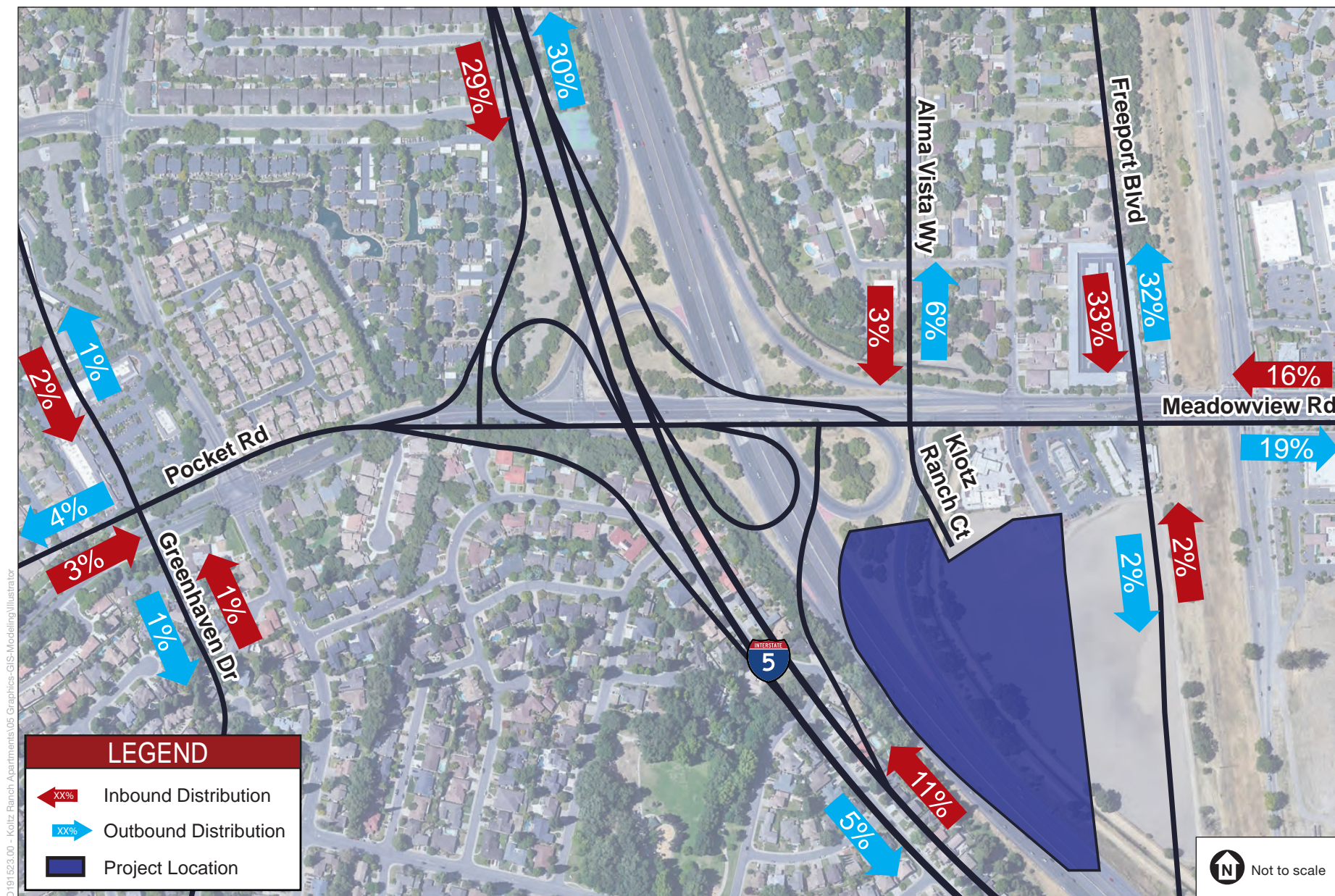


SOURCE: Kimley-Horn, 2020

Klotz Ranch Apartments

**Figure 4.6-5**  
Existing (2020) Project Trip Distribution





SOURCE: Kimley-Horn, 2020

Klotz Ranch Apartments

**Figure 4.6-6**  
Cumulative (2035) Project Trip Distribution

## Impacts and Mitigation Measures

**Impact 4.6-1: The proposed project's VMT per service population (residents and employment) could exceed 85 percent of the existing average for the SACOG region.**

Two key factors influence a project's VMT: density of the development and accessibility to destinations.

Increased density affects the distance people travel and provides greater options for the mode of travel they choose. The proposed project has a residential density of 20.94 units per acre, while the surrounding area has a residential density of 9.29 units per acre. By having a higher density than the surrounding area, the proposed project would locate more people closer to job centers, thus reducing the distance each resident would travel and reducing VMT.

By locating a project in an area with high accessibility to destinations (i.e., downtown or a major job center such as downtown Sacramento), the distance people are traveling throughout the day is reduced. The distance from the project site to downtown Sacramento is 8.7 miles. However, the average distance from the low density residential neighborhoods adjacent to the project site to downtown Sacramento is 9.2 miles. This metric indicates that the proposed project site is closer to downtown Sacramento, resulting in less VMT than workers from other residential areas adjacent to the project site.

As indicated in Table 4.6-2, the regional VMT per capita is 17.91. To be 15 percent below the regional average, a residential project must not exceed 15.22 VMT per capita. Taking into account the proposed project's density and the site's high accessibility to job center destinations, a 5 percent VMT reduction can be applied. Using the 5 percent reduction and the residential VMT per capita for Hexagon Obj. ID 2704, the proposed project's residential VMT per capita is 14.953.<sup>10</sup>

$$\text{Project's Residential VMT per Capita} = 15.74 - (15.74 \times 0.05) = 14.953^{11}$$

Therefore, the proposed project's VMT per capita would be 14.953, which is less than 85 percent of the existing average for the SACOG region (15.22 VMT per capita). As a result, the impact would be **less than significant**.

### Mitigation Measure

None required.

<sup>10</sup> Linscott, Law and Greenspan, Engineers, 2020. Klotz Ranch Apartments Project VMT Adjustment Analysis. August 26.

<sup>11</sup> Linscott, Law and Greenspan, Engineers, 2020. Klotz Ranch Apartments Project VMT Adjustment Analysis. August 26.

**Impact 4.6-2: Implementation of the proposed project could adversely affect existing or planned bicycle or pedestrian facilities or could fail to adequately provide for access by bicycle or pedestrian.**

As previously discussed, there are existing and planned bicycle facilities in the vicinity of the project site, including the Del Rio Multi-Use Trail to the east of the project site. While the project will not result in removal of any existing or planned pedestrian facility or bikeway/bike lane, the project may add pedestrian and bicycle demand within the project site and nearby vicinity. The project site plan shown in Figure 2-7 depicts adequate bicycle access and pedestrian circulation. Internal pathways and crosswalks are shown to provide pedestrian circulation throughout the project site. Pedestrian access to the project is provided via sidewalks along Klotz Ranch Court. The proposed project's impacts to bicycle and pedestrian facilities are considered to be **less than significant**.

Mitigation Measure

None required.

**Impact 4.6-3: Implementation of the proposed project could adversely affect public transit operations and could fail to adequately provide access to transit.**

The project would not adversely affect existing or planned transit operations. The project would not add noticeable transit demand. Any additional demand is anticipated to be adequately accommodated by the existing and/or planned transit system. Project residents and visitors would be provided adequate access to transit including Bus Route 56 which has stops along Pocket Road. The proposed project's impacts on transit are considered to be **less than significant**.

Mitigation Measure

None required.

**Impact 4.6-4: Implementation of the proposed project could cause inconveniences to motorists due to prolonged road closures and could result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists due to construction-related traffic impacts.**

Construction-related activity may potentially disrupt the existing transportation network in the surrounding project area. Possible temporary lane closures, street closures, sidewalk closures, and bikeway closures may temporarily impact pedestrian, bicycle, and transit accessibility. Heavy vehicles will access the site and may need to be staged for construction. As a result of these activities, existing roadway operation conditions may be temporarily degraded during project construction. Therefore, the impacts are considered **potentially significant**.

## Mitigation Measures

### **Mitigation Measure 4.6-4:**

The City Code (City Code 12.20.030) requires that a construction traffic control plan is prepared and approved prior to the beginning of project construction, to the satisfaction of the City Traffic Engineer and subject to review by all affected agencies. All work performed during construction must conform to the conditions and requirements of the approved plan. The plan shall ensure that safe and efficient movement of traffic through the construction work zone(s) is maintained. At a minimum, the plan shall include the following:

- Time and day of street closures;
- Proper advance warning and posted signage regarding street closures;
- Provision of driveway access plan to ensure safe vehicular, pedestrian, and bicycle movements;
- Safe and efficient access routes for emergency vehicles;
- Provisions for pedestrian safety;
- Use of manual traffic control when necessary;
- Number of anticipated truck trips, and time of day of arrival and departure of trucks; and
- Provision of a truck circulation pattern and staging area with a limitation on the number of trucks that can be waiting and any limitations on the size and type of trucks appropriate for the surrounding transportation network.

The traffic control plan must be available at the site for inspection by the City representative during all work.

**Significance After Mitigation:** With the implementation Mitigation Measure 4.6-4, development of a traffic control plan, the local roadways and freeway facilities will continue to operate acceptably and there will not be increased frequency of potential multimodal conflicts. Thus, the impact of the project would be **less than significant**.

## **Cumulative Impacts**

SACOG's travel demand model was used to develop background traffic growth rates for the Cumulative (2035) scenarios. As stated above, Cumulative (2035) Conditions were evaluated assuming the site is developed in a manner consistent with its 2035 General Plan land use (Regional Commercial). Cumulative (2035) plus Project conditions were evaluated by manually adding the proposed project's trips (difference between the trips generated by the apartments and regional commercial and incorporate distribution differences) to the Cumulative (2035) Conditions.



**Impact 4.6-5: Implementation of the proposed project, in combination with other development, could contribute to cumulative conditions where VMT per service population (residents and employment) could exceed 85 percent of the existing average for the SACOG region.**

Regional population and VMT are expected to increase over time as the Sacramento region continues to grow. However, an increased emphasis on compact development and better coordination of that development with transportation projects show significant benefits for travel in 2040. An extra 109,500 jobs are forecast to be within a 30-minute drive of people's homes, an increase of 29 percent. And the extra 17,500 jobs forecast to be within a 30-minute transit trip from people's homes is an increase of more than 350 percent. The SACOG MTP/SCS projects total household-generated VMT to be 27,810,200 by 2040.<sup>12</sup> Household-generated VMT per capita is projected to decrease from 17.9 miles in 2016 to 16.5 miles by 2040, a decrease of 7.9 percent.<sup>13</sup> Combining all sources of VMT, including external and through travel VMT, forecasted VMT per capita declines from 24.6 miles to 23.3 miles from 2016 to 2040, a 5.3 percent decrease.<sup>14</sup>

Therefore, because region wide VMT per capita is expected to decrease in the cumulative scenario, the impact would be **less than significant**.

Mitigation Measure

None required.

**Impact 4.6-6: Implementation of the proposed project, in combination with other development, could adversely affect existing or planned bicycle or pedestrian facilities or could fail to adequately provide for access by bicycles or pedestrians.**

As previously discussed, there are existing and planned bicycle facilities in the vicinity of the project site. The completion of the Del Rio Multi-Use Trail would provide additional pedestrian and bicycle access throughout the area. While the project will not result in removal of any existing or planned pedestrian facility or bikeway/bike lane, the project may add pedestrian and bicycle demand within the project site and nearby vicinity. The project site plan shown in Figure 2-4 depicts adequate bicycle access and pedestrian circulation. Internal pathways and crosswalks are shown to provide pedestrian circulation throughout the project site. Pedestrian access to the project is provided via sidewalks along Klotz Ranch Court. The impacts of the project are considered to be **less than significant**.

Mitigation Measure

None required.

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<sup>12</sup> SACOG, 2019. SACOG MTP/SCS, Appendix E: Plan Performance. Page 35, Table 14.

<sup>13</sup> SACOG, 2019. SACOG MTP/SCS, Appendix E: Plan Performance. Page 34.

<sup>14</sup> SACOG, 2019. SACOG MTP/SCS, Appendix E: Plan Performance. Page 34.



**Impact 4.6-7: Implementation of the proposed project, in combination with other development, could adversely affect public transit operations and could fail to adequately provide access to transit.**

SacRT is continually optimizing bus routes, upgrading light rail service, adding additional buses and light rail trains, increasing frequency of service, and expanding the bus and light rail systems. SacRT's Strategic Plan identifies programs, projects and tasks intended to achieve those goals. The proposed project would not adversely affect planned transit operations. The project would not add noticeable transit demand. Any additional demand is anticipated to be adequately accommodated by the existing/planned transit system. Therefore, cumulative impacts to transit operations would be **less than significant**.

Mitigation Measure

None required.

**Impact 4.6-8: Implementation of the proposed project, in combination with other development, could cause inconveniences to motorists due to prolonged road closures and could result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists due to construction-related traffic impacts.**

As development continues to occur in the area, temporary construction disruptions to local roadways may occur. If multiple projects are constructed concurrently, construction activities and construction vehicles could impede travel on local roadways and could result in conflicts between vehicles, pedestrians, and bicyclists. This is a potentially significant cumulative impact. The proposed project would be constructed over the course of 24 months. During that time, construction vehicles would access the project site and could impede local traffic. The proposed project would have a considerable contribution to a potentially significant cumulative impact. Therefore, the cumulative impact would be **potentially significant**.

Mitigation Measure

**Mitigation Measure 4.6-8:**

Implement Mitigation Measure 4.6-4.

**Significance After Mitigation:** With the implementation of the traffic control plan for the proposed project, the local roadways and freeway facilities would continue to operate acceptably and there would not be increased frequency of potential multimodal conflicts. Thus, the proposed project's contribution to the cumulative impact would be **less than significant**.

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# CHAPTER 5

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## Other CEQA Required Considerations

### 5.1 Introduction

Section 15126 of the CEQA Guidelines requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. Further, CEQA Guidelines section 15126.2(a) requires that the evaluation of significant impacts consider direct and reasonably foreseeable indirect effects of the project over the short-term and long-term. The EIR must identify (1) significant environmental effects of the proposed project, (2) feasible mitigation measures proposed to minimize significant effects, (3) significant environmental effects that cannot be avoided if the proposed project is implemented, (4) significant irreversible environmental changes that would result from implementation of the proposed project, (5) growth-inducing impacts of the proposed project, and (6) alternatives to the proposed project.<sup>1</sup>

Sections 4.1 through 4.6 of the EIR provide a comprehensive presentation of the proposed project's environmental effects, proposed mitigation measures, and conclusions regarding the level of significance of each impact both before and after mitigation.

Chapter 6, Alternatives, presents a comparative analysis of alternatives to the proposed project.

The other CEQA-required analyses described above are presented below.

### 5.2 Significant and Unavoidable Adverse Impacts

Section 15126.2(c) of the State CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. As discussed in Chapter 4, the proposed project would not result in any project-specific or cumulative impacts that would be significant and unavoidable.

### 5.3 Significant Irreversible Environmental Effects

Under CEQA, an EIR must analyze the extent to which a project's primary and secondary effects would generally commit future generations to the allocation of nonrenewable resources and to

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<sup>1</sup> CEQA Guidelines sections 15126.2(a), (c-e), 15126.4, and 15126.6.

irreversible environmental damage (State CEQA Guidelines section 15126.2(c); 15127). Section 15126.2(c) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Development of the proposed project would result in the dedication of the project site to an apartment complex, thereby precluding other uses for the lifespan of the project.

The State CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the proposed project. While the proposed project could result in the use, transport, storage, and disposal of hazardous wastes during construction and operation, as described in initial study included as an appendix to the EIR (see **Appendix A**), all activities would comply with applicable state and federal laws related to hazardous materials, which significantly reduce the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the proposed project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are increased generation of pollutants from vehicle travel and stationary operations, and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources, such as water resources during construction activities. The environmental consequences of the proposed project are described in the appropriate sections in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

Resources that would be permanently and continually consumed by implementation of the proposed project include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources. With respect to operational activities, compliance with applicable building codes, including the 2019 Title 24 Energy Efficiency Standards (Effective January 1, 2020), as well as mitigation measures, planning policies, and standard conservation features,

would ensure that natural resources are conserved to the maximum extent feasible. It is also possible that, over time, new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, construction activities related to the proposed project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

Over the past decade our understanding of global climate change and the role that communities can play in addressing it has grown significantly. There is scientific consensus that recent increases in global temperatures are associated with corresponding increases of greenhouse gases. This temperature increase is beginning to affect regional climates and is expected to result in impacts to our region and the world. Climate change has profound implications for the availability of the natural resources on which economic prosperity and human development depend. Because climate change is inherently a cumulative effect, the relative contribution from the proposed project to global warming is not currently possible to determine. This issue is discussed in Section 4.4, Global Climate Change.

## 5.4 Growth-Inducing Effects

As required by section 15126.2(e) of the State CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. The purpose of this section is to evaluate the potential growth-inducing effects resulting from the implementation of the proposed project in the City of Sacramento, and throughout the region. Additional analysis of the growth-inducing effects from the proposed project is provided in Chapter 3, Land Use, Population, Employment, and Housing.

In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of the new access to or infrastructure capacity that serves an area; a change in zoning or general plan designations that increase density for areas outside the boundaries of the project site); or indirectly stimulates economic expansion or growth that occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc.). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the potential for a proposed project to remove infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval; and
- **Economic Effects:** This refers to the potential for a proposed project to cause increased activity in the local or regional economy. Economic effects can include such effects as the

**Multiplier Effect.** A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The Multiplier Effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect recognizes that the onsite employment and population growth of each project may not be the complete picture of growth caused by the project.

### 5.4.1 Elimination of Obstacles to Growth

The elimination of physical obstacles to growth is considered a growth-inducing effect. Growth within the Pocket Area and the City of Sacramento as a whole is affected by the capacity of utility systems serving the City including the wastewater and drainage, water supply, and electrical systems. Growth within the City is also affected by the roadway circulation system, public transit infrastructure and services and bikeway/pedestrian facilities.

The implementation of the proposed project would not result in the elimination of obstacles to growth. The proposed project is located within a suburban area of the City. While the proposed project would include localized circulation improvements, such as a driveway, crosswalks, and sidewalks, such improvements would be designed to facilitate project-related circulation and would not substantially expand the capacity of area roadways, which are constrained by existing development. As described in the initial study, included as Appendix A of the EIR, existing service systems for drainage and wastewater are either adequate to serve the proposed project, or require improvements to accommodate the proposed project. Improvements to utility infrastructure would be intended to serve the proposed project; they would not be sized to provide substantial excess capacity beyond what is needed to serve the proposed project. Therefore, improvements associated with the proposed project would not expand the capacity of local infrastructure to the extent that current constraints to development in surrounding areas would be eliminated. As such, the proposed project would not eliminate obstacles to further growth within the Pocket Area and the City of Sacramento.

### 5.4.2 Economic Effects

As is presented in Chapter 3, under the future conditions it is anticipated that the proposed project would house 742 residents. In addition to the residential growth generated by the proposed project, employment could be generated in the local and regional economy through what is commonly referred to as the “Multiplier Effect.” The Multiplier Effect generally refers to the secondary economic effects caused by spending from project-generated residents and employees and resulting in additional employment in the local and regional economy. The Multiplier Effect tends to be greater in regions with larger diverse economies due to a decrease in the requirement to import goods and services from outside the region, as compared to the effects of spending in smaller economies where goods and services must be imported from elsewhere. Because the project site is located in the Sacramento metropolitan area, a large diverse, and complex economy, the Multiplier Effect would tend to be greater than if the proposed project were constructed and operated in a smaller region.

Two different types of secondary economic effects (additional employment) are tracked through the Multiplier Effect. *Indirect* employment includes those additional jobs that are generated

through the expenditure patterns of residents associated with the project. For example, future residents of the proposed project would spend money in the local economy, and the expenditure of that money would result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of residences because that is where people typically spend money on groceries and their other day-to-day needs.

The multiplier effect also calculates *induced* employment. Induced employment follows the economic effect of employment beyond the expenditures of the residents within the proposed project area to include jobs created by the stream of goods and services necessary to construct the proposed project and support businesses within the Sacramento area. For example, when a manufacturer buys products or sells products, the employment associated with those inputs or outputs are considered *induced* employment. As an additional example, when an employee or resident from the project goes out to lunch or dinner nearby, the person who serves the project resident lunch or dinner holds a job that was *indirectly* caused by the proposed project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered induced.

In Chapter 3, Land Use, Population, Employment, and Housing, it is estimated that the future residential units onsite would provide housing for 472 residents. Increased activity in the project area would support increased purchases of supplies, equipment, and services from businesses in Sacramento and nearby cities and from businesses located elsewhere in the region and beyond the Sacramento area. The increased spending also would initiate subsequent rounds of additional business spending by those and other businesses.

Increased future employment generated by resident spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that determine the type and magnitude of environmental impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental consequences of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the Sacramento region and beyond.

The future cumulative context of citywide and regional growth used for the cumulative analyses in the City of Sacramento's 2035 General Plan Master EIR (Master EIR) and the cumulative analyses in the Sacramento Area Council of Government's (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) EIR includes the multiplier effects of the project. Consequently, the cumulative impact analyses in the Master EIR and the MTP/SCS EIR account for additional growth beyond the project site that would be generated by the project.

It should be noted that, while the proposed project would contribute to direct, indirect, and induced growth in the region, it would develop residential land uses in a manner that is efficient, and utilizes existing and planned urban resources. As is described in Chapter 3, development of the proposed project is consistent with the goals and policies of the City's General Plan. Contributing to the vitality of the community is also a General Plan goal, which would be achieved as a result of the proposed project.

### 5.4.3 Environmental Effects of Induced Growth

While economic and employment growth at the project site is an intended consequence of the proposed project, growth induced directly and indirectly by the proposed project could also affect the greater region. Increased future employment generated by resident spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this developed physical space at a specific location that determines the type and magnitude of environmental impacts of this additional economic activity.

Depending on its location and design, potential effects caused by induced growth in the region could include: increased traffic congestion; increased air pollutant emissions; loss of open space; loss of habitat and associated flora and fauna; increased demand on public utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing. However, the proposed project would be an infill residential project placing residents in close proximity to employment centers. Public utilities connections are available at the project site, so no new extensive utility lines would be required. The project site is adjacent to I-5, a major travel corridor, and as explained in Section 4.6, VMT associated with the proposed project would be 15 percent less than the per capita regional average.

Specifically, an increase in housing demand in the Sacramento region could cause significant environmental effects as new residential development would require governmental services, such as schools, libraries, and parks. Indirect and induced employment and population growth could further contribute to the loss of open space because it could encourage conversion to urban uses for housing, commercial space, and infrastructure.

Nevertheless, the incremental increase in economic activity created by the indirect and induced employment associated with the proposed project would be a small part of the overall future growth in economic activity in the Sacramento region. Local governments throughout the region are planning for additional residential and employment-generating land uses, some of which could meet the demands created indirectly by the proposed project. Through their planning and entitlement actions, the future actions of those local agencies would be subject to environmental review under CEQA, and would be required to be consistent with regional and state plans and regulations. To the extent that future development that accommodates indirect and induced growth from the proposed project is undertaken in a manner consistent with the Sacramento 2035 General Plan and SACOG MTP/SCS, as well as a multitude of planning and regulatory documents referred to throughout the sections of Chapter 4 of this EIR, many of the potential adverse environmental consequences would be reduced in magnitude or avoided altogether.

Although the economic effect of indirect and induced employment can be predicted, because the adverse physical environmental impacts of these economic effects could occur at locations throughout the Sacramento region, the actual environmental consequences of this type of economic growth are too speculative to predict or evaluate. Pursuant to CEQA Guidelines section 15145, no further analysis of the environmental consequences of indirect or induced growth associated with the proposed project is proper under CEQA.



# CHAPTER 6

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## Project Alternatives

### 6.1 Overview

Under CEQA, an environmental impact report (EIR) must describe a range of reasonable alternatives to the proposed project that might feasibly accomplish most of the project's basic objectives and could avoid or substantially lessen one or more of the significant effects of the project. The feasibility of an alternative is determined by the lead agency based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (CEQA Guidelines section 15126.6(f)(1)).

The chapter discloses the comparative effects of each of the alternatives relative to the proposed project, and evaluates the relationship of the alternatives to the objectives of the proposed project. As required under section 15126.6(e)(2) of the CEQA Guidelines, the discussion describes the relative environmental merits of the alternatives and identifies which of them may be considered the "environmentally superior" alternative.

### 6.2 Factors in the Selection of Alternatives

#### 6.2.1 Project Objectives

The objectives of the proposed project are used to evaluate the reasonableness and potential feasibility of each alternative. As presented in Chapter 2, Project Description, the overall goal of the proposed project is to enhance the Pocket Community Area by developing a well-designed, economically feasible residential community that consists of a variety of residential unit types and incorporates smart growth elements. More specifically, the objectives of the proposed project are to:

1. Create a diverse community that provides housing for multiple generations and lifestyles that is consistent with the City's General Plan planning goals, policies, objectives, and provisions
2. Activate an underutilized property to meet housing needs for a wide spectrum of community members;
3. Develop a well-designed, economically feasible residential community that consists of a variety of residential products and unit types;
4. Create a development of a scale and character that complements and is supportive of the surrounding uses;

5. Develop a smart-growth community that incorporates sustainable site design and efficient use of land; and
6. Provide convenient alternatives to auto travel by providing access to the future Del Rio trail located directly to the east of the project site.

### **6.2.2 Significant Effects of the Proposed Project**

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. The analysis of project-specific and cumulative impacts in Chapter 4 of this EIR did not identify any significant and unavoidable impacts. All impacts were determined to be less than significant, or less than significant with mitigation incorporated.

## **6.3 Alternatives Considered but Dismissed from Further Evaluation**

As required under section 15126.6(c) of the State CEQA Guidelines, the City is required to disclose alternatives that were considered but rejected from further analysis in this Draft EIR and provide the rationale for dismissal of those alternatives.

Of the alternatives considered for the proposed project, the use of an alternative site was considered but rejected as no other development sites exist within the Pocket Community Plan area and the neighboring Meadowview Community Plan area that are controlled by the project applicant or the City and would be of sufficient size to accommodate the proposed project. The ability of the applicant to purchase and develop the project at another site is considered speculative.

In addition, a member of the public suggested in a comment in response to the Notice of Preparation (NOP) that the project site be developed with a small industrial center. This alternative was considered but rejected as constructing an industrial center of the project site would require an amendment to the General Plan to change the land use designation on the project site and a zone change. In addition, depending on the type of industrial uses that would operate on the project, there may be land use compatibility uses with nearby residential uses to the north across Pocket Road.

No other types of alternatives were found to be facially infeasible or worthy of dismissal prior to further consideration. Therefore, all other alternatives considered for the proposed project have been selected for further consideration and are discussed in the following section.

## **6.4 Alternatives Selected for Further Consideration**

This section describes the range of alternatives to the proposed project that are analyzed in this Draft EIR and examines how specific environmental impacts would differ in severity compared to those associated with the proposed project. For the most part, significant impacts of the

alternatives can be mitigated to less than significant levels through adoption of mitigation measures identified in Chapter 4, which contains the environmental analysis of the proposed project. Like the proposed project, the following alternatives would not result in significant and unavoidable impacts. The alternatives considered in this section include:

Alternative 1: No Project/No Development Alternative

Alternative 2: No Project/Existing PUD Alternative

Alternative 3: Reduced Density Alternative

**Table 6-1** provides a side-by-side comparison of each alternative. Each of the alternatives is described in more detail and analyzed in the following subsections.

**TABLE 6-1  
COMPARISON OF ALTERNATIVES**

|                            | <b>Proposed Project</b> | <b>Alternative 1<br/>No Project / No<br/>Development</b> | <b>Alternative 2<br/>No Project /<br/>Existing PUD</b> | <b>Alternative 3<br/>Reduced Density</b> |
|----------------------------|-------------------------|--|--|--|
| <b>Development Program</b> |                         |  |  |  |
| Residential                | 266 Units               | None   | None   | 133 Units                                |
| Office                     | None                    | None   | 40,000 sf  | None                                     |
| Hotel/Motel                | None                    | None   | 200 rooms  | None                                     |
| Restaurant/Fast Food       | None                    | None   | 29,500 sf  | None                                     |
| SOURCE: ESA, 2020.         |                         |  |  |  |

The evaluation of alternatives is organized to facilitate a clear comparison between the effects of the alternative and the effects of the proposed project. There is a discussion of those impacts of the alternative that would be the same or similar to those of the proposed project. This is followed by a discussion of those effects of the alternative that would be less substantial than those of the proposed project, followed by those effects of the alternative that would be more substantial than those of the proposed project. Each discussion concludes with a discussion of the relationship between the alternative and the basic objectives of the proposed project.

### 6.4.1 Alternative 1: No Project/No Development Alternative Description

Under the No Project/No Development Alternative (Alternative 1), the proposed project would not be developed, and the project site would remain unutilized. Under the No Project/No Development Alternative, the City would not approve any project, and none of the mitigation measures identified in this EIR would be implemented.

## **Comparative Analysis of Environmental Effects**

The No Project/No Development Alternative would be a continuation of the existing conditions described in the Environmental Settings presented in the resource sections of Chapter 4, because no new development would occur at the project site.

### ***Impacts Identified as Being the Same or Similar to the Proposed Project***

Under the No Project/No Development Alternative, there would be no construction at the project site, and the project site would remain undeveloped. Therefore, none of the impacts identified for the proposed project would occur under this alternative.

### ***Impacts Identified as Being Less Substantial than the Proposed Project***

All impacts would be less substantial under the No Project/No Development Alternative for the proposed project, as no construction, or change in existing operations, would take place.

### ***Impacts Identified as Being More Substantial than the Proposed Project***

There would be no impacts that would be more substantial under the No Project/No Development Alternative for the proposed project, as no construction, or change in existing operations, would take place.

## **Relationship to Significant and Unavoidable Impacts**

As noted in Chapter 4, the proposed project does not have any significant and unavoidable impacts. All environmental impacts identified for the proposed project are mitigated to a less-than-significant level through the implementation of mitigation. Similarly, the No Project/No Development Alternative would not have any significant and unavoidable impacts. Therefore, the relationship of the No Project/No Development Alternative to significant and unavoidable impacts would be the same as that under the proposed project.

## **Relationship to Klotz Ranch Apartments Project Objectives**

Under the No Project/No Development Alternative, none of the project objectives would be achieved.

### **6.4.2 Alternative 2: No Project/Existing PUD Alternative**

#### **Description**

Under the No Project/Existing PUD Alternative (Alternative 2), the proposed project would not be developed on the project site and the project site would be developed in a manner consistent with the schematic plan for the Klotz Ranch Commercial Center Planned Unit Development (PUD). Approved land uses for the project site under the Klotz Ranch Commercial Center PUD include 40,000 square feet of office space, a 200 room hotel/motel, 14,500 square feet of sit-down restaurant space, and 15,000 square feet of fast food restaurant space. According to the PUD, the maximum height for multi-tenant buildings and hotels/motels is 35 feet, with architectural details such as entry gables not to exceed a maximum height of 50 feet. For single-tenant buildings, the

maximum height is 25 feet, with architectural details such as entry gables not to exceed a maximum height of 35 feet.

As shown in **Table 6-2**, No Project/Existing PUD Alternative Trip Generation, the No Project/Existing PUD Alternative would generate 9,758 daily trips with 870 trips in the AM peak hour and 724 trips during the PM peak hour. This represents over a 600 percent increase in daily trips compared to the proposed project; AM peak hour trips would increase by approximately 900 percent and PM peak trips would increase by about 600 percent.

**TABLE 6-2**  
**NO PROJECT/EXISTING PUD ALTERNATIVE TRIP GENERATION**

| Land Use<br>(ITE code)   | Size<br>(ksf/Room<br>s) | Daily<br>Trips | AM Peak Hour   |     |       |     |       | PM Peak Hour   |     |       |     |       |
|--|-------------------------|----------------|----------------|-----|-------|-----|-------|----------------|-----|-------|-----|-------|
|  |                         |                | Total<br>Trips | In  |       | Out |       | Total<br>Trips | In  |       | Out |       |
|  |                         |                |                | %   | Trips | %   | Trips |                | %   | Trips | %   | Trips |
| General Office (710)   | 40                      | 438            | 64             | 86% | 55    | 14% | 9     | 48             | 17% | 8     | 83% | 40    |
| Hotel (310)  | 200                     | 1,832          | 95             | 59% | 56    | 41% | 39    | 124            | 51% | 63    | 49% | 61    |
| High-Turnover Restaurant<br>(Sit Down) (932)   | 15                      | 1,628          | 144            | 55% | 79    | 45% | 65    | 142            | 62% | 88    | 38% | 54    |
| Fast Food Restaurant<br>(with Drive-thru) (934)                                      | 15                      | 7,066          | 603            | 51% | 308   | 49% | 295   | 490            | 52% | 255   | 48% | 235   |
| Internal Capture Reduction:<br>Daily (11%), AM Peak-Hour (4%),<br>PM Peak-hour (10%) |                         | -1,206         | -36            |     | -20   |     | -16   | -80            |     | -41   |     | -39   |
| Total  |                         | 9,758          | 870            |     | 478   |     | 392   | 724            |     | 373   |     | 351   |

SOURCE: Kimley-Horn, 2020

## Comparative Analysis of Environmental Effects

### ***Impacts Identified as Being the Same or Similar to the Proposed Project***

Several commercial structures would be constructed on the project site under the Under the No Project/Existing PUD Alternative. Multi-tenant buildings, such as office buildings, could reach a maximum height of 35 feet, while single-tenant buildings, such a motel, could reach a maximum height of 25 feet. These heights are less than the heights of the apartment buildings to be constructed on the project site under the proposed project, which are 42 feet. However, regardless of the difference in height, the visual character of the project site would still undergo a substantial change under Alternative 2 similar to the proposed project. While the reduced height of the commercial structures under the No Project/Existing PUD Alternative would result in a less dramatic change to the existing visual character of the site and its surroundings than would result from development of the proposed project, Alternative 2 would still have a similar impact on visual character as the entire site would be developed, as would occur under the proposed project (Impacts 4.1-1 and 4.1-4).

Under the No Project/Existing PUD Alternative, approximately the same amount of building space would be constructed as would constructed under the proposed project. Therefore, about the same amount of light and glare would be produced under Alternative 2. In addition, air and GHG emissions from building operation would also be expected to be similar to the proposed project and the same number of HVAC systems would be required to heat and cool the commercial structures. For these reasons, development under the No Project/Existing PUD Alternative would have similar impacts related to the introduction of new sources of light and glare (Impact 4.1-2, 4.1-3, 4.1-5 and 4.1-6), air and GHG emissions from building operation (Impacts 4.2-2, 4.2-4, 4.4-1, 4.4-2, and 4.4-3), and operational noise from stationary sources (Impact 4.5-4).

The duration of construction under the No Project/Existing PUD Alternative would likely be the same as the proposed project as approximately the same amount of building space would be constructed. As a result, impacts with respect to exterior and interior noise levels and vibration at nearby sensitive receptors are anticipated to be the same (Impacts 4.5-1, 4.5-2, 4.5-6, and 4.5-7) as would construction-related traffic impacts (Impacts 4.6-4 and 4.6-8). Alternative 2 would also result in similar impacts related to construction-related air and GHG emissions (Impacts 4.2-2, 4.2-3, 4.2-5, 4.4-1, 4.4-2, and 4.4-3).

The project that would be developed under the No Project/Existing PUD Alternative would have the same footprint as under the proposed project, so impacts related to ground disturbance and project footprint would be essentially the same. Specifically, impacts would be the same for cultural and tribal cultural resources, including historical resources and unique archaeological resources (Impacts 4.4-1 and 4.4-5), unique paleontological resources (Impacts 4.4-2 and 4.4-6), human remains (Impact 4.4-3), and tribal cultural resources (Impact 4.4-4). In addition, impacts relating to geology, soils, and seismicity, biological resources, including impacts to plant or animal populations, threatened or endangered species, and other species of special concern to agencies or natural resource organizations, and hazards, including exposure of people to contaminated soil, would be similar for the same reason.

Access to bicycle and pedestrian facilities would be the same as the proposed project as development under the No Project/Existing PUD Alternative would not result in removal of any existing or planned pedestrian facility or bikeway/bike lane in the vicinity of the project site. Similarly, future visitors to the project site would also have the same access to public transit as development under Alternative 2 would not interfere with transit operations and/or bus stops along Pocket Road. For these reasons, impacts associated with bicycle and pedestrian facilities (Impacts 4.6-2 and 4.6-6) and transit operations (Impacts 4.6-3 and 4.6-7) would be similar as under the proposed project.

### ***Impacts Identified as Being Potentially Less Substantial than the Proposed Project***

No impacts from the No Project/Existing PUD Alternative would be anticipated to be less substantial than the same type of impacts that would occur under the proposed project.

### ***Impacts Identified as Being More Substantial than the Proposed Project***

The No Project/Existing PUD Alternative would result in a substantial increase in vehicle trips to and from the project site. As a result, there would be a substantial increase in VMT that would be generated under this alternative (Impact 4.6-1 and Impact 4.6-5). In addition, air and GHG emissions from mobile sources would also substantially increase for the same reason (Impacts 4.2-2, 4.2-4, 4.4-1, 4.4-2, 4.4-3). Finally, as most of the long-term noise that would result due to the implementation of the proposed project would primarily be traffic-generated, there would also be substantial increase in operational noise from traffic (Impacts 4.5-3, 4.5-5 and 4.5-8).

### **Relationship to Significant and Unavoidable Impacts**

As noted in Chapter 4, the proposed project does not have any significant and unavoidable impacts. All environmental impacts identified for the proposed project are mitigated to a less-than-significant level through the implementation of mitigation. The No Project/Existing PUD Alternative may have more severe impacts than the proposed project, particularly due to the different land use mix. However, the proposed project would not have any significant and unavoidable impacts. Similarly, the No Project/Existing PUD Alternative would not have any significant and unavoidable impacts. Therefore, the relationship of the No Project/Existing PUD Alternative significant and unavoidable impacts would be the same as that under the proposed project.

### **Summary of Preliminary Evaluation of Relationship to Klotz Ranch Apartments Project Objectives**

Under the No Project/Existing PUD Alternative, most of the project objectives would not be achieved as no housing would be constructed on the project site (Objectives 1, 2 and 3). In addition, Alternative 2 would not provide development (housing) that complements and is supportive of the surrounding uses (nearby retail) (Objective 4). Although the No Project/Existing PUD Alternative would not develop a smart-growth community, it is possible that the use under the existing PUD could incorporate a sustainable site design (Objective 5). It is also possible access to the future Del Rio trail would be provided under this alternative (Objective 6).

## **6.4.3 Alternative 3: Reduced Density Alternative**

### **Description**

Under the Reduced Density Alternative (Alternative 3), the proposed project would be developed with half as many residential units than the proposed project by reducing the number of buildings onsite and/or reducing building heights. Overall, the proposed project would have 50 percent fewer units than the proposed project, with a total of 133 units. Likewise, the Reduced Density Alternative would include 50 percent fewer vehicle parking spaces than would be included in the proposed project, with a total of 263 vehicle spaces.

Construction activities under the Reduced Density Alternative would have the same amount of site preparation. If the number of buildings is reduced to achieve 50 percent fewer units, the same amount of land disturbance would occur as the project would add more open space areas for residents. However, with the elimination of building levels or constructing fewer buildings, less

building space would be constructed, thus shortening the overall construction timeline relative to the proposed project.

Under the Reduced Density Alternative, there would be fewer residents living on the project site relative to the proposed project. As a result, there would be fewer vehicle trips to and from the project site. As shown in **Table 6-3**, Reduced Density Alternative Trip Generation, the Reduced Density Alternative would generate 724 daily trips with 48 trips in the AM peak hour and 58 trips during the PM peak hour. This represents an approximately 50 percent decrease in daily and peak hour trips compared to the proposed project.

**TABLE 6-3  
REDUCED DENSITY ALTERNATIVE TRIP GENERATION**

| Land Use<br>(ITE code)                 | Size<br>(ksf/Rooms) | Daily<br>Trips | AM Peak Hour   |     |       |     | PM Peak Hour |                |     |       |     |       |
|--|---------------------|----------------|----------------|-----|-------|-----|--------------|----------------|-----|-------|-----|-------|
|  |                     |                | Total<br>Trips | In  |       | Out |              | Total<br>Trips | In  |       | Out |       |
|  |                     |                |                | %   | Trips | %   | Trips        |                | %   | Trips | %   | Trips |
| Multifamily Housing,<br>Mid-Rise (221) | 133                 | 724            | 48             | 26% | 12    | 74% | 36           | 58             | 61% | 36    | 39% | 23    |
| Total                                  |                     | 724            | 48             |     | 12    |     | 36           | 58             |     | 36    |     | 23    |

SOURCE: Kimley-Horn, 2020; ESA, 2020

## Comparative Analysis of Environmental Effects

### *Impacts Identified as Being the Same or Similar to the Proposed Project*

Under both the Reduced Density Alternative and the proposed project, the building exterior would include the same design and features. However, under Alternative 3, the apartment buildings may have fewer levels than the proposed project (two levels instead of four levels) in order to provide half as many units as the proposed project. Instead of reducing the number of levels on each building, Alternative 3 may reduce the number of buildings in order to provide half as many units as the proposed project. If fewer buildings are constructed, additional open space would be included on the project site. As with the proposed project, the visual character of the project site would undergo visual change, as the existing undeveloped site conditions would be replaced with apartment buildings. Although the visual character of the project site would still undergo a substantial change under the Reduced Density Alternative, the change would be less substantial than the proposed project. The reduced height of the apartment buildings or reduction in the number of apartment buildings under Alternative 3 would result in a less dramatic change to the existing visual character of the site and its surroundings than would result from development of the proposed project. Therefore, the Reduced Density Alternative would have a lesser impact on visual character as would occur under the proposed project (Impacts 4.1-1 and 4.1-4).

The project that would be developed under the Reduced Density Alternative would have the same footprint as under the proposed project, so impacts related to ground disturbance and project footprint would be essentially the same. Specifically, impacts would be the same for cultural and



tribal cultural resources, including historical resources and unique archaeological resources (Impacts 4.4-1 and 4.4-5), unique paleontological resources (Impacts 4.4-2 and 4.4-6), human remains (Impact 4.4-3), and tribal cultural resources (Impact 4.4-4). Similarly, impacts relating to geology, soils, and seismicity, biological resources, including impacts to plant or animal populations, threatened or endangered species, and other species of special concern to agencies or natural resource organizations, and hazards, including exposure of people to contaminated soil, would be similar for the same reason.

Access to bicycle and pedestrian facilities would be the same as the proposed project as development under the Reduced Density Alternative would not result in removal of any existing or planned pedestrian facility or bikeway/bike lane in the vicinity of the project site. Similarly, future resident on the project site would also have the same access to public transit as development under Alternative 3 would not interfere with transit operations and/or bus stops along Pocket Road. For these reasons, impacts associated with bicycle and pedestrian facilities (Impacts 4.6-2 and 4.6-6) and transit operations (Impacts 4.6-3 and 4.6-7) would be similar as under the proposed project.

### ***Impacts Identified as Being Less Substantial than the Proposed Project***

Under the Reduced Density Alternative, the apartment buildings would be shorter than the proposed project by two levels, or fewer apartment buildings would be constructed. As less building space would be constructed, less light and glare would be produced under Alternative 3. As such, development under the Reduced Density Alternative would have fewer impacts related to the introduction of new sources of light and glare (Impact 4.1-2, 4.1-3, 4.1-5 and 4.1-6).

As described above, duration of construction, under the Reduced Density Alternative, would be anticipated to be shorter than under the proposed project; however, the intensity of construction activity on a daily basis would be anticipated to be the same. Due to the shorter duration of construction, impacts with respect to exterior and interior noise levels and vibration at nearby sensitive receptors are anticipated to be less substantial (Impacts 4.5-1, 4.5-2, 4.5-6, and 4.5-7) as would construction-related traffic impacts (Impacts 4.6-4 and 4.6-8). In addition, Alternative 3 would also result in lessened impacts related to construction-related air and GHG emissions (Impacts 4.2-2, 4.2-3, 4.2-4, 4.2-5, 4.4-1, 4.4-2, and 4.4-3).

Under the Reduced Density Alternative, approximately 50 percent fewer units would be provided, so air and GHG emissions from building operation and resident transportation would be expected to be lower by a similar proportion (Impacts 4.2-2, 4.2-4, 4.4-1, 4.4-2, and 4.4-3). Development under Alternative 3 would also have fewer vehicle trips to and from the project site. As a result, less VMT would be generated under this alternative (Impact 4.6-1 and Impact 4.6-5). Most of the long-term noise that would result due to the implementation of the proposed project would primarily be traffic-generated. Thus, fewer vehicle trips to and from the project site under the Reduced Density Alternative, relative to those that would occur under the proposed project, would also reduce operational noise impacts from traffic (Impacts 4.5-3, 4.5-5 and 4.5-8). Finally, the reduction in units would result in the need to heat and cool fewer floors, and thus fewer HVAC systems would be required. For this reason, operational noise impacts from stationary sources would be reduced (Impact 4.5-4).

***Impacts Identified as Being More Substantial than the Proposed Project***

No impacts from the Reduced Density Alternative would be anticipated to be more substantial than the same type of impacts that would occur under the proposed project.

**Impacts Relative to General Plan**

Alternative 3 would conflict with the City of Sacramento General Plan land use designations and policies. The Suburban Center land use designation allows for a density between 15 dwelling units per acre and 36 dwelling units per acre. The proposed project would have a density of 20.94 dwelling units per acre, which is within the allowable range prescribed by the project site's land use designation. Alternative 3 would reduce the number of proposed dwelling units by 50 percent, resulting in a density of 10.47 dwelling units per acre. This density would fall below the minimum density required by the Suburban Center land use.

Further, the Reduced Density Alternative would be counter to several General Plan policies that promote infill development. General Plan policy LU 1.1.4 says that the City shall be a leader in infill growth through active leadership, while policy LU 1.1.5 requires the City to promote and provide incentives (e.g., focused infill planning, zoning/rezoning, revised regulations, provision of infrastructure) for infill development, reuse, and growth in existing urbanized areas. General Plan policy LU 2.6.1 promotes compact development patterns and higher-development intensities that use land efficiently. General Plan policy LU 2.6.6 requires the City to support an overall increase in average residential densities throughout the city consistent with the adopted General Plan Land Use & Urban Form Diagram, as new housing types shift from lower-density, large lot developments to higher-density, small lot and multifamily developments as a means to increase energy efficiency, conserve water, and reduce waste. Implementation of Alternative 3, Reduced Density Alternative, would run counter to these City policies which outline the City's vision for infill growth and efficient land development.

Development of the site at a density lower than the minimum required for the land use designation would result in an inconsistency with the 2035 General Plan. Projects that are inconsistent with the General Plan are not feasible. As a result, the Reduced Density Alternative is not a feasible alternative.

**Relationship to Significant and Unavoidable Impacts**

As noted in Chapter 4, the proposed project does not have any significant and unavoidable impacts. All environmental impacts identified for the proposed project are mitigated to a less-than-significant level through the implementation of mitigation. Similarly, the Reduced Density Alternative would not have any significant and unavoidable environmental impacts. Therefore, the relationship of the Reduced Density Alternative to significant and unavoidable impacts would be the same as that under the proposed project.

**Summary of Preliminary Evaluation of Alternatives in Relation to Klotz Ranch Apartments Project Objectives**

The Reduced Density Alternative would still provide housing for multiple generations and lifestyles that is consistent with the City's planning goals, policies, and objectives (Objective 1)

and activate an underutilized property to meet housing needs (Objective 2). In addition, Alternative 2 would still create a development of a scale and character that complements and is supportive of the surrounding uses (Objective 4) and provide convenient alternatives to auto travel by providing access to the future Del Rio trail (Objective 6). However, with the provision of fewer residential units, the residential community developed under the Reduced Density Alternative might not be economically feasible as the community constructed under the proposed project (Objective 3). In addition, the residential community developed under the Reduced Density Alternative would not result in the most efficient use of land as would be obtained under the proposed project as the site could readily accommodate more housing (Objective 5).

## 6.5 Environmentally Superior Alternative

From the alternatives evaluated for the proposed project in this EIR, the environmentally superior alternative would be Alternative 1, the No Project/No Development Alternative. This alternative would avoid all potentially significant impacts and required mitigation associated with the proposed project.

Among the other alternatives, Alternative 3, the Reduced Density Alternative, could be expected to have the fewest adverse environmental impacts because it would require a shorter construction duration, would consume fewer resources and raw materials, and have less substantial construction and operational impacts. However, Alternative 3 is an impractical alternative due the reduced residential density of the development; the residential density would be less than the minimum density permitted for the Suburban Corridor land use and would not meet the goals and policies of the General Plan. While a General Plan amendment could be sought to implement Alternative 3, such a request would be a discretionary approval and may not be granted. Further, the alternative would be in direct opposition to the densification and infill growth policies contained in the General Plan. The General Plan Land Use Diagram and land use designations identify minimum and maximum densities throughout the city in order to achieve the City's goals for efficient and sustainable growth. Therefore, while Alternative 3 would have fewer adverse environmental effects when compared to the proposed project, it would not meet the requirements and policies presented in the General Plan.

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# CHAPTER 7

## Report Preparation

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### 7.1 Lead Agency

#### City of Sacramento

Scott Johnson, Senior Planner, Community Development Department

### 7.2 Environmental Consultant

#### Environmental Science Associates (ESA)

2600 Capitol Avenue, Suite 200  
Sacramento, California 95816  
(916) 564-4500

Christina Erwin.....Project Director, Transportation  
Paul Stephenson .....Project Manager, Transportation  
Jon Teofilo..... Deputy Project Manager  
Chris Sanchez, REA ..... Noise and Vibration  
Matthew Fagundes ..... Greenhouse Gas Emissions  
Cheri Velzy.....Air Quality, Health Risk Assessment  
Heidi Koenig, RPA..... Cultural Resources, Tribal Cultural Resources, Archaeology  
Steve Smith..... Aesthetics  
James Songco ..... Graphics  
Logan Sakai..... Word Processing and Report Production

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# Appendix A

## **Notice of Preparation (NOP)**







DATE: March 19, 2020

TO: Interested Persons

FROM: Scott Johnson, Senior Planner  
Community Development Department

RE: **NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT  
FOR THE KLOTZ RANCH APARTMENTS PROJECT (P19-070)**

**COMMENT PERIOD**

March 20, 2019 – April 20, 2019

**INTRODUCTION**

The City of Sacramento (City) is the Lead Agency for preparation of an Environmental Impact Report (EIR) for the proposed Klotz Ranch Apartments project. The EIR will evaluate potential significant environmental effects of the proposed Klotz Ranch Apartments project and other actions and transactions associated with the proposed project. Written comments regarding the issues that should be covered in the EIR, including potential alternatives to the proposed Klotz Ranch Apartments project and the scope of the analysis, are invited.

The EIR is being prepared in compliance with the California Environmental Quality Act (CEQA). Under CEQA, upon deciding to prepare an EIR, the City as lead agency must issue a Notice of Preparation (NOP) to inform trustee agencies, responsible agencies, and the public of that decision. The purpose of the NOP is to provide information describing the project and its potential environmental effects to those who may wish to comment regarding the scope and content of the information to be included in the EIR. Agencies should comment on such information as it relates to their statutory responsibilities in connection with the project.

The EIR will provide an evaluation of potential environmental impacts associated with development of the proposed project. The proposed project description, location, and environmental issue areas that may be affected by development of the proposed project are described below. The EIR will evaluate the potentially significant environmental impacts of the proposed project, on both a direct and cumulative basis, identify mitigation measures that may be feasible to lessen or avoid such impacts, and identify alternatives to the proposed project.

## **PROJECT LOCATION/SETTING**

The project site is a 12.7-acre site that is generally located south of Pocket Road between Interstate 5 (I-5) and Freeport Boulevard adjacent to the Pocket Area in south Sacramento. Access to the project site is provide by Klotz Ranch Court, which intersects with Pocket Road approximately 400 to the north of the site. The project site is bounded by three commercial buildings adjacent to Pocket Road to the north, and vacant parcels to the east, south, and west. The commercial buildings include a gas station (Shell Oil), located to the west of Klotz Ranch Court, and a fast food restaurant (McDonalds) and a car wash (Kelly's Express Car Wash) located to the east of Klotz Ranch Court. The project site was previously graded and is currently vacant; a telecommunications facility (cell phone tower) is located in the southeastern corner of the site.

## **PROJECT DESCRIPTION**

The proposed project includes the construction of a 266-unit apartment complex consisting of six, four-story residential buildings and a two-story clubhouse. Two multi-family residential buildings would each contain 49 units while the remaining four multi-family residential buildings would each contain 42 units. The clubhouse would provide 6,300 square feet (sf) of community space accessible to residents.

The complex would include 128 one-bedroom units, 120 two-bedroom units, and 18 three-bedroom units and would have a density of approximately 21 units per acre. The one-bedroom units would range in size from 506 to 676 sf, the two-bedroom units would range in size from 746 to 971 sf, and the three-bedroom units would be 1,251 sf in size. Each of the apartment buildings would be approximately 48 feet in height.

The clubhouse/pool area would be located on the northwestern portion of the site. The clubhouse would include a leasing office, a fitness and yoga studio, a great room with kitchen and sitting area, mail package room, game room, cyber/conference center, and an outdoor amenity deck; the structure would be approximately 32 feet in height. The entry to the pool area would be from the clubhouse area. Amenities within the pool area would include a pool, spa, outdoor kitchen, television and fire place lounges, hammock area, yoga lawn, two bocce ball courts, and a passive recreation lawn lounge area. Other amenities on the project site include a tot lot on the northeastern corner of the site and a dog run and sports court on the southwest corner of the site.

Parking for the project would be provided in covered carports, private garages, driveways, and surface lots adjacent to the apartment buildings. A total of 525 parking spaces would be provided, including 353 parking spaces for residents and 172 parking spaces for visitors. A total of 165 bicycle parking spaces would also be provided consisting of 28 exterior spaces and 137 interior spaces. Bicycle racks and interior storage would be provided for each building. In addition, bicycle racks and a bicycle locker would be provided in front of the clubhouse.

The main vehicle access point would be from Klotz Ranch Drive, which provides access to I-5 via Pocket Road. An emergency vehicle access point from the parking lot of the car wash would also be provided in the northeastern corner of the project site.

Pedestrian paths would be provided on-site that lead to building entrance areas. These paths would also connect to the existing sidewalks on Klotz Ranch Court. In addition, the proposed project would provide direct access to the future Del Rio trail, a proposed 4.8-mile pedestrian and bicycle trail that runs through the Land Park, South Land Park, Freeport Manor, Z'Berg, Pocket and Meadowview neighborhoods between Interstate 5 and Freeport Boulevard. The right-of-way for the future trail is located directly to the east of the project site. Finally, the nearest bus stop is located approximately 100 feet to the east of the intersection of Pocket Road/Klotz Ranch Court.

## **ENVIRONMENTAL EFFECTS AND SCOPE OF THE EIR**

The EIR will analyze potentially significant impacts that result from implementation of the proposed project.

The City has prepared and attached an Initial Study to describe the project and (1) 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 (2) identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR, as well as, and any mitigation measures or alternatives that may avoid or mitigate the identified effects, if any, to a less-than-significant level. Based on the findings of the Initial Study, it is anticipated that the following topics could have potentially significant impacts:

- Aesthetics, Light and Glare
- Air Quality
- Cultural and Tribal Cultural Resources
- Greenhouse Gas Emissions and Climate Change
- Noise and Vibration
- Transportation/Traffic

In addition, the EIR will describe and evaluate project alternatives that may reduce or avoid any identified significant adverse impacts of the project. Unless new information is presented during the NOP comment process, the following topics are expected to have less-than-significant impacts and will be discussed only in the Initial Study: agricultural resources; biological resources; energy; geology, soils, and seismicity; hazards; hydrology and water quality; noise; population and housing; public services; recreation; and utilities and services systems.

## **SUBMITTING COMMENTS**

Comments and suggestions as to the appropriate scope of analysis in the EIR are invited from all interested parties. Written comments or questions concerning the EIR for the proposed project should be directed to the City at the following address by 4:00 p.m. on April 20, 2019. Please include the commenter's full name and address.

Scott Johnson, Environmental Planning Services  
City of Sacramento Community Development Department  
300 Richards Blvd., Third Floor, Sacramento, CA 95811  
Telephone: (916) 808-5842  
E-mail: [SRJohnson@cityofsacramento.org](mailto:SRJohnson@cityofsacramento.org)

NOTE: The Initial Study is available online with the Notice of Preparation at the City's web at <http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports> and at the offices of the Community Development Department at 300 Richards Boulevard, Third Floor, Sacramento, CA 95811. Please contact the environmental project manager, Scott Johnson, at the phone and email above with any questions regarding the availability of hard copies of the Initial Study.

# Appendix B

## **Notice of Preparation (NOP)**

### **Comment Letters**







**DEPARTMENT OF THE ARMY**  
**U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT**  
**1325 J STREET**  
**SACRAMENTO CA 95814-2922**

March 25, 2020

Regulatory Division (SPK-2020-00257)

City of Sacramento Community Development Dept.

Attn: Mr. Scott Johnson, Senior Planner

300 Richards Boulevard, Third Floor

Sacramento, CA 95811

[SRJohnson@CityofSacramento.org](mailto:SRJohnson@CityofSacramento.org)

Dear Mr. Johnson:

We are responding to your March 24, 2020, request for comments on preparation of an Environmental Impact Report (EIR) in compliance with the California Environmental Quality Act (CEQA) for the proposed Klotz Ranch Apartments project. The City of Sacramento project identification number is P19-070. The approximately 12.7-acre project site is located at the terminus of Klotz Ranch Court, south of Pocket Road between Interstate 5 and Freeport Boulevard, Latitude 38.47902°, Longitude -121.50669°, City of Sacramento, Sacramento County, California.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work.

To ascertain the extent of waters on the project site, the applicant should prepare a wetland delineation, in accordance with the "Minimum Standards for Acceptance of Preliminary Wetlands Delineations" and "Final Map and Drawing Standards for the South Pacific Division Regulatory Program" under "Jurisdiction" on our website at the address below, and submit it to this office for verification. A list of consultants that prepare wetland delineations and permit application documents is also available on our website at the same location.

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation.

Please refer to identification number SPK-2020-00257 in any correspondence concerning this project. If you have any questions, please contact me at U.S. Army Corps of Engineers Regulatory Division, California Delta Section, 1325 J Street, Room 1350, Sacramento, CA 95814-2922, by email at [Mary.R.Pakenham-Walsh@usace.army.mil](mailto:Mary.R.Pakenham-Walsh@usace.army.mil), or telephone at (916) 557-7718. For more information regarding our program, please visit our website at [www.spk.usace.army.mil/Missions/Regulatory.aspx](http://www.spk.usace.army.mil/Missions/Regulatory.aspx),

Sincerely,

Mary R. Pakenham-Walsh  
Senior Project Manager  
California Delta Section



**From:** [Wood, Dylan@Wildlife](mailto:Wood,Dylan@Wildlife)  
**To:** [Scott Johnson](#)  
**Cc:** [Wildlife R2 CEQA](#); [state.clearinghouse@opr.ca.gov](mailto:state.clearinghouse@opr.ca.gov)  
**Subject:** Comments on the NOP for the Klotz Ranch Apartment Project (SCH: 2020039059)  
**Date:** Monday, April 20, 2020 5:44:22 PM  
**Attachments:** [image001.png](#)  
[Attachment 1 Homegrown Plant List Final-1.pdf](#)

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Dear Mr. Johnson:

The California Department of Fish and Wildlife (CDFW) received the Notice of Preparation (NOP) of an Environmental Impact Report for the Klotz Ranch Apartment Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines<sup>1</sup>.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the project that may affect California fish and wildlife.

## CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) Although not anticipated, CDFW may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed and to the extent implementation of the Project as proposed may result in take<sup>2</sup> as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

<sup>1</sup>CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

<sup>2</sup>Section 86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"

## COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the Lead Agency in adequately identifying and/or mitigating the project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

**Comment 1: Mitigation Measure BIO-1 revisions needed to mitigate impacts to Swainson's hawks to a level of less-than-significant.** As identified in the Initial Study (IS), Swainson's hawk (*Buteo swainsoni*) has been observed near the project site and CNDDDB records indicate potential nesting activity along the Sacramento River. Swainson's hawk is a species listed as *threatened* under CESA, so potential take of the species resulting from the construction disturbance described in the IS could constitute a potentially significant impact under CEQA.

To address this, CDFW recommends making the following revisions to Biological Resources Mitigation Measure BIO-1 to more effectively mitigate to a level-of-less than significant:

- Disclose and adhere to the survey protocol: *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000)
- Define survey radius as 0.5 miles in accordance with the above protocol
- Consult with a qualified biologist and CDFW if active nests are found during project surveys

**Comment 2: Mitigation Measure BIO-1 revisions needed to mitigate impacts white-tailed kite to a level of less-than-significant.** As identified in the NOP, White-tailed kite (*Elanus leucurus*) been observed near the project site. White-tailed kite is a fully protected species under Section 3511 of the California Fish and Game Code. Surveys described in the IS do not necessarily capture potential impacts needed to ensure appropriate avoidance measures implemented.

To address this, CDFW recommends making the following revisions to Biological Resources Mitigation Measure 1 to more effectively mitigate to a level-of-less than significant:

- Disclose and adhere to the survey protocol: *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000)
- Define survey radius as 0.25 miles
- Consult with a qualified biologist and CDFW if active nests are found during project surveys
- Include the following language: "If it is determined during surveys or project implementation that project activities may impact White-tailed kite, project personnel shall fully avoid any impacts and immediately notify CDFW if White-tailed kite is observed to be utilizing the project area or adjacent area."

**Comment 3: Potential impacts to special-status species (burrowing owls) are not mitigated to a level of less-than-significant.** A review of CDFW records (CDFW BIOS 2020) indicates occupied habitat for burrowing owls (*Athene cunicularia*) is present within 1 miles of the project area. It should be noted that burrowing owls are a species that is known to utilize urban infrastructure for nesting habitat, such as utility conduits and graded subdivision lots that have laid dormant. The IS does not does specifically identify a survey protocol to detect burrowing owls within the project area. The measure also does not define avoidance measures in the event burrowing owls are discovered.

To address this comment, CDFW recommends the IS be revised to include adherence to

survey protocol and the mitigation strategies defined in the CDFW *Staff Report on Burrowing Owl Mitigation* (2012) to mitigate to a level of less-than significant.

**Comment 4: Mitigation Measure BIO-2 revisions suggested.** CDFW notes that the project will mitigate from a CDFW-approved mitigation bank. Although typically an acceptable option, CDFW recommends also including mitigation at a CDFW-approved conservation site or CDFW-approved conservation bank in the event that either mitigation bank credits are not available (i.e. either sold out or not available to the project). Likewise, CDFW recommends adding an appropriate reference to the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFW 1994) for determination of the mitigation ratio and considerations.

**Comment 5: CDFW recommends enhancing habitat value of landscaping.** CDFW has noted that the IS includes project plans for landscaping improvements in the project area. CDFW recommends consideration of the Homegrown Habitat Plant List (Sacramento Valley Chapter, California Native Plant Society)(Attachment 1) when developing the final planting palette. The Homegrown Habitat Plant List (HHPL) is the result of a coordinated effort of regional stakeholders with the intent of improving landscape plantings for the benefit of property owners and ecosystem. Including plants from the HHPL is intended to produce the following outcomes for landscaping:

- Increased drought tolerance
- Decreased water use
- Decreased maintenance and replacement planting costs
- Increased functionality for local pollinators and wildlife
  - Increase in overall biodiversity and ecosystem health
- Increased carbon sequestration and climate change resilience
- Educational opportunities for residents

## ENVIRONMENTAL DATA

CEQA requires that information developed in environmental documents be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special-status species and natural communities detected during project surveys to the California Natural Diversity Database (CNDDB). The types of information reported to CNDDB can be found at the following link: <https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals>. The completed form can be sent electronically to CNDDB at the following email address: [CNDDB@wildlife.ca.gov](mailto:CNDDB@wildlife.ca.gov).

## CONCLUSION

CDFW appreciates the opportunity to comment and assist the Lead Agency in identifying and mitigating project impacts on biological resources.

Please contact me at 916-358-2384 or [dylan.a.wood@wildlife.ca.gov](mailto:dylan.a.wood@wildlife.ca.gov) if you have any questions.

Sincerely,

**Dylan Wood**

California Department of Fish and Wildlife

Environmental Scientist  
(916) 358-2384



# Homegrown Habitat Plant List 2019

|    | A         | B   | C                               | D          | E        | F     | G       | H  |
|----|-----------|---|---------------------------------|------------|----------|-------|---------|--|
| 1  | Bloom     | Common Name                               | Scientific Name                 | Life Cycle | Height   | WUCOL | Sun     | Notes  |
| 2  | Early     | <a href="#">Western Redbud</a>            | Cercis occidentalis             | P          | 10'-20'  | L     | S/PS    | Drought-tolerant; also tolerates semi-riparian conditions  |
| 3  |           | <a href="#">Red Willow</a>                | Salix laevigata                 | P          | 30'-50'  | H     | FS      | Wetland-semi riparian; tolerates clay soils; fast grower, semi-deciduous                                     |
| 4  |           | <a href="#">Arroyo Willow</a>             | Salix lasiolepis                | P          | 7'-35'   | H     | FS      | Likes marshes/wet areas; spreads by root runners; deciduous  |
| 5  |           | <a href="#">Sandbar Willow</a>            | Salix exigua                    | P          | 10'-23'  | H     | FS      | Constant moisture; spreads by basal shoots to any moisture   |
| 6  |           | <a href="#">Valley Oak</a>                | Quercus lobata                  | P          | 60'-100' | L     | FS      | Fast growing (20' in 5 years); drought tolerant  |
| 7  |           | <a href="#">Scrub Oak</a>                 | Quercus berberidifolia          | P          | 15'-20'  | L     | FS/PS   | Smaller, drought tolerant, likes medium fast drainage  |
| 8  |           | <a href="#">Buck Brush</a>                | Ceanothus cuneatus              | P          | 5'-12'   | VL    | FS      | Needs fast drainage; fast to moderate growth, evergreen  |
| 9  |           | <a href="#">California Everlasting</a>    | Psuedognaphalium californicum   | P          | 3'       | VL/L  | FS      | Semi deciduous, may like some afternoon shade in summer  |
| 10 |           | <a href="#">California Blackberry</a>     | Rubus ursinus                   | P          | 6'       | M/H   | FS/PS/S | Requires substantial moisture, wide spreading  |
| 11 |           | <a href="#">Dutchmans Pipe</a>            | Aristolochia californica        | P          | 20'      | L/M   | S/PS    | Deciduous vine, grows in moist woods along streams   |
| 12 |           | <a href="#">Baby Blue Eyes</a>            | Nemophila menziesii             | A          | .25'     | L     | FS/PS   | Annual herb  |
| 13 |           | <a href="#">Chinese Houses</a>            | Collinsia heterophylla          | A          | .5'      | M     | S/PS    | Annual purple flowering herb, good in containers   |
| 14 |           | <a href="#">Lacy Phacelia</a>             | Phacelia tanacetifolia          | A          | 3'       | VL/L  | FS      | Tolerates clay soils; good plant for biological pest control   |
| 15 |           | <a href="#">Miners Lettuce</a>            | Claytonia perfoliata            | A          | 1.3'     | L/M   | PS      | Edible spreading annual herb; in the valley, does best in part shade   |
| 16 |           |   |                                 |            |          |       |         |  |
| 17 | Early-Mid | <a href="#">Blue Elderberry</a>           | Sambucus nigra var. cerulea     | P          | 20'-30'  | M     | FS      | Easy to grow, fast growing deciduous shrub/tree; host plant for endangered Valley Elderberry Longhorn Beetle |
| 18 |           | <a href="#">Interior Live Oak</a>         | Quercus wislizenii              | P          | 15'-50'  | VL    | S/PS    | Medium to large evergreen, moderate grower   |
| 19 |           | <a href="#">Blue Oak</a>                  | Quercus douglasii               | P          | 16'-82'  | VL    | FS/PS   | Slow grower deciduous, supports many species   |
| 20 |           | <a href="#">Toyon</a>                     | Heteromeles arbutifolia         | P          | 12'      | L     | FS/PS   | Evergreen shrub easy to grow, white flowers early summer, red berries in fall                                |
| 21 |           | <a href="#">Shining Willow</a>            | Salix lasiandra                 | P          | 3'-30'   | M/H   | FS/PS   | Winter deciduous riparian plant, good for restoration projects   |
| 22 |           | <a href="#">Mountain Mahogany</a>         | Cercocarpus betuloides          | P          | 8'-20'   | VL/L  | FS/PS   | In the valley this plant will do better with PM shade  |
| 23 |           | <a href="#">Hollyleaf Redberry</a>        | Rhamnus ilicifolia              | P          | 9'       | L     | PS      | PM shade in the valley, siting is critical for success   |
| 24 |           | <a href="#">California Broom/Deerweed</a> | Acmispon glaber                 | P          | 3'       | VL    | FS      | Not too showy subshrub with high habitat value   |
| 25 |           | <a href="#">Skunkbush, Fragrant Sumac</a> | Rhus aromatica                  | P          | 8'       | L     | FS/PS   | Winter deciduous shrub, may like PM shade in valley  |
| 26 |           | <a href="#">Chaparral Honeysuckle</a>     | Lonicera interrupta (hispidula) | P          |          | VL/L  | FS/PS   | Hardy, woody chaparral shrub/vine, summer flowering, edible/bitter berries                                   |
| 27 |           | <a href="#">Silver Bush Lupine</a>        | Lupinus albifrons               | P          | 3'       | L     | FS/PS   | Requires good drainage, PM shade in valley   |
| 28 |           | <a href="#">Foothill Penstemon</a>        | Penstemon heterophyllus         | P          | 5'       | L     | FS/PS   | Perennial evergreen herb. May need pm shade in valley  |
| 29 |           | <a href="#">Sonoma Sage</a>               | Salvia sonomensis               | P          | 1.3'     | VL    | PS      | Moderately drought tolerant if given part shade  |
| 30 |           | <a href="#">Purple Needlegrass</a>        | Stipa pulchra                   | P          | 3'       | VL/L  | FS      | CA state grass, perennial with deep roots  |
| 31 |           | <a href="#">California Poppy</a>          | Eschscholzia californica        | A          | .5'      | VL/L  | FS      | CA State flower, tolerates clay soil, readily reseeds  |
| 32 |           | <a href="#">Elegant Clarkia</a>           | Clarkia unguiculata             | A          | .5'      | L     | FS/PS   | Showy pink flowers, reseeds readily  |
| 33 |           | <a href="#">Globe Gillia</a>              | Gillia capitata                 | A          | 1'       | L/M   | FS      | Showy pink to lavender flowers   |
| 34 |           | <a href="#">Miniature Lupine</a>          | Lupinus bicolor                 | A          | 1.3'     | L     | FS      | Showy purple and white flowers, plant with CA poppies  |
| 35 |           | <a href="#">Sky Lupine</a>                | Lupinus nanus                   | A          | 2'       | L     | FS      | Chaparral annual herb  |

# Homegrown Habitat Plant List 2019

|    | A        | B   | C                                  | D          | E       | F     | G       | H  |
|----|----------|---|------------------------------------|------------|---------|-------|---------|--|
|    | Bloom    | Common Name                               | Scientific Name                    | Life Cycle | Height  | WUCOL | Sun     | Notes  |
| 36 | Mid      | <a href="#">California Buckwheat</a>      | Eriogonum fasciculatum             | P          | 2.5'    | VL/L  | FS      | Tough, easy to grow, prefer good drainage  |
| 37 |          | <a href="#">Hoary Coffeberry</a>          | Frangula californica var tomentosa | P          | 20'     | L     | FS/PS   | May prefer PM shade in valley  |
| 38 |          | <a href="#">California Wildrose</a>       | Rosa californica                   | P          | 8'      | M     | FS/PS   | Tolerates clay soils; drought-tolerant; spreads through underground runners          |
| 39 |          | <a href="#">California Wild Grape</a>     | Vitis californica                  | P          | 10'-40' | L/M   | FS/PS   | Common along rivers and streams, winter deciduous                                    |
| 40 |          | <a href="#">Common Yarrow</a>             | Achillea millefolium               | P          | 3'      | L-H   | FS/PS   | Looks best with regular water; semi deciduous in drier conditions; can be aggressive |
| 41 |          | <a href="#">Coyote Mint</a>               | Monardella villosa                 | P          | 2'      | L     | PS/S    | Requires good drainage, needs PM shade in the valley                                 |
| 42 |          | <a href="#">Showy Milkweed</a>            | Asclepias speciosa                 | P          | 5'      | L/M   | FS      | Tolerates clay soils; spreads through underground rhizomes                           |
| 43 |          | <a href="#">Imbricate Phacelia</a>        | Phacelia imbricata                 | P          | 1'      | L     | FS/PS   | Perennial herb; tolerates clay soil; can re-seed                                     |
| 44 |          | <a href="#">Woolly Sunflower</a>          | Eriophyllum lanatum                | P          | 2'      | L     | FS/PS   | Summer semi-deciduous; can be extremely drought-tolerant                             |
| 45 |          | <a href="#">Nude Buckwheat</a>            | Eriogonum nudum                    | P          | 6'      | L     | FS      | Summer semi-deciduous; leafless stems  |
| 46 |          | <a href="#">Blue Wild Rye</a>             | Elymus glaucus                     | P          | 5'      | L     | FS/PS   | Popular accent grass for gardens; summer semi-deciduous                              |
| 47 |          | <a href="#">Deergrass</a>                 | Muhlenbergia rigens                | P          | 5'      | L     | FS      | Attractive bunch grass; easy to grow; grows in most soils                            |
| 48 |          | <a href="#">Fleabane Daisy</a>            | Erigeron foliosus                  | P          | 3.3'    | L     | PS      |  |
| 49 |          | <a href="#">Lippia</a>                    | Phyla nodiflora                    | P          | 6"      | L     | FS/PS   | Flowering ground cover; spreads rapidly  |
| 50 |          | <a href="#">Spider Lupine</a>             | Lupinus benthamii                  | A          | 2.3'    | VL    | FS      |  |
| 51 |          | <a href="#">Seep Monkeyflower</a>         | Erythranthe guttata                | A          | 5'      | M/H   | FS/PS   | Aquatic annual plant; good in ponds or rain gardens                                  |
| 52 |          |   |                                    |            |         |       |         |  |
| 53 |          |   |                                    |            |         |       |         |  |
| 54 | Mid-Late | <a href="#">Narrowleaf Milkweed</a>       | Asclepias fascicularis             | P          | 1.5'    | M     | FS      | Not showy; tolerates clay; host to Monarchs  |
| 55 |          | <a href="#">Virgin's Bower</a>            | Clematis ligusticifolia            | P          | 30'     | L/M   | PS/SH   | vine; showy white flowers; summer deciduous; part shade to shade                     |
| 56 |          | <a href="#">Hooker's Evening Primrose</a> | Oenothera elata                    | P          | 5'      | M-H   | FS/PS   | Wetland-riparian but still drought tolerant; reseeds aggressively                    |
| 57 |          | <a href="#">California Fuchsia</a>        | Epilobium canum                    | P          | 3'      | L     | FS      | Hummingbird favorite; spreads; cut back in winter                                    |
| 58 |          | <a href="#">Gumplant</a>                  | Grindelia camporum                 | P          | 4'      | L     | FS      | Tolerates most soils; can be cut back in winter                                      |
| 59 |          | <a href="#">Snowberry</a>                 | Symphoricarpos albus               | P          | 6'      | L     | PS/SH   | Moist shady areas; winter deciduous; spreads by rhizomes                             |
| 60 |          | <a href="#">Slender Woolly Buckwheat</a>  | Eriogonum gracile                  | A          | 5'      | EL/VL | FS/PS   | Small annual; tolerates most soils; winter semi-deciduous                            |
| 61 |          | <a href="#">Common Madia</a>              | Madia elegans                      | A          | 7'      | L     | FS/PS   | Annual herb; showy yellow flowers; tolerates many soils                              |
| 62 |          | <a href="#">Common Sunflower</a>          | Helianthus annuus                  | A          | 5'      | M     | FS      | Tolerates most soils; can get very large   |
| 63 |          |   |                                    |            |         |       |         |  |
| 64 | Late     | <a href="#">California Aster</a>          | Symphyotrichum chilense            | P          | 5'      | VL/L  | FS/PS   | Tolerates clay soil; winter deciduous; cut back in winter; aggressive spreader       |
| 65 |          | <a href="#">California Goldenrod</a>      | Solidago californica               | P          | 3'      | VL/M  | FS/PS/S | Easy to grow; for late color plant with Epilobium canum; spreader                    |
| 66 |          | <a href="#">Sulphur Buckwheat</a>         | Eriogonum umbellulatum             | P          | 7'      | VL/M  | FS      | Showy yellow flowers; variable plant; evergreen                                      |
| 67 |          | <a href="#">Bee Plant</a>                 | Scrophularia californica           | P          | 4'      | L     | PS      | Strong bee attractant; tolerates most soils; needs good drainage                     |
| 68 |          | <a href="#">Coyote Brush</a>              | Baccharis pilularis                | P          | 10'     | VL/L  | FS/PS   | Tough easy to grow shrub; variable forms; blooms into winter                         |
| 69 |          | <a href="#">Rubber Rubberbrush</a>        | Ericameria nauseosa                | P          | 9'      | L     | FS      | Needs good drainage; summer/fall bloom   |
| 70 |          | <a href="#">Vinegarweed</a>               | Trichostema lanceolatum            | A          | 1'      | L     | FS      | Does not do well in seed mixes; sow individually; tolerates dry clay soils           |

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## Central Valley Regional Water Quality Control Board

20 April 2020

Scott Johnson  
City of Sacramento  
300 Richards Boulevard, Third Floor  
Sacramento, CA 95811

### **COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT, KLOTZ RANCH APARTMENTS (P19-070) PROJECT, SCH#2020039059, SACRAMENTO COUNTY**

Pursuant to the State Clearinghouse's 20 March 2020 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation of an Environmental Impact Report* for the Klotz Ranch Apartments (P19-070) Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Central Valley Water Board staff noticed that wetland restoration was not listed as a mitigation option in Mitigation Measure BIO-5, only wetland preservation and creation were listed. Wetland restoration, which includes re-establishment and rehabilitation, may be a suitable mitigation option to offset impacts. Mitigation banks and in-lieu fee programs may have wetland re-establishment credits available for purchase, as well as preservation and establishment credits. Central Valley Water Board staff recommends updating Mitigation Measure BIO-5 to either include restoration as a mitigation option or to explain why restoration is not considered a mitigation option for this project.

Central Valley Water Board staff also noticed that several standard checklist questions do not seem to be included, or were altered, in the Hydrology & Water Quality section of the Initial Study. Central Valley Water Board staff recommends including additional checklist questions and including regulatory setting of additional agencies that have jurisdiction on hydrology and water quality within this section. Central Valley Water Board staff recommends listing and describing Clean Water Act Sections 404 and 401, and the Porter-Cologne Act under the Regulatory Setting in the Hydrology and Water Quality section of the Environmental Impact Report (EIR). Further, potential project impacts to waters of the State, including waters of the United States, should be included in the Hydrology and Water Quality section of the EIR with reference to best management practices and Mitigation Measures that will result in reduction of significance of impact of project activities.

## **I. Regulatory Setting**

### **Basin Plan**

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:

[http://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/](http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/)

### **Antidegradation Considerations**

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:

[https://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/sacsjr\\_2018\\_05.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_2018_05.pdf)

In part it states:

*Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*

*This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*



The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

## **II. Permitting Requirements**

### **Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/constpermits.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml)

### **Phase I and II Municipal Separate Storm Sewer System (MS4) Permits<sup>1</sup>**

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

[http://www.waterboards.ca.gov/centralvalley/water\\_issues/storm\\_water/municipal\\_permits/](http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/)

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/phase\\_ii\\_municipal.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml)

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<sup>1</sup> Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

### **Clean Water Act Section 404 Permit**

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

### **Clean Water Act Section 401 Permit – Water Quality Certification**

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at:  
[https://www.waterboards.ca.gov/centralvalley/water\\_issues/water\\_quality/certification/](https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality/certification/)

### **Waste Discharge Requirements – Discharges to Waters of the State**

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:  
[https://www.waterboards.ca.gov/centralvalley/water\\_issues/waste\\_to\\_surface\\_water/](https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/)

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at:  
[https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2004/wqo/wqo2004-0004.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf)

### **Dewatering Permit**

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2003/wqo/wqo2003-0003.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf)

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at:

[https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/waivers/r5-2018-0085.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf)

### **Limited Threat General NPDES Permit**

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

[https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/general\\_orders/r5-2016-0076-01.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf)

### **NPDES Permit**

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: <https://www.waterboards.ca.gov/centralvalley/help/permit/>

If you have questions regarding these comments, please contact me at (916) 464-4812 or [Jordan.Hensley@waterboards.ca.gov](mailto:Jordan.Hensley@waterboards.ca.gov).

A handwritten signature in black ink, appearing to read "J Hensley".

Jordan Hensley  
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research,  
Sacramento (via email)

**From:** [kasdvm@aol.com](mailto:kasdvm@aol.com)  
**To:** [Scott Johnson](mailto:Scott.Johnson@vca.com); [margit.spencer@vca.com](mailto:margit.spencer@vca.com)  
**Subject:** Klotz Ranch Apartment Project  
**Date:** Wednesday, March 25, 2020 10:02:34 AM

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City of Sacramento

March 25, 2020

The following thoughts are in regards to the proposed Klotz Ranch Apartment Project (P19-070).

I have lived in the Greenhaven Pocket area for close to 50 years. I have had the pleasure of providing Veterinary service to the community for most of those years. And I presently own the Veterinary Hospital, VCA Mueller Pet Medical Center, across Freeport Blvd from the proposed site.

My biggest concern for this project is the apparent gross underestimation of the traffic impact that it will create. Your notice notes that the only primary access for this project will be through the already present road bordering McDonalds and the Shell station. I have had the pleasure of using both of these businesses and have often found congestion due to the already busy area. Adding 300 to 500 vehicles to this area will simply not work.

Many, if not most of the occupants of this need development will be commuting to work each day. That area is already extremely congested during the 7-8:30am commute time. Adding hundreds of new vehicles will severely impact this already congested traffic flow.

One consideration that I'm sure has been considered would be to allow the primary traffic flow to occur along Freeport Blvd. instead of Klotz Ranch Dr. That would require new storm drains along

Freeport Blvd to replace the open ditch. But, once again, the impact of this many cars on Freeport Blvd. would stagnate the region, especially during the commute hours. The traffic flow along Freeport Blvd has been severely impacted when the new Delta Shores road and shopping center were added to the south. This has already impacted my business with the inability, at times, of my clients (especially emergency clients and patients) and staff from turning left on Freeport to enter my parking area due to this congestion.

Though I truly understand the need for more housing, especially affordable housing, in the Sacramento area, I really don't think this site is appropriate for that usage. In my humble evaluation, Sacramento has spent a great amount of money creating a very nice rapid transit system. Why are we not planning for these housing units to be placed adjacent, or very close to these already present stations? The regional traffic would be not be impacted as severely, and the new residents would be very pleased to have an alternative way to get to work.

As for the Klotz site, have they considered a small industrial center. Though large trucks would need to be accommodated, the traffic would be significantly less. And having a close freeway access would be a huge selling point for occupancy.

Thank you for your time.

Dr. Ken Schenck



## NATIVE AMERICAN HERITAGE COMMISSION

March 23, 2020

Scott Johnson  
City of Sacramento  
300 Richards Blvd., Third Floor  
Sacramento, CA 95811

**Re: 2020039059, Klotz Ranch Apartment Project, Sacramento County**

Dear Mr. Johnson:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b) (CEQA Guidelines § 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

CHAIRPERSON  
**Laura Miranda**  
Luiseño

VICE CHAIRPERSON  
**Reginald Pagaling**  
Chumash

SECRETARY  
**Merri Lopez-Keifer**  
Luiseño

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Paiute/White Mountain  
Apache

COMMISSIONER  
**Joseph Myers**  
Pomo

COMMISSIONER  
**Julie Tumamait-Stenslie**  
Chumash

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[Vacant]

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**Christina Snider**  
Pomo

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[NAHC.ca.gov](http://NAHC.ca.gov)

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
  - a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
  - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1 (b)).
  - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
  - a. Alternatives to the project.
  - b. Recommended mitigation measures.
  - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).
4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
  - a. Type of environmental review necessary.
  - b. Significance of the tribal cultural resources.
  - c. Significance of the project's impacts on tribal cultural resources.
  - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
  - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).



- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
    - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
    - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
  - b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    - i.** Protecting the cultural character and integrity of the resource.
    - ii.** Protecting the traditional use of the resource.
    - iii.** Protecting the confidentiality of the resource.
  - c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
  - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
  - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
  - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
  - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)



## SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf).

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

## NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

**3. Contact the NAHC for:**

- a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
- b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

**4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.**

- a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, § 15064.5(f) (CEQA Guidelines § 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code § 7050.5, Public Resources Code § 5097.98, and Cal. Code Regs., tit. 14, § 15064.5, subdivisions (d) and (e) (CEQA Guidelines § 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: [Nancy.Gonzalez-Lopez@nahc.ca.gov](mailto:Nancy.Gonzalez-Lopez@nahc.ca.gov).

Sincerely,



Nancy Gonzalez-Lopez  
Staff Services Analyst

cc: State Clearinghouse



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**Treatment Plant**

8521 Laguna Station Road  
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**[www.regionalsan.com](http://www.regionalsan.com)**

March 23, 2020

Mr. Scott Johnson

City of Sacramento – Community Development Department  
300 Richards Boulevard, 3<sup>rd</sup> Floor  
Sacramento CA 95811

**Subject: Notice of Preparation of an Environmental Impact Report  
for the Klotz Ranch Apartment Project (P19-070)**

Dear Mr. Johnson,

Sacramento Regional County Sanitation District (Regional San) has the following comments pertaining to the Notice of Preparation of an Environmental Impact Report for the Klotz Ranch Apartment project (P19-070).

The proposed project includes construction of a 266-unit apartment complex consisting of six, four-story residential buildings and a two-story clubhouse on a 12.7-acre site.

Regional San is not a land-use authority. Projects identified within Regional San planning documents are based on growth projections provided by land-use authorities. Sewer studies may need to be completed to assess the impacts of any proposed project that has the potential to increase flow demands. Onsite and offsite impacts associated with constructing sanitary sewer facilities to provide service to the subject project site should be included in this environmental impact report.

Customers receiving service from Regional San are responsible for rates and fees outlined within the latest Regional San ordinances. Fees for connecting to the sewer system are set up to recover the capital investment of sewer treatment facilities that provides service to new customers. The Regional San ordinance is located on the Regional San website at: [www.regionalsan.com](http://www.regionalsan.com).

Local sanitary sewer service for the proposed project site will be provided by the City of Sacramento's (City) local sewer collection system. Ultimate conveyance of wastewater from the City collection system to the Sacramento Regional Wastewater Treatment Plant (SRWTP) for treatment and disposal will be provided via Sump 2/2A and the Regional San City Interceptor system. Cumulative impacts of the proposed project will need to be quantified by the project proponents to ensure that wet and dry weather capacity limitations within Sump 2/2A and the City Interceptor are not exceeded.

On March 13, 2013, Regional San approved the Wastewater Operating Agreement between Regional San and the City. The following limitations are outlined in the subject Agreement:

| <i>Service Area</i>  | <i>Flow Rate (MGD)</i> |
|--|------------------------|
| <i>Combined Flows from Sump 2 and Sump 2A</i>  | <i>60</i>              |
| <i>Combined flows from Sumps 2, 2A, 21, 55, and 119</i>  | <i>98</i>              |
| <i>Total to City Interceptor of combined flows from Sumps 2, 2A, 21, 55, 119, and five trunk connections</i> | <i>108.5</i>           |

The SRWTP provides secondary treatment using an activated sludge process. Incoming wastewater flows through mechanical bar screens through a primary sedimentation process. This allows most of the heavy organic solids to settle to the bottom of the tanks. These solids are later delivered to the digesters. Next, oxygen is added to the wastewater to grow naturally occurring microscopic organisms, which consume the organic particles in the wastewater. These organisms eventually settle on the bottom of the secondary clarifiers. Clean water pours off the top of these clarifiers and is chlorinated, removing any pathogens or other harmful organisms that may still exist. Chlorine disinfection occurs while the wastewater travels through a two mile “outfall” pipeline to the Sacramento River, near the town of Freeport, California. Before entering the river, sulfur dioxide is added to neutralize the chlorine. The design of the SRWTP and collection system was balanced to have SRWTP facilities accommodate some of the wet weather flows while minimizing idle SRWTP facilities during dry weather. The SRWTP was designed to accommodate some wet weather flows while the storage basins and interceptors were designed to accommodate the remaining wet weather flows.

A NPDES Discharge Permit was issued to Regional San by the Central Valley Regional Water Quality Control Board (Water Board) in December 2010. In adopting the new Discharge Permit, the Water Board required Regional San to meet significantly more restrictive treatment levels over its current levels. Regional San believed that many of these new conditions go beyond what is reasonable and necessary to protect the environment, and appealed the permit decision to the State Water Resources Control Board (State Board). In December 2012, the State Board issued an Order that effectively upheld the Permit. As a result, Regional San filed litigation in California Superior Court. Regional San and the Water Board agreed to a partial settlement in October 2013 to address several issues and a final settlement on the remaining issues were heard by the Water Board in August 2014. Regional San began the necessary activities, studies and projects to meet the permit conditions. The new treatment facilities to achieve the permit and settlement requirements must be completed by May 2021 for ammonia and nitrate and May 2023 for the pathogen requirements.

Mr. Scott Johnson  
March 23, 2020  
(P19-070)  
Page 3

Regional San currently owns and operates a 5-mgd Water Reclamation (WRF) that has been producing Title 22 tertiary recycled since 2003. The WRF is located within the SRWTP property in Elk Grove. A portion of the recycled water is used by Regional San at the SRWTP and the rest is wholesaled to the Sacramento County Water Agency (SCWA).

SCWA retails the recycled water, primarily for landscape irrigation use, to select customers in the City of Elk Grove. It should be noted that Regional San currently does not have any planned facilities that could provide recycled water to the proposed project or its vicinity. Additionally, Regional San is not a water purveyor and any potential use of recycled water in the project area must be coordinated between the key stakeholders, e.g. land use jurisdictions, water purveyors, users, and the recycled water producers.

If you have any questions regarding this letter, please feel free to contact me at (916) 876-6104 or by email: [armstrongro@sacsewer.com](mailto:armstrongro@sacsewer.com).

Sincerely,

*Robb Armstrong*

Robb Armstrong  
Regional San Development Services & Plan Check

April 3, 2020

Scott Johnson  
City of Sacramento  
Community Development Department  
300 Richards Boulevard, 3<sup>rd</sup> Floor  
Sacramento, CA 95811

**Subject: Klotz Ranch Apartments**  
**APN: 031-1550-002**  
**File No.: P19-070**

Dear Mr. Johnson,

The Sacramento Area Sewer District (SASD) has reviewed the subject documents.

The applicant is requesting comment on the NOP of an EIR for the Klotz Ranch Apartment Project.

The subject property is outside the boundaries of SASD but within the Urban Service Boundary and Sacramento Regional County Sanitation District (Regional San) boundaries. Regional San will provide ultimate conveyance and treatment of the sewer generated from this site, but the Sacramento City Utilities Department's approval will be required for local sewage service.

If you have any questions regarding these comments, please call me at 916-876-9991 or Yadira Lewis 916-876-6336.

Sincerely,

*Haley MacGowan*

Haley MacGowan, EIT  
SASD Development Services

[www.sacsewer.com](http://www.sacsewer.com)

**Board of Directors**

Representing:

County of Sacramento | City of Citrus Heights  
City of Elk Grove | City of Folsom  
City of Rancho Cordova | City of Sacramento

**Prabhakar Somavarapu**  
District Engineer

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**Christoph Dobson**  
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**Joseph Maestretti**  
Chief Financial Officer

**Nicole Coleman**  
Public Affairs Manager

**From:** [Justin Le](#)  
**To:** [Scott Johnson](#)  
**Subject:** SCH# 2020039059  
**Date:** Tuesday, April 21, 2020 1:51:22 PM

---

The State Clearinghouse would like to inform you that our office will be transitioning from providing a hard copy of acknowledging the close of review period on your project to electronic mail system.

**Please visit:** <https://ceqanet.opr.ca.gov/2020039059/2> for full details about your project and if any state agencies submitted comments by close of review period (note: any state agencies in **bold**, submitted comments and are available).

This email acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please email the State Clearinghouse at [state.clearinghouse@opr.ca.gov](mailto:state.clearinghouse@opr.ca.gov) for any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Justin Le | Student Assistant

**Governor's Office of Planning and Research**

**State Clearinghouse Unit**

1400 10th Street, Room 113

Sacramento, CA 95814

(916) 445-0613

April 15, 2020

SENT VIA E-MAIL ONLY

Scott Johnson  
City of Sacramento  
Community Development Department  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811

**RE: Notice of Preparation of an Environmental Impact Report for the Klotz Ranch Apartments Project (P19-070) (SAC201902268)**

Dear Mr. Johnson:

Thank you for providing the Notice of Preparation of the Environmental Impact Report for the Klotz Ranch Apartments project to the Sacramento Metropolitan Air Quality Management District (Sac Metro Air District). The proposed project consists of the construction and operation of a 266-unit apartment complex (six four-story buildings) and a two-story clubhouse on an approximately 12.7-acre property located south of Pocket Road between Interstate 5 and Freeport Boulevard in south Sacramento. An initial study (IS) has been prepared to evaluate the environmental effects of this project and to ensure compliance under the California Environmental Quality Act (CEQA). Based on the findings of the Initial Study, the City determined that potentially significant impacts to air quality, greenhouse gas emissions, transportation and traffic could result from implementation of the project. A focused EIR will be prepared to analyze potential impacts related to these topics.

Air Quality Impacts

The Notice of Preparation states that the impacts of the project on air quality will be evaluated. Please examine the types and levels of emissions generated by the project, the existing air quality conditions, and the impact of the project on emissions of nitrogen oxides, reactive organic gases, particulate matter (PM10 and PM2.5) including from exhaust and fugitive dust, and toxic air contaminants. Analyze and disclose both construction and operational emissions. Evaluate possible onsite and offsite mitigation measures to reduce construction and operational emissions from this project. Please see our [CEQA Guidance, Guide to Air Quality Assessment in Sacramento County \(CEQA Guide\)](#), which provides direction on analysis and includes [thresholds of significance](#) for particulate matter and other criteria pollutants.

Greenhouse Gas Emissions

The Notice of Preparation states that the impacts of the project on greenhouse gas emissions and climate change will be evaluated. Please evaluate the project's consistency with the City of Sacramento's Climate Action Plan.

In addition, the Sac Metro Air District recommends that the project achieve consistency with the applicable recommendations of the Mayors' Commission on Climate Change. Sacramento Mayor Darrell Steinberg and Mayor Christopher Cabaldon of West Sacramento



are leading an effort to develop a common vision and set of strategies for both cities to achieve net zero greenhouse gas emissions by 2045. The Commission's recommendations to help achieve this goal include: *Mandate all-electric construction to eliminate fossil fuel use in new buildings by 2023*. Please analyze the impact of building all-electric residences, and installing no natural gas connections, on project GHG emissions.

#### Urban Heat Island Effect

The Sac Metro Air District recommends an analysis of the proposed project's features that contribute to increases in the urban heat island effect. Impervious surfaces, such as those created with traditional urban paving materials, have less surface moisture available for evapotranspiration than natural ground cover. This characteristic contributes to higher surface and air temperatures, known as heat island effect. As a result, air temperatures in the project's parking lots and other paved areas may contribute to increased area temperatures. Higher ambient temperatures increase formation of ozone, a respiratory system irritant. During extreme heat and extended heat waves, these higher temperatures can lead to heat stress, heat stroke, and even heat mortality, especially for the elderly, the young, and those with pre-existing health conditions. The urban heat island effect also contributes to increased greenhouse gas emissions by increasing use of electricity for air conditioning.

Analyze the feasibility of deploying measures such as tree canopy, cool roofs, and cool pavements to reduce the urban heat island effect. The widespread use of these measures and other strategies can help to cool ambient temperatures, lower building energy use, and protect the public from excessive heat.

#### Consistency with Existing Plans

Please evaluate the project's consistency with existing plans, especially those that reduce emissions of criteria air pollutants and greenhouse gases. Such plans include, but are not limited to: (1) the current Metropolitan Transportation Plan/Sustainable Communities Strategy; (2) the City of Sacramento 2035 General Plan; (3) the City of Sacramento's Pedestrian Master Plan and 2016 Bicycle Master Plan.

#### Design Recommendation - Emissions Exposure Reduction Measures

Due to this project's proximity to Interstate 5, the proponent should consider reducing exposure to toxic air contaminants of project residents by planting a vegetation barrier along the western boundary of the project. Vegetation barriers designed, installed and maintained in accordance with the Sac Metro Air District's [Landscaping Guidance to Improve Air Quality Near Major Roadways](#) can reduce exposure of project residents to particulate matter and other toxic air contaminants emitted by vehicles on Interstate 5. For more information on the effectiveness of near-roadway vegetation barriers, please refer to the US EPA's [Recommendations for Constructing Vegetation Barriers to Improve Near-Roadway Air Quality](#). See also the California Air Resources Board's [Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways](#).

As an additional measure to reduce resident exposure to air pollutants generated by traffic on Interstate 5, the Sac Metro Air District recommends the planting of as many trees as possible throughout the project site. Urban trees improve air quality by absorbing gaseous pollutants such as ozone and nitrogen dioxide; intercepting particulate matter; increasing

Mr. Scott Johnson  
April 15, 2020  
Klotz Ranch Apartments Notice of Preparation  
Page 3

oxygen levels through photosynthesis; and providing shade, resulting in lower local air temperatures, thereby reducing ozone formation. Lower VOC-emitting tree species should be selected, which can be identified on the [Sacramento Tree Foundation's website](#). Tree canopy can provide additional health benefits: for example, shaded parking spaces help reduce emissions of volatile organic compounds (VOCs), an ozone precursor, from parked vehicles with internal combustion engines.

#### Air Quality Rules and Regulations

All projects are subject to Sac Metro Air District rules in effect at the time of construction and any construction project, regardless of the size, is required to implement the Sac Metro Air District's Basic Construction Emission Control Practices. The Basic Construction Emission Control Practices and the Rules & Regulations Statement are attached for your reference. A complete listing of current rules is available at [www.airquality.org](http://www.airquality.org) or by calling 916-874-4800.

Thank you for your consideration of these comments. Please send environmental documents, including air quality analyses, to [projectreview@airquality.org](mailto:projectreview@airquality.org). If you have any questions, please contact me at 916-874-4816 or [tduarte@airquality.org](mailto:tduarte@airquality.org).

Sincerely,



Teri Duarte, MPH  
Planner/Analyst

Cc: Paul Philley, AICP, Sac Metro Air District

Attachment

## **Attachment**

### **Sac Metro Air District BASIC CONSTRUCTION EMISSION CONTROL PRACTICES (BEST MANAGEMENT PRACTICES)**

The following Basic Construction Emissions Control Practices are considered feasible for controlling fugitive dust from a construction site. The practices also serve as best management practices (BMPs), allowing the use of the non-zero particulate matter significance thresholds.

Control of fugitive dust is required by District Rule 403 and enforced by District staff.

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- The following practices describe exhaust emission control from diesel powered fleets working at a construction site. California regulations limit idling from both on-road and off-road diesel powered equipment. The California Air Resources Board enforces the idling limitations.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Although not required by local or state regulation, many construction companies have equipment inspection and maintenance programs to ensure work and fuel efficiencies.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Lead agencies may add these emission control practices as Conditions of Approval (COA) or include in a Mitigation Monitoring and Reporting Program (MMRP).

### **Sac Metro Air District Rules & Regulations Statement (revised 6/2018)**

*The following statement is recommended as standard condition of approval or construction document language for **all** development projects within the Sacramento Metropolitan Air Quality Management District (Sac Metro Air District):*

All projects are subject to Sac Metro Air District rules in effect at the time of construction. A complete listing of current rules is available at [www.airquality.org](http://www.airquality.org) or by calling 916-874-4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

**Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from Sac Metro Air District prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the Sac Metro Air District early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a Sac Metro Air District permit or a California Air Resources Board portable equipment registration (PERP) (see Other Regulations below).

**Rule 402: Nuisance.** The developer or contractor is required to prevent dust or any emissions from onsite activities from causing injury, nuisance, or annoyance to the public.

**Rule 403: Fugitive Dust.** The developer or contractor is required to control dust emissions from earth moving activities, storage or any other construction activity to prevent airborne dust from leaving the project site.

**Rule 414: Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 BTU PER Hour.** The developer or contractor is required to install water heaters (including residence water heaters), boilers or process heaters that comply with the emission limits specified in the rule.

**Rule 417: Wood Burning Appliances.** This rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

**Rule 442: Architectural Coatings.** The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

**Rule 453: Cutback and Emulsified Asphalt Paving Materials.** This rule prohibits the use of certain types of cut back or emulsified asphalt for paving, road construction or road maintenance activities.

**Rule 460: Adhesives and Sealants.** The developer or contractor is required to use adhesives and sealants that comply with the volatile organic compound content limits specified in the rule.

**Rule 902: Asbestos.** The developer or contractor is required to notify the Sac Metro Air District of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

#### **Other Regulations (California Code of Regulations (CCR))**

**17 CCR, Division 3, Chapter 1, Subchapter 7.5, §93105 Naturally Occurring Asbestos:** The developer or contractor is required to notify the Sac Metro Air District of earth moving projects, greater than 1 acre in size in areas “Moderately Likely to Contain Asbestos” within eastern Sacramento County. The developer or contractor is required to comply with specific requirements for surveying, notification, and handling soil that contains naturally occurring asbestos.

**13 CCR, Division 3, Chapter 9, Article 5, Portable Equipment Registration Program:** The developer or contractor is required to comply with all registration and operational requirements of the portable equipment registration program such as recordkeeping and notification.

**13 CCR, Division 3, Chapter 9, Article 4.8, §2449(d)(2) and 13 CCR, Division 3, Chapter 10, Article 1, §2485 regarding Anti-Idling:** Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes. These apply to diesel powered off-road equipment and on-road vehicles, respectively.



***Sent Via E-Mail***

April 16, 2020

Scott Johnson  
Environmental Planning Services  
City of Sacramento, Community Development Department  
300 Richards Blvd., Third Floor, Sacramento, CA 95811  
(916) 808-5842  
[SRJohnson@cityofsacramento.org](mailto:SRJohnson@cityofsacramento.org)

Subject: **Klotz Ranch Apartments Project / NOP / 2020039059**

Dear Mr. Johnson,

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Notice of Preparation (NOP) for the Klotz Ranch Apartments Project (Project, SCH 2020039059). SMUD is the primary energy provider for Sacramento County and the proposed Project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed Project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

It is our desire that the Project EIR will acknowledge any Project impacts related to the following:

- Overhead and or underground transmission and distribution line easements. Please view the following links on [smud.org](http://smud.org) for more information regarding transmission encroachment:
  - <https://www.smud.org/en/Business-Solutions-and-Rebates/Design-and-Construction-Services>
  - <https://www.smud.org/en/Corporate/Do-Business-with-SMUD/Land-Use/Transmission-Right-of-Way>
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency
- Climate Change
- Cumulative impacts related to the need for increased electrical delivery
- The potential need to relocate and or remove any SMUD infrastructure that may be affected in or around the project area

More specifically, SMUD would like any subsequent CEQA documents for proposed Project activities, to include adequate evaluation of cumulative impacts to utility systems, the utility facilities needed to serve the Project, and any potential environmental issues associated with extending utility service to the proposed Project.

In addition, per our letter Re: Klotz Ranch (Project No. P19-070) sent January 10, 2020, SMUD requests the following conditions on the Applicant's Project to minimize impacts to SMUD facilities on or adjacent to the Project site

1. SMUD has existing overhead 69kV facilities on the east side of the project site along Freeport Blvd which will need to remain. The Applicant shall be responsible for maintaining all Cal OSHA and State of California Public Utilities Commission General Order No. 95 safety clearances during construction and upon building completion. If the required clearances cannot be maintained, the Applicant shall be responsible for the cost of relocation.
2. SMUD has existing underground 12kV facilities on the west of the project site which will need to remain. The Applicant shall be responsible for maintaining all Cal OSHA and State of California Public Utilities Commission General Order No. 128 safety clearances during construction and upon building completion. If the required clearances cannot be maintained, the Applicant shall be responsible for the cost of relocation.
3. In the event the Applicant requires the relocation or removal of existing SMUD facilities on or adjacent to the subject property, the Applicant shall coordinate with SMUD. The Applicant shall be responsible for the cost of relocation or removal.
4. The Applicant shall not place any building foundations within 5-feet of any SMUD trench to maintain adequate trench integrity. The Applicant shall verify specific clearance requirements for other utilities (e.g., Gas, Telephone, etc.).
5. In the event the City requires an Irrevocable Offer of Dedication (IOD) for future roadway improvements, the Applicant shall dedicate a 12.5-foot public utility easement (PUE) for overhead and/or underground facilities and appurtenances adjacent to the City's IOD. Road improvements should be evaluated as part of the project.
6. The Applicant shall dedicate and provide all-weather vehicular access for service vehicles that are up to 26,000 pounds. At a minimum: (a) the drivable surface shall be 20-feet wide; and (b) all SMUD underground equipment and appurtenances shall be within 15-feet from the drivable surface.

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed Project. Please ensure that the information included in this response is conveyed to the Project planners and the appropriate Project proponents.

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this Project. Again, we appreciate the opportunity to provide input on this NOP. If you have any questions regarding this letter, please do not hesitate to contact me at 916.732.6676, or by email at [rob.ferrera@smud.org](mailto:rob.ferrera@smud.org).

Sincerely,

A handwritten signature in black ink, appearing to read 'Rob Ferrera', with a long horizontal line extending to the right.

Rob Ferrera  
Environmental Services Specialist  
Sacramento Municipal Utility District  
6201 S Street  
Sacramento, CA 95817

cc: Entitlements



April 16, 2020

Scott Johnson  
City of Sacramento Community Development Department  
300 Richards Boulevard, 3<sup>rd</sup> Floor  
Sacramento CA 95811

**Re: NOP Comment Letter for Klotz Ranch (P19-070)**

Dear Mr. Johnson:

Thank you for the opportunity to submit comments on the future content and scope of an Environmental Impact Report (EIR) for the Klotz Ranch application for a new development of 266 apartments in a 4-story building configuration. South Pocket Homeowners Association (SPHA) represents approximately 400 homes within the boundaries of Pocket Road, Interstate 5, Sacramento River, and Greenhaven Drive. Our neighborhood association has been working to represent our neighbors for over thirty years.

SPHA received your March 19 Notice of Preparation (NOP) for an EIR, which seeks comments from public agencies and members of the public regarding the content and scope of the EIR. The EIR will analyze potential significant impacts from the project on the environment, as well as analyzing alternatives to the project. SPHA provides our comments below.

**ISSUES THAT SHOULD BE ANALYZED IN THE EIR**

1. **Transportation System Impacts.** The Initial Study/Mitigated Negative Declaration (IS/MND) acknowledges on page 50 that potentially significant impacts could be placed on the existing transportation and circulation system. Our neighbors are already aware of multiple existing transportation problems in the vicinity and have tried to work with City Public Works for remedies, with no success to date.

Existing congestion on Pocket Road between Freeport Boulevard and Greenhaven Drive is significant at the AM and PM peak traffic times. This stretch of Pocket Road has three traffic signals, including the two off-ramps from Interstate 5 and the Klotz Ranch Court traffic signal. This stretch of Pocket Road is one of only three access points to the Pocket Area, the others being Florin Road and Riverside Boulevard, so additional congestion is undesirable.

Existing peak PM commute back-up on S/B Greenhaven Drive to turn east onto Pocket Road (discussed with Eric Poon, City PW, 2018, unmitigated to date) creates general congestion and significant impact on our neighborhood in particular. There are two left turn lanes on south-bound Greenhaven Drive to turn left onto Pocket Road. During the peak PM commute, these lanes fill up and motorists wishing to turn left back up all the way to Rush River Drive. The back-up encourages motorists to make rash and

unpredictable movements, such as darting out of the backed up lanes into the right lane. Many of our neighbors have commented about the problem.

The impact on our South Pocket neighborhood is an unintended and dangerous consequence of these drivers, frustrated at waiting to turn left, proceeding straight into our neighborhood, making a u-turn just south of the median on Greenhaven Drive, going back to Pocket Road and making a right turn to proceed on their way. Our Board of Directors has taken several reports from our neighbors about near accidents due to commuters making this u-turn in an attempt to avoid the back-up on Greenhaven Drive. We are unable to identify any mitigation measure that City Public Works has implemented to date.

Given the existing congestion on Pocket Road between Freeport and Greenhaven, and the existing back-up problem on Greenhaven Drive with direct impact to the safety of our neighbors, any additional traffic will create a dangerous and significant impact.

2. **Aesthetic Impact from Height.** The IS/MND acknowledges that the proposed project exceeds the maximum height for buildings with the SC zone and the Klotz Ranch Planned Unit Development (PUD) Guidelines on page 13. In addition, the IS/MND acknowledges that the proposed four-story project “would feature prominently from public vantage points along Pocket Road, Freeport Boulevard, and I-5” on page 15 because existing development in the surrounding area is all one and two-story structures.
3. **Impacts on Tribal Cultural Resources.** The IS/MND acknowledges on page 53 that impacts to Tribal cultural resources could be potentially significant but does not indicate that Tribal Consultation between the City and potentially affected Tribes is in progress or planned. The proposed project is fully subject to AB 52 Tribal Consultation requirements because the City of Sacramento, as the lead agency, filed a NOP after July 1, 2015.

At a minimum, the Wilton Rancheria Tribe is traditionally and culturally affiliated with the geographic area where the proposed project is located. Evidence for Wilton Rancheria’s affiliation is easily identifiable to the City, as Wilton Rancheria has been a federally recognized Tribe since 2009 and its Service Delivery Area (SDA) is Sacramento County.

United Auburn Indian Community (UAIC) is also traditionally and culturally affiliated with the geographic area where the proposed project is located. Similar to the Wilton Rancheria Tribe, evidence for UAIC’s affiliation is also readily identifiable to the City, as UAIC has been a federal recognized Tribe since 1994 and has demonstrated a consistent and active interest in development projects in the Sacramento region.

In addition, the proposed project's location in close proximity to the Sacramento River underscores the importance of the City's obligations for Tribal Consultation under AB 52.

## **ALTERNATIVES TO THE PROPOSED PROJECT THAT SHOULD BE ANALYZED**

The SPHA Board of Directors met with the applicant and numerous representatives on the evening of February 25, 2020, as requested, and received a full briefing on the proposed project. The briefing included a series of visual simulations from various vantage points. We heard the applicant pledge that Spanos Corporation would retain ownership of the property for a minimum of ten (10) years before selling it to another party, who may not retain the same property management best practices. We also heard the applicant pledge that a property manager would be on site 24 hours a day, 365 days a year, and would be available to triage complaints and problems during the time Spanos retains ownership. Therefore, the SPHA Board of Directors fully understands the proposed project and the applicant's statements.

Given that background, we suggest that the following alternatives to the proposed project be fully analyzed in the EIR.

1. Three-story height limitation
2. Two-story height limitation
3. Adhere to the original, council-approved Klotz Ranch PUD Guidelines and obtain high quality, sit-down restaurants on the property as the community has repeatedly requested over decades

The first two alternatives have the benefit of obtaining most of the project objectives while reducing significant impacts on the environment. The third alternative has the benefit of conforming with the approved PUD Guidelines and responding to the community's consistently expressed desires.

In closing, on behalf of our Board of Directors, thank you for the opportunity to comment on the NOP. SPHA members are concerned with this proposed project and we look forward to the City's response to our comments contained in this letter.

Thank you,

*Patricia A. Clark*

Patricia A. Clark  
President, South Pocket Homeowners Association (SPHA)  
7609 El Douro Drive  
Sacramento CA 95831  
(916) 601-7338



**From:** [Anna Starkey](#)  
**To:** [Scott Johnson](#); [Antonio Ruiz](#); [Ron Bess](#)  
**Cc:** [Rebecca Allen](#); [Matthew Moore](#)  
**Subject:** NOP for the Klotz Ranch site  
**Date:** Tuesday, March 24, 2020 3:51:55 PM  
**Attachments:** [image001.png](#)

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Hello Scott,

We have received the NOP for the Klotz Ranch project. I am writing to you to provide comments on behalf of UAIC. The tribal cultural resources (TCRs) section of the NOP states that no TCRs were identified based on a records search. This is problematic as tribal consultation should be one of the primary methods of identifying TCRs. The NOP stated on page 53 that no TCRs have been identified by Native American representatives even though we have specifically stated in previous emails and letters that we have identified the project area as sensitive with the potential for burials. The NOP seems to ignore this completely and only relies on the information used for the cultural resources section. Can you provide an explanation to this? Thank you.

Best,

Anna Starkey



**Anna M. Starkey, M.A., RPA**  
Cultural Regulatory Specialist  
Tribal Historic Preservation Department | UAIC  
10720 Indian Hill Road  
Auburn, CA 95603  
Direct line: (916) 251-1565 | Cell: (530) 863-6503  
[astarkey@auburnrancheria.com](mailto:astarkey@auburnrancheria.com) | [www.auburnrancheria.com](http://www.auburnrancheria.com)

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Nothing in this e-mail is intended to constitute an electronic signature for purposes of the Electronic Signatures in Global and National Commerce Act (E-Sign Act), 15, U.S.C. §§ 7001 to 7006 or the Uniform Electronic Transactions Act of any state or the federal government unless a specific statement to the contrary is included in this e-mail.

**From:** [Cultural Resource Department Inbox](#)  
**To:** [Scott Johnson](#)  
**Cc:** [Cultural Resource Department Inbox](#)  
**Subject:** Klotz Ranch Apartments Project (P19-070)  
**Date:** Tuesday, April 7, 2020 12:34:21 PM  
**Attachments:** [image001.png](#)  
[1 Mitigation Measures CEQA TCR Avoidance 04-19-19.docx](#)  
[2 Mitigation Measures CEQA Discoveries 04-19-19.docx](#)  
[3 Mitigation Measures CEQA Discoveries PostGroundDist SiteVisit 04-19-19.docx](#)  
[4 Mitigation Measures CEQA Construction Worker Awareness Training 04-19-19.docx](#)

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Good afternoon,

Thanks for the notice of preparation of an environmental impact report. Attached are mitigation measures we would like to include considering this project lies within a culturally sensitive area.

Thank you



**Mariah Mayberry**

Wilton Rancheria  
Tel: 916.683.6000 ext 2023 | Fax: 916.683.6015  
9728 Kent Street | Elk Grove | CA | 95624  
[mmayberry@wiltonrancheria-nsn.gov](mailto:mmayberry@wiltonrancheria-nsn.gov)  
[wiltonrancheria-nsn.gov](http://wiltonrancheria-nsn.gov)

## Tribal Cultural Resource Avoidance Mitigation Measure

Avoidance and preservation in place is the preferred manner of mitigating impacts to tribal cultural resources and will be accomplished by several means, including:

- Planning construction to avoid tribal cultural resources, archaeological sites and/ or other resources; incorporating sites within parks, green-space or other open space; covering archaeological sites; deeding a site to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity. Recommendations for avoidance of cultural resources will be reviewed by the CEQA lead agency representative, interested Native American Tribes and the appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project area to avoid cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or modification or realignment to avoid highly significant features within a cultural resource. Native American Representatives from interested Native American Tribes will be allowed to review and comment on these analyses and shall have the opportunity to meet with the CEQA lead agency representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.
- If the resource can be avoided, the construction contractor(s), with paid Native American monitors from culturally affiliated Native American Tribes present, will install protective fencing outside the site boundary, including a buffer area, before construction restarts. The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an “Environmentally Sensitive Area”. Native American representatives from interested Native American Tribes and the CEQA lead agency representative will also consult to develop measures for long term management of the resource and routine operation and maintenance within culturally sensitive areas that retain resource integrity, including tribal cultural integrity, and including archaeological material, Traditional Cultural Properties and cultural landscapes, in accordance with state and federal guidance including National Register Bulletin 30 (*Guidelines for Evaluating and Documenting Rural Historic Landscapes*), Bulletin 36 (*Guidelines for Evaluating and Registering Archaeological Properties*), and Bulletin 38 (*Guidelines for Evaluating and Documenting Traditional Cultural Properties*); National Park Service Preservation Brief 36 (*Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes*) and using the Advisory Council on Historic Preservation (ACHP) *Native American Traditional Cultural Landscapes Action Plan* for further guidance. Use of temporary and

## Tribal Cultural Resource Avoidance Mitigation Measure

permanent forms of protective fencing will be determined in consultation with Native American representatives from interested Native American Tribes.



## Inadvertent Discoveries Mitigation Measures

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Develop a standard operating procedure, points of contact, timeline and schedule for the project so all possible damages can be avoided or alternatives and cumulative impacts properly accessed.

If potential tribal cultural resources, archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease in the immediate vicinity of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from an interested Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations will be documented in the project record. For any recommendations made by interested Native American Tribes which are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

If adverse impacts to tribal cultural resources, unique archeology, or other cultural resources occurs, then consultation with Wilton Rancheria regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 should occur, in order to coordinate for compensation for the impact by replacing or providing substitute resources or environments.

## Post-Ground Disturbance Site Visit Mitigation Measure

A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the applicant shall notify the CEQA lead agency representative of the proposed earthwork start-date, in order to provide the CEQA lead agency representative with time to contact the Wilton Rancheria tribal representative shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of ground-breaking activity. During this inspection, a site meeting of construction personnel shall also be held in order to afford the tribal representative the opportunity to provide tribal cultural resources awareness information. If any tribal cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during this initial inspection or during any subsequent construction activities, work shall be suspended within 100 feet of the find, and the project applicant shall immediately notify the CEQA lead agency representative. The project applicant shall coordinate any necessary investigation of the site with a Wilton Rancheria tribal representative, a qualified archaeologist approved by the City, and as part of the site investigation and resource assessment the archeologist shall consult with the Wilton Rancheria and provide proper management recommendations should potential impacts to the resources be found by the CEQA lead agency representative to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the CEQA lead agency representative by the qualified archaeologist. Possible management recommendations for tribal cultural resources, historical, or unique archaeological resources could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, preservation in place or other measures. The contractor shall implement any measures deemed by CEQA lead agency representative staff to be necessary and feasible to avoid or minimize significant effects to the cultural resources, including the use of a Native American Monitor whenever work is occurring within 100 feet of the find.

## Tribal Cultural Resource – Awareness Training - Mitigation Measure

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A consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in project implementation will be developed in coordination with interested Native American Tribes. The brochure will be distributed and the training will be conducted in coordination with qualified cultural resources specialists and Native American Representatives and Monitors from culturally affiliated Native American Tribes before any stages of project implementation and construction activities begin on the project site. The program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and behaviors, consistent with Native American Tribal values.

**From:** [Brianna Moland](#)  
**To:** [Scott Johnson](#)  
**Cc:** [Dana Repan](#); [Raymond Costantino](#)  
**Subject:** RE: Klotz Ranch Apartments (P19-070) - CEQA Notice of Preparation of an EIR  
**Date:** Tuesday, March 24, 2020 3:18:20 PM

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Hi Scott,

This project is anticipated to house approximately 472 individuals, however, negative impacts on our parks system are not anticipated. The closest parks to the proposed project site are Richard Marriot Park, Edwin L. Z' Berg Park, the Bill Conlin Youth Sports Complex, Freeport Park, and LeVar Burton Park.

This project would generate approximately \$595,090 in Park Impact Fees, and based on payment of the park fees, the proposed project would not adversely affect the capacity or physical conditions of existing local parks and recreation facilities.

The project would also provide direct access to the future Del Rio Trail, a proposed 4.8-mile pedestrian and bicycle trail that runs between I-5 and Freeport Boulevard. In our comment memo for this project, we requested that the applicant clearly marks the trail access from the Klotz Ranch development to the Del Rio Trail.

Thank you,

Brianna Moland  
Assistant Planner, Park Planning and Development Services  
Department of Youth, Parks, and Community Enrichment  
**City of Sacramento**  
**915 I Street,**  
**Sacramento, CA 95814**  
[bmoland@cityofsacramento.org](mailto:bmoland@cityofsacramento.org)  
(916) 808-6188

---

**From:** Scott Johnson <[SRJohnson@cityofsacramento.org](mailto:SRJohnson@cityofsacramento.org)>  
**Sent:** Friday, March 20, 2020 11:28 AM  
**To:** Scott Johnson <[SRJohnson@cityofsacramento.org](mailto:SRJohnson@cityofsacramento.org)>  
**Cc:** Angel Anguiano <[AAnguiano@cityofsacramento.org](mailto:AAnguiano@cityofsacramento.org)>  
**Subject:** Klotz Ranch Apartments (P19-070) - CEQA Notice of Preparation of an EIR

**NOTICE OF PREPARATION OF AN  
ENVIRONMENTAL IMPACT REPORT FOR  
THE KLOTZ RANCH APARTMENT PROJECT (P19-070)**

-  
**COMMENT PERIOD: March 20, 2020 to April 20, 2020**  
-

The City of Sacramento (City) is the Lead Agency for preparation of an Environmental Impact Report (EIR) for the proposed Klotz Ranch Apartments project. The EIR to be prepared by the City will evaluate potential significant environmental effects of the proposed Klotz Ranch Apartments project and other actions and transactions associated with the proposed project. Written comments regarding the issues that should be covered in the Focused EIR, including potential alternatives to the proposed Klotz Ranch Apartments project and the scope of the analysis, are invited.

The EIR for the proposed Klotz Ranch Apartments project is being prepared in compliance with the California Environmental Quality Act (CEQA). Under CEQA, upon deciding to prepare an EIR, the City as lead agency must issue a Notice of Preparation (NOP) to inform trustee agencies, responsible agencies, and the public of that decision. The purpose of the NOP is to provide information describing the project and its potential environmental effects to those who may wish to comment regarding the scope and content of the information to be included in the EIR. The NOP (attached) and Initial Study are available on the City's Community Development Department webpage at: <http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx>

Direct document links:

**Klotz Ranch Apartments (P19-070)**

- [Notice of Preparation](#)
- [Initial Study](#)

Written Comments in response to the NOP may be submitted to the address or email below. Email would be preferred.

Thank you,

Scott Johnson, Senior Planner  
City of Sacramento  
Community Development Department  
Environmental Planning Services  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811  
(916) 808-5842  
[srjohnson@cityofsacramento.org](mailto:srjohnson@cityofsacramento.org)



# Appendix C

## **Air Quality and Greenhouse Gas Emissions Calculations**





## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

## Klotz Ranch Apartments

### Sacramento Metropolitan AQMD Air District, Annual

## 1.0 Project Characteristics

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### 1.1 Land Usage

| Land Uses              | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|------------------------|--------|---------------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 5.00   | Acre          | 5.00        | 217,800.00         | 0          |
| Racquet Club           | 6.30   | 1000sqft      | 0.14        | 6,300.00           | 0          |
| Apartments Mid Rise    | 266.00 | Dwelling Unit | 12.70       | 266,000.00         | 710        |

### 1.2 Other Project Characteristics

|                             |                                       |                             |       |                             |         |
|-----------------------------|---------------------------------------|-----------------------------|-------|-----------------------------|---------|
| Urbanization                | Rural                                 | Wind Speed (m/s)            | 3.5   | Precipitation Freq (Days)   | 58      |
| Climate Zone                | 6                                     |                             |       | Operational Year            | 2022    |
| Utility Company             | Sacramento Municipal Utility District |                             |       |                             |         |
| CO2 Intensity<br>(lb/MW hr) | 590.31                                | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.00617 |

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

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

Project Characteristics - PG&E GHG emission factor based on <https://www.pgecurrents.com/2018/03/26/independent-registry-confirms-record-low-carbonemissions-for-pge/>

Land Use - 12.7 acres based on project data. Raquet Club land use represents the 6,300 ft2, two-story clubhouse. Parking/roads estimated to be 5 acres.

Construction Phase - Construction phases based on Project Description

Trips and VMT - per project description.

Grading - Cut and fill volumes provided by client.

Vehicle Trips - Trip rates were updated based on traffic study of 1,448 trips per weekday. The racquet club land use represents a clubhouse and does not attract additional trips, so they are set to zero.

Vehicle Emission Factors - Use of EMFAC2017 Emission Factors

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final mitigation for onsite equipment.

| Table Name              | Column Name                  | Default Value | New Value |
|-------------------------|------------------------------|---------------|-----------|
| tblArchitecturalCoating | ConstArea_Parking            | 13,068.00     | 0.00      |
| tblAreaCoating          | Area_Parking                 | 13068         | 0         |
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed | 0             | 15        |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 9.00      |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|                         |                            |           |              |
|-------------------------|----------------------------|-----------|--------------|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                    | 30.00     | 15.00        |
| tblFleetMix             | HHD                        | 0.02      | 0.02         |
| tblFleetMix             | HHD                        | 0.02      | 0.00         |
| tblFleetMix             | HHD                        | 0.02      | 0.02         |
| tblFleetMix             | LDA                        | 0.56      | 0.55         |
| tblFleetMix             | LDA                        | 0.56      | 0.00         |
| tblFleetMix             | LDA                        | 0.56      | 0.55         |
| tblFleetMix             | LDT1                       | 0.04      | 0.05         |
| tblFleetMix             | LDT1                       | 0.04      | 0.00         |
| tblFleetMix             | LDT1                       | 0.04      | 0.05         |
| tblFleetMix             | LDT2                       | 0.21      | 0.18         |
| tblFleetMix             | LDT2                       | 0.21      | 0.00         |
| tblFleetMix             | LDT2                       | 0.21      | 0.18         |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|             |      |             |             |
|-------------|------|-------------|-------------|
| tblFleetMix | LHD1 | 0.02        | 0.03        |
| tblFleetMix | LHD1 | 0.02        | 0.00        |
| tblFleetMix | LHD1 | 0.02        | 0.03        |
| tblFleetMix | LHD2 | 5.2450e-003 | 6.2050e-003 |
| tblFleetMix | LHD2 | 5.2450e-003 | 0.00        |
| tblFleetMix | LHD2 | 5.2450e-003 | 6.2050e-003 |
| tblFleetMix | MCY  | 5.8840e-003 | 5.2070e-003 |
| tblFleetMix | MCY  | 5.8840e-003 | 0.00        |
| tblFleetMix | MCY  | 5.8840e-003 | 5.2070e-003 |
| tblFleetMix | MDV  | 0.12        | 0.13        |
| tblFleetMix | MDV  | 0.12        | 0.00        |
| tblFleetMix | MDV  | 0.12        | 0.13        |
| tblFleetMix | MH   | 8.6500e-004 | 9.1100e-004 |
| tblFleetMix | MH   | 8.6500e-004 | 0.00        |
| tblFleetMix | MH   | 8.6500e-004 | 9.1100e-004 |
| tblFleetMix | MHD  | 0.02        | 0.02        |
| tblFleetMix | MHD  | 0.02        | 0.00        |
| tblFleetMix | MHD  | 0.02        | 0.02        |
| tblFleetMix | OBUS | 2.0310e-003 | 1.6060e-003 |
| tblFleetMix | OBUS | 2.0310e-003 | 0.00        |
| tblFleetMix | OBUS | 2.0310e-003 | 1.6060e-003 |
| tblFleetMix | SBUS | 6.1900e-004 | 9.8400e-004 |
| tblFleetMix | SBUS | 6.1900e-004 | 0.00        |
| tblFleetMix | SBUS | 6.1900e-004 | 9.8400e-004 |
| tblFleetMix | UBUS | 2.0540e-003 | 1.3670e-003 |
| tblFleetMix | UBUS | 2.0540e-003 | 0.00        |
| tblFleetMix | UBUS | 2.0540e-003 | 1.3670e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|                           |                   |          |             |
|---------------------------|-------------------|----------|-------------|
| tblGrading                | AcresOfGrading    | 37.50    | 75.00       |
| tblGrading                | MaterialExported  | 0.00     | 20,100.00   |
| tblLandUse                | LotAcreage        | 7.00     | 12.70       |
| tblProjectCharacteristics | UrbanizationLevel | Urban    | Rural       |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripNumber  | 65.00    | 29.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripNumber  | 286.00   | 194.00      |
| tblTripsAndVMT            | WorkerTripNumber  | 57.00    | 39.00       |
| tblVehicleEF              | HHD               | 0.60     | 0.03        |
| tblVehicleEF              | HHD               | 0.07     | 0.06        |
| tblVehicleEF              | HHD               | 0.11     | 0.00        |
| tblVehicleEF              | HHD               | 2.43     | 6.38        |
| tblVehicleEF              | HHD               | 1.02     | 0.46        |
| tblVehicleEF              | HHD               | 3.28     | 5.1820e-003 |
| tblVehicleEF              | HHD               | 4,159.31 | 1,215.64    |
| tblVehicleEF              | HHD               | 1,651.06 | 1,538.11    |
| tblVehicleEF              | HHD               | 9.15     | 0.05        |
| tblVehicleEF              | HHD               | 22.32    | 7.16        |

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|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 3.36        | 3.68        |
| tblVehicleEF | HHD | 19.79       | 2.45        |
| tblVehicleEF | HHD | 0.04        | 6.7790e-003 |
| tblVehicleEF | HHD | 0.06        | 0.06        |
| tblVehicleEF | HHD | 0.03        | 0.04        |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 9.0000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 0.03        | 6.4850e-003 |
| tblVehicleEF | HHD | 0.03        | 0.03        |
| tblVehicleEF | HHD | 8.6320e-003 | 8.7710e-003 |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 8.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 1.5300e-004 | 9.0000e-006 |
| tblVehicleEF | HHD | 5.4300e-003 | 2.8400e-004 |
| tblVehicleEF | HHD | 0.63        | 0.47        |
| tblVehicleEF | HHD | 7.2000e-005 | 4.0000e-006 |
| tblVehicleEF | HHD | 0.11        | 0.07        |
| tblVehicleEF | HHD | 8.2400e-004 | 1.8220e-003 |
| tblVehicleEF | HHD | 0.09        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 0.01        |
| tblVehicleEF | HHD | 0.02        | 0.01        |
| tblVehicleEF | HHD | 1.4600e-004 | 1.0000e-006 |
| tblVehicleEF | HHD | 1.5300e-004 | 9.0000e-006 |
| tblVehicleEF | HHD | 5.4300e-003 | 2.8400e-004 |
| tblVehicleEF | HHD | 0.72        | 0.54        |
| tblVehicleEF | HHD | 7.2000e-005 | 4.0000e-006 |
| tblVehicleEF | HHD | 0.20        | 0.14        |

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|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 8.2400e-004 | 1.8220e-003 |
| tblVehicleEF | HHD | 0.10        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.57        | 0.03        |
| tblVehicleEF | HHD | 0.07        | 0.06        |
| tblVehicleEF | HHD | 0.10        | 0.00        |
| tblVehicleEF | HHD | 1.77        | 6.24        |
| tblVehicleEF | HHD | 1.03        | 0.46        |
| tblVehicleEF | HHD | 3.02        | 4.7730e-003 |
| tblVehicleEF | HHD | 4,406.18    | 1,213.68    |
| tblVehicleEF | HHD | 1,651.06    | 1,538.11    |
| tblVehicleEF | HHD | 9.15        | 0.05        |
| tblVehicleEF | HHD | 23.04       | 7.00        |
| tblVehicleEF | HHD | 3.15        | 3.45        |
| tblVehicleEF | HHD | 19.77       | 2.45        |
| tblVehicleEF | HHD | 0.03        | 5.8390e-003 |
| tblVehicleEF | HHD | 0.06        | 0.06        |
| tblVehicleEF | HHD | 0.03        | 0.04        |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 9.0000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 0.03        | 5.5870e-003 |
| tblVehicleEF | HHD | 0.03        | 0.03        |
| tblVehicleEF | HHD | 8.6320e-003 | 8.7710e-003 |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 8.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 4.0400e-004 | 2.5000e-005 |
| tblVehicleEF | HHD | 6.4540e-003 | 3.5200e-004 |
| tblVehicleEF | HHD | 0.59        | 0.49        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 1.9500e-004 | 1.2000e-005 |
| tblVehicleEF | HHD | 0.11        | 0.07        |
| tblVehicleEF | HHD | 8.4500e-004 | 1.9180e-003 |
| tblVehicleEF | HHD | 0.09        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 0.01        |
| tblVehicleEF | HHD | 0.02        | 0.01        |
| tblVehicleEF | HHD | 1.4200e-004 | 1.0000e-006 |
| tblVehicleEF | HHD | 4.0400e-004 | 2.5000e-005 |
| tblVehicleEF | HHD | 6.4540e-003 | 3.5200e-004 |
| tblVehicleEF | HHD | 0.68        | 0.57        |
| tblVehicleEF | HHD | 1.9500e-004 | 1.2000e-005 |
| tblVehicleEF | HHD | 0.20        | 0.14        |
| tblVehicleEF | HHD | 8.4500e-004 | 1.9180e-003 |
| tblVehicleEF | HHD | 0.10        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.65        | 0.03        |
| tblVehicleEF | HHD | 0.07        | 0.06        |
| tblVehicleEF | HHD | 0.12        | 0.00        |
| tblVehicleEF | HHD | 3.34        | 6.59        |
| tblVehicleEF | HHD | 1.01        | 0.46        |
| tblVehicleEF | HHD | 3.67        | 5.7450e-003 |
| tblVehicleEF | HHD | 3,818.40    | 1,218.35    |
| tblVehicleEF | HHD | 1,651.06    | 1,538.11    |
| tblVehicleEF | HHD | 9.15        | 0.06        |
| tblVehicleEF | HHD | 21.33       | 7.39        |
| tblVehicleEF | HHD | 3.43        | 3.75        |
| tblVehicleEF | HHD | 19.81       | 2.45        |
| tblVehicleEF | HHD | 0.04        | 8.0760e-003 |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 0.06        | 0.06        |
| tblVehicleEF | HHD | 0.03        | 0.04        |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 9.0000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 7.7270e-003 |
| tblVehicleEF | HHD | 0.03        | 0.03        |
| tblVehicleEF | HHD | 8.6320e-003 | 8.7710e-003 |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 8.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 4.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 5.5610e-003 | 3.0300e-004 |
| tblVehicleEF | HHD | 0.68        | 0.44        |
| tblVehicleEF | HHD | 1.6000e-005 | 1.0000e-006 |
| tblVehicleEF | HHD | 0.11        | 0.07        |
| tblVehicleEF | HHD | 8.9700e-004 | 1.9320e-003 |
| tblVehicleEF | HHD | 0.10        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 0.01        |
| tblVehicleEF | HHD | 0.02        | 0.01        |
| tblVehicleEF | HHD | 1.5200e-004 | 1.0000e-006 |
| tblVehicleEF | HHD | 4.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 5.5610e-003 | 3.0300e-004 |
| tblVehicleEF | HHD | 0.78        | 0.51        |
| tblVehicleEF | HHD | 1.6000e-005 | 1.0000e-006 |
| tblVehicleEF | HHD | 0.20        | 0.14        |
| tblVehicleEF | HHD | 8.9700e-004 | 1.9320e-003 |
| tblVehicleEF | HHD | 0.11        | 2.0000e-006 |
| tblVehicleEF | LDA | 4.2860e-003 | 2.5680e-003 |

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|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | LDA | 5.8650e-003 | 0.06        |
| tblVehicleEF | LDA | 0.61        | 0.69        |
| tblVehicleEF | LDA | 1.26        | 2.30        |
| tblVehicleEF | LDA | 252.52      | 260.95      |
| tblVehicleEF | LDA | 57.68       | 54.67       |
| tblVehicleEF | LDA | 0.05        | 0.04        |
| tblVehicleEF | LDA | 0.08        | 0.20        |
| tblVehicleEF | LDA | 1.7730e-003 | 1.5130e-003 |
| tblVehicleEF | LDA | 2.2990e-003 | 1.9700e-003 |
| tblVehicleEF | LDA | 1.6350e-003 | 1.3940e-003 |
| tblVehicleEF | LDA | 2.1140e-003 | 1.8110e-003 |
| tblVehicleEF | LDA | 0.04        | 0.07        |
| tblVehicleEF | LDA | 0.11        | 0.12        |
| tblVehicleEF | LDA | 0.03        | 0.05        |
| tblVehicleEF | LDA | 0.01        | 0.01        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.08        | 0.26        |
| tblVehicleEF | LDA | 2.5290e-003 | 2.5820e-003 |
| tblVehicleEF | LDA | 5.9800e-004 | 5.4100e-004 |
| tblVehicleEF | LDA | 0.04        | 0.07        |
| tblVehicleEF | LDA | 0.11        | 0.12        |
| tblVehicleEF | LDA | 0.03        | 0.05        |
| tblVehicleEF | LDA | 0.02        | 0.01        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.09        | 0.28        |
| tblVehicleEF | LDA | 5.0150e-003 | 3.0340e-003 |
| tblVehicleEF | LDA | 4.7840e-003 | 0.05        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | LDA | 0.78        | 0.89        |
| tblVehicleEF | LDA | 1.03        | 1.90        |
| tblVehicleEF | LDA | 280.47      | 289.33      |
| tblVehicleEF | LDA | 57.68       | 53.88       |
| tblVehicleEF | LDA | 0.05        | 0.04        |
| tblVehicleEF | LDA | 0.07        | 0.19        |
| tblVehicleEF | LDA | 1.7730e-003 | 1.5130e-003 |
| tblVehicleEF | LDA | 2.2990e-003 | 1.9700e-003 |
| tblVehicleEF | LDA | 1.6350e-003 | 1.3940e-003 |
| tblVehicleEF | LDA | 2.1140e-003 | 1.8110e-003 |
| tblVehicleEF | LDA | 0.11        | 0.18        |
| tblVehicleEF | LDA | 0.13        | 0.15        |
| tblVehicleEF | LDA | 0.08        | 0.12        |
| tblVehicleEF | LDA | 0.01        | 0.01        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.06        | 0.21        |
| tblVehicleEF | LDA | 2.8110e-003 | 2.8620e-003 |
| tblVehicleEF | LDA | 5.9400e-004 | 5.3300e-004 |
| tblVehicleEF | LDA | 0.11        | 0.18        |
| tblVehicleEF | LDA | 0.13        | 0.15        |
| tblVehicleEF | LDA | 0.08        | 0.12        |
| tblVehicleEF | LDA | 0.02        | 0.02        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.07        | 0.23        |
| tblVehicleEF | LDA | 4.0630e-003 | 2.3890e-003 |
| tblVehicleEF | LDA | 7.0460e-003 | 0.07        |
| tblVehicleEF | LDA | 0.58        | 0.66        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDA  | 1.57        | 2.88        |
| tblVehicleEF | LDA  | 245.02      | 253.39      |
| tblVehicleEF | LDA  | 57.68       | 55.77       |
| tblVehicleEF | LDA  | 0.06        | 0.05        |
| tblVehicleEF | LDA  | 0.09        | 0.23        |
| tblVehicleEF | LDA  | 1.7730e-003 | 1.5130e-003 |
| tblVehicleEF | LDA  | 2.2990e-003 | 1.9700e-003 |
| tblVehicleEF | LDA  | 1.6350e-003 | 1.3940e-003 |
| tblVehicleEF | LDA  | 2.1140e-003 | 1.8110e-003 |
| tblVehicleEF | LDA  | 0.01        | 0.02        |
| tblVehicleEF | LDA  | 0.11        | 0.12        |
| tblVehicleEF | LDA  | 7.3210e-003 | 0.01        |
| tblVehicleEF | LDA  | 0.01        | 9.6040e-003 |
| tblVehicleEF | LDA  | 0.05        | 0.28        |
| tblVehicleEF | LDA  | 0.10        | 0.31        |
| tblVehicleEF | LDA  | 2.4540e-003 | 2.5070e-003 |
| tblVehicleEF | LDA  | 6.0400e-004 | 5.5200e-004 |
| tblVehicleEF | LDA  | 0.01        | 0.02        |
| tblVehicleEF | LDA  | 0.11        | 0.12        |
| tblVehicleEF | LDA  | 7.3210e-003 | 0.01        |
| tblVehicleEF | LDA  | 0.01        | 0.01        |
| tblVehicleEF | LDA  | 0.05        | 0.28        |
| tblVehicleEF | LDA  | 0.10        | 0.34        |
| tblVehicleEF | LDT1 | 0.01        | 5.4680e-003 |
| tblVehicleEF | LDT1 | 0.02        | 0.08        |
| tblVehicleEF | LDT1 | 1.36        | 1.20        |
| tblVehicleEF | LDT1 | 3.32        | 2.50        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT1 | 313.76      | 308.81      |
| tblVehicleEF | LDT1 | 71.71       | 65.78       |
| tblVehicleEF | LDT1 | 0.13        | 0.10        |
| tblVehicleEF | LDT1 | 0.19        | 0.29        |
| tblVehicleEF | LDT1 | 2.6720e-003 | 2.0500e-003 |
| tblVehicleEF | LDT1 | 3.4480e-003 | 2.6030e-003 |
| tblVehicleEF | LDT1 | 2.4650e-003 | 1.8900e-003 |
| tblVehicleEF | LDT1 | 3.1710e-003 | 2.3940e-003 |
| tblVehicleEF | LDT1 | 0.16        | 0.16        |
| tblVehicleEF | LDT1 | 0.31        | 0.23        |
| tblVehicleEF | LDT1 | 0.10        | 0.10        |
| tblVehicleEF | LDT1 | 0.03        | 0.02        |
| tblVehicleEF | LDT1 | 0.20        | 0.80        |
| tblVehicleEF | LDT1 | 0.23        | 0.41        |
| tblVehicleEF | LDT1 | 3.1540e-003 | 3.0560e-003 |
| tblVehicleEF | LDT1 | 7.7500e-004 | 6.5100e-004 |
| tblVehicleEF | LDT1 | 0.16        | 0.16        |
| tblVehicleEF | LDT1 | 0.31        | 0.23        |
| tblVehicleEF | LDT1 | 0.10        | 0.10        |
| tblVehicleEF | LDT1 | 0.04        | 0.04        |
| tblVehicleEF | LDT1 | 0.20        | 0.80        |
| tblVehicleEF | LDT1 | 0.25        | 0.45        |
| tblVehicleEF | LDT1 | 0.01        | 6.3980e-003 |
| tblVehicleEF | LDT1 | 0.01        | 0.07        |
| tblVehicleEF | LDT1 | 1.70        | 1.51        |
| tblVehicleEF | LDT1 | 2.71        | 2.06        |
| tblVehicleEF | LDT1 | 346.93      | 337.97      |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT1 | 71.71       | 64.82       |
| tblVehicleEF | LDT1 | 0.12        | 0.09        |
| tblVehicleEF | LDT1 | 0.17        | 0.27        |
| tblVehicleEF | LDT1 | 2.6720e-003 | 2.0500e-003 |
| tblVehicleEF | LDT1 | 3.4480e-003 | 2.6030e-003 |
| tblVehicleEF | LDT1 | 2.4650e-003 | 1.8900e-003 |
| tblVehicleEF | LDT1 | 3.1710e-003 | 2.3940e-003 |
| tblVehicleEF | LDT1 | 0.41        | 0.40        |
| tblVehicleEF | LDT1 | 0.40        | 0.30        |
| tblVehicleEF | LDT1 | 0.25        | 0.25        |
| tblVehicleEF | LDT1 | 0.03        | 0.03        |
| tblVehicleEF | LDT1 | 0.19        | 0.79        |
| tblVehicleEF | LDT1 | 0.19        | 0.34        |
| tblVehicleEF | LDT1 | 3.4910e-003 | 3.3440e-003 |
| tblVehicleEF | LDT1 | 7.6400e-004 | 6.4100e-004 |
| tblVehicleEF | LDT1 | 0.41        | 0.40        |
| tblVehicleEF | LDT1 | 0.40        | 0.30        |
| tblVehicleEF | LDT1 | 0.25        | 0.25        |
| tblVehicleEF | LDT1 | 0.05        | 0.04        |
| tblVehicleEF | LDT1 | 0.19        | 0.79        |
| tblVehicleEF | LDT1 | 0.20        | 0.37        |
| tblVehicleEF | LDT1 | 0.01        | 5.1180e-003 |
| tblVehicleEF | LDT1 | 0.02        | 0.09        |
| tblVehicleEF | LDT1 | 1.31        | 1.14        |
| tblVehicleEF | LDT1 | 4.17        | 3.14        |
| tblVehicleEF | LDT1 | 304.87      | 301.05      |
| tblVehicleEF | LDT1 | 71.71       | 67.08       |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT1 | 0.15        | 0.11        |
| tblVehicleEF | LDT1 | 0.21        | 0.32        |
| tblVehicleEF | LDT1 | 2.6720e-003 | 2.0500e-003 |
| tblVehicleEF | LDT1 | 3.4480e-003 | 2.6030e-003 |
| tblVehicleEF | LDT1 | 2.4650e-003 | 1.8900e-003 |
| tblVehicleEF | LDT1 | 3.1710e-003 | 2.3940e-003 |
| tblVehicleEF | LDT1 | 0.04        | 0.04        |
| tblVehicleEF | LDT1 | 0.32        | 0.23        |
| tblVehicleEF | LDT1 | 0.02        | 0.02        |
| tblVehicleEF | LDT1 | 0.03        | 0.02        |
| tblVehicleEF | LDT1 | 0.24        | 0.97        |
| tblVehicleEF | LDT1 | 0.28        | 0.49        |
| tblVehicleEF | LDT1 | 3.0640e-003 | 2.9790e-003 |
| tblVehicleEF | LDT1 | 7.9000e-004 | 6.6400e-004 |
| tblVehicleEF | LDT1 | 0.04        | 0.04        |
| tblVehicleEF | LDT1 | 0.32        | 0.23        |
| tblVehicleEF | LDT1 | 0.02        | 0.02        |
| tblVehicleEF | LDT1 | 0.04        | 0.03        |
| tblVehicleEF | LDT1 | 0.24        | 0.97        |
| tblVehicleEF | LDT1 | 0.30        | 0.54        |
| tblVehicleEF | LDT2 | 6.1470e-003 | 3.8830e-003 |
| tblVehicleEF | LDT2 | 8.5390e-003 | 0.08        |
| tblVehicleEF | LDT2 | 0.83        | 0.94        |
| tblVehicleEF | LDT2 | 1.80        | 2.95        |
| tblVehicleEF | LDT2 | 354.77      | 334.69      |
| tblVehicleEF | LDT2 | 81.19       | 71.98       |
| tblVehicleEF | LDT2 | 0.08        | 0.08        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT2 | 0.15        | 0.33        |
| tblVehicleEF | LDT2 | 1.7350e-003 | 1.4940e-003 |
| tblVehicleEF | LDT2 | 2.3440e-003 | 1.8840e-003 |
| tblVehicleEF | LDT2 | 1.5960e-003 | 1.3750e-003 |
| tblVehicleEF | LDT2 | 2.1550e-003 | 1.7320e-003 |
| tblVehicleEF | LDT2 | 0.06        | 0.09        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.05        | 0.07        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.08        | 0.49        |
| tblVehicleEF | LDT2 | 0.12        | 0.36        |
| tblVehicleEF | LDT2 | 3.5550e-003 | 3.3110e-003 |
| tblVehicleEF | LDT2 | 8.4200e-004 | 7.1200e-004 |
| tblVehicleEF | LDT2 | 0.06        | 0.09        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.05        | 0.07        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.08        | 0.49        |
| tblVehicleEF | LDT2 | 0.13        | 0.40        |
| tblVehicleEF | LDT2 | 7.1660e-003 | 4.5690e-003 |
| tblVehicleEF | LDT2 | 6.9600e-003 | 0.06        |
| tblVehicleEF | LDT2 | 1.06        | 1.20        |
| tblVehicleEF | LDT2 | 1.48        | 2.42        |
| tblVehicleEF | LDT2 | 393.11      | 363.56      |
| tblVehicleEF | LDT2 | 81.19       | 70.93       |
| tblVehicleEF | LDT2 | 0.08        | 0.07        |
| tblVehicleEF | LDT2 | 0.14        | 0.30        |



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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT2 | 1.7350e-003 | 1.4940e-003 |
| tblVehicleEF | LDT2 | 2.3440e-003 | 1.8840e-003 |
| tblVehicleEF | LDT2 | 1.5960e-003 | 1.3750e-003 |
| tblVehicleEF | LDT2 | 2.1550e-003 | 1.7320e-003 |
| tblVehicleEF | LDT2 | 0.16        | 0.24        |
| tblVehicleEF | LDT2 | 0.17        | 0.18        |
| tblVehicleEF | LDT2 | 0.12        | 0.17        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.07        | 0.48        |
| tblVehicleEF | LDT2 | 0.09        | 0.30        |
| tblVehicleEF | LDT2 | 3.9410e-003 | 3.5970e-003 |
| tblVehicleEF | LDT2 | 8.3700e-004 | 7.0200e-004 |
| tblVehicleEF | LDT2 | 0.16        | 0.24        |
| tblVehicleEF | LDT2 | 0.17        | 0.18        |
| tblVehicleEF | LDT2 | 0.12        | 0.17        |
| tblVehicleEF | LDT2 | 0.03        | 0.03        |
| tblVehicleEF | LDT2 | 0.07        | 0.48        |
| tblVehicleEF | LDT2 | 0.10        | 0.32        |
| tblVehicleEF | LDT2 | 5.8250e-003 | 3.6190e-003 |
| tblVehicleEF | LDT2 | 0.01        | 0.09        |
| tblVehicleEF | LDT2 | 0.79        | 0.89        |
| tblVehicleEF | LDT2 | 2.24        | 3.70        |
| tblVehicleEF | LDT2 | 344.50      | 326.99      |
| tblVehicleEF | LDT2 | 81.19       | 73.41       |
| tblVehicleEF | LDT2 | 0.09        | 0.09        |
| tblVehicleEF | LDT2 | 0.17        | 0.37        |
| tblVehicleEF | LDT2 | 1.7350e-003 | 1.4940e-003 |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT2 | 2.3440e-003 | 1.8840e-003 |
| tblVehicleEF | LDT2 | 1.5960e-003 | 1.3750e-003 |
| tblVehicleEF | LDT2 | 2.1550e-003 | 1.7320e-003 |
| tblVehicleEF | LDT2 | 0.02        | 0.03        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.01        | 0.02        |
| tblVehicleEF | LDT2 | 0.01        | 0.02        |
| tblVehicleEF | LDT2 | 0.09        | 0.59        |
| tblVehicleEF | LDT2 | 0.14        | 0.43        |
| tblVehicleEF | LDT2 | 3.4510e-003 | 3.2350e-003 |
| tblVehicleEF | LDT2 | 8.5000e-004 | 7.2600e-004 |
| tblVehicleEF | LDT2 | 0.02        | 0.03        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.01        | 0.02        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.09        | 0.59        |
| tblVehicleEF | LDT2 | 0.15        | 0.47        |
| tblVehicleEF | LHD1 | 5.3360e-003 | 4.9860e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.01        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 0.15        | 0.18        |
| tblVehicleEF | LHD1 | 1.29        | 1.04        |
| tblVehicleEF | LHD1 | 2.70        | 1.08        |
| tblVehicleEF | LHD1 | 9.21        | 9.34        |
| tblVehicleEF | LHD1 | 701.67      | 805.85      |
| tblVehicleEF | LHD1 | 31.04       | 11.21       |
| tblVehicleEF | LHD1 | 0.09        | 0.08        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 1.97        | 1.40        |
| tblVehicleEF | LHD1 | 1.02        | 0.32        |
| tblVehicleEF | LHD1 | 9.9400e-004 | 9.3400e-004 |
| tblVehicleEF | LHD1 | 0.01        | 9.8680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.8000e-004 | 2.6300e-004 |
| tblVehicleEF | LHD1 | 9.5100e-004 | 8.9400e-004 |
| tblVehicleEF | LHD1 | 2.5200e-003 | 2.4670e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.0100e-004 | 2.4200e-004 |
| tblVehicleEF | LHD1 | 3.5820e-003 | 2.9780e-003 |
| tblVehicleEF | LHD1 | 0.11        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 1.4260e-003 | 1.1800e-003 |
| tblVehicleEF | LHD1 | 0.15        | 0.12        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.28        | 0.08        |
| tblVehicleEF | LHD1 | 9.2000e-005 | 9.0000e-005 |
| tblVehicleEF | LHD1 | 6.8890e-003 | 7.8580e-003 |
| tblVehicleEF | LHD1 | 3.6100e-004 | 1.1100e-004 |
| tblVehicleEF | LHD1 | 3.5820e-003 | 2.9780e-003 |
| tblVehicleEF | LHD1 | 0.11        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.03        |
| tblVehicleEF | LHD1 | 1.4260e-003 | 1.1800e-003 |
| tblVehicleEF | LHD1 | 0.18        | 0.15        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.30        | 0.09        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 5.3360e-003 | 5.0020e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.01        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 0.15        | 0.18        |
| tblVehicleEF | LHD1 | 1.32        | 1.07        |
| tblVehicleEF | LHD1 | 2.48        | 0.99        |
| tblVehicleEF | LHD1 | 9.21        | 9.34        |
| tblVehicleEF | LHD1 | 701.67      | 805.90      |
| tblVehicleEF | LHD1 | 31.04       | 11.06       |
| tblVehicleEF | LHD1 | 0.09        | 0.08        |
| tblVehicleEF | LHD1 | 1.84        | 1.30        |
| tblVehicleEF | LHD1 | 0.95        | 0.30        |
| tblVehicleEF | LHD1 | 9.9400e-004 | 9.3400e-004 |
| tblVehicleEF | LHD1 | 0.01        | 9.8680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.8000e-004 | 2.6300e-004 |
| tblVehicleEF | LHD1 | 9.5100e-004 | 8.9400e-004 |
| tblVehicleEF | LHD1 | 2.5200e-003 | 2.4670e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.0100e-004 | 2.4200e-004 |
| tblVehicleEF | LHD1 | 9.1870e-003 | 7.6550e-003 |
| tblVehicleEF | LHD1 | 0.14        | 0.11        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 3.6360e-003 | 3.0280e-003 |
| tblVehicleEF | LHD1 | 0.15        | 0.12        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.26        | 0.08        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 9.2000e-005 | 9.0000e-005 |
| tblVehicleEF | LHD1 | 6.8890e-003 | 7.8590e-003 |
| tblVehicleEF | LHD1 | 3.5700e-004 | 1.0900e-004 |
| tblVehicleEF | LHD1 | 9.1870e-003 | 7.6550e-003 |
| tblVehicleEF | LHD1 | 0.14        | 0.11        |
| tblVehicleEF | LHD1 | 0.02        | 0.03        |
| tblVehicleEF | LHD1 | 3.6360e-003 | 3.0280e-003 |
| tblVehicleEF | LHD1 | 0.19        | 0.15        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.29        | 0.09        |
| tblVehicleEF | LHD1 | 5.3360e-003 | 4.9680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.01        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 0.15        | 0.18        |
| tblVehicleEF | LHD1 | 1.26        | 1.02        |
| tblVehicleEF | LHD1 | 2.99        | 1.19        |
| tblVehicleEF | LHD1 | 9.21        | 9.34        |
| tblVehicleEF | LHD1 | 701.67      | 805.80      |
| tblVehicleEF | LHD1 | 31.04       | 11.41       |
| tblVehicleEF | LHD1 | 0.09        | 0.08        |
| tblVehicleEF | LHD1 | 2.02        | 1.43        |
| tblVehicleEF | LHD1 | 1.10        | 0.35        |
| tblVehicleEF | LHD1 | 9.9400e-004 | 9.3400e-004 |
| tblVehicleEF | LHD1 | 0.01        | 9.8680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.8000e-004 | 2.6300e-004 |
| tblVehicleEF | LHD1 | 9.5100e-004 | 8.9400e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 2.5200e-003 | 2.4670e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.0100e-004 | 2.4200e-004 |
| tblVehicleEF | LHD1 | 1.0290e-003 | 8.4400e-004 |
| tblVehicleEF | LHD1 | 0.12        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 3.7300e-004 | 3.0500e-004 |
| tblVehicleEF | LHD1 | 0.15        | 0.12        |
| tblVehicleEF | LHD1 | 0.39        | 0.67        |
| tblVehicleEF | LHD1 | 0.30        | 0.09        |
| tblVehicleEF | LHD1 | 9.2000e-005 | 9.0000e-005 |
| tblVehicleEF | LHD1 | 6.8880e-003 | 7.8580e-003 |
| tblVehicleEF | LHD1 | 3.6700e-004 | 1.1300e-004 |
| tblVehicleEF | LHD1 | 1.0290e-003 | 8.4400e-004 |
| tblVehicleEF | LHD1 | 0.12        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.03        |
| tblVehicleEF | LHD1 | 3.7300e-004 | 3.0500e-004 |
| tblVehicleEF | LHD1 | 0.18        | 0.15        |
| tblVehicleEF | LHD1 | 0.39        | 0.67        |
| tblVehicleEF | LHD1 | 0.33        | 0.10        |
| tblVehicleEF | LHD2 | 3.6020e-003 | 3.2890e-003 |
| tblVehicleEF | LHD2 | 9.9840e-003 | 8.6010e-003 |
| tblVehicleEF | LHD2 | 8.8820e-003 | 9.6210e-003 |
| tblVehicleEF | LHD2 | 0.12        | 0.14        |
| tblVehicleEF | LHD2 | 0.73        | 0.81        |
| tblVehicleEF | LHD2 | 1.31        | 0.64        |
| tblVehicleEF | LHD2 | 14.25       | 14.51       |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 720.74      | 795.82      |
| tblVehicleEF | LHD2 | 24.40       | 7.90        |
| tblVehicleEF | LHD2 | 0.11        | 0.11        |
| tblVehicleEF | LHD2 | 1.35        | 1.49        |
| tblVehicleEF | LHD2 | 0.53        | 0.20        |
| tblVehicleEF | LHD2 | 1.2940e-003 | 1.4230e-003 |
| tblVehicleEF | LHD2 | 0.01        | 0.01        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.4000e-004 | 1.3200e-004 |
| tblVehicleEF | LHD2 | 1.2380e-003 | 1.3620e-003 |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.0400e-004 | 1.2100e-004 |
| tblVehicleEF | LHD2 | 1.3190e-003 | 1.4950e-003 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.01        | 0.02        |
| tblVehicleEF | LHD2 | 5.6200e-004 | 6.1600e-004 |
| tblVehicleEF | LHD2 | 0.12        | 0.13        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |
| tblVehicleEF | LHD2 | 0.12        | 0.05        |
| tblVehicleEF | LHD2 | 7.0120e-003 | 7.6850e-003 |
| tblVehicleEF | LHD2 | 2.6800e-004 | 7.8000e-005 |
| tblVehicleEF | LHD2 | 1.3190e-003 | 1.4950e-003 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 5.6200e-004 | 6.1600e-004 |
| tblVehicleEF | LHD2 | 0.14        | 0.15        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 0.13        | 0.05        |
| tblVehicleEF | LHD2 | 3.6020e-003 | 3.2990e-003 |
| tblVehicleEF | LHD2 | 0.01        | 8.7180e-003 |
| tblVehicleEF | LHD2 | 8.3620e-003 | 9.0680e-003 |
| tblVehicleEF | LHD2 | 0.12        | 0.14        |
| tblVehicleEF | LHD2 | 0.74        | 0.82        |
| tblVehicleEF | LHD2 | 1.20        | 0.59        |
| tblVehicleEF | LHD2 | 14.25       | 14.51       |
| tblVehicleEF | LHD2 | 720.74      | 795.84      |
| tblVehicleEF | LHD2 | 24.40       | 7.81        |
| tblVehicleEF | LHD2 | 0.11        | 0.11        |
| tblVehicleEF | LHD2 | 1.26        | 1.40        |
| tblVehicleEF | LHD2 | 0.50        | 0.19        |
| tblVehicleEF | LHD2 | 1.2940e-003 | 1.4230e-003 |
| tblVehicleEF | LHD2 | 0.01        | 0.01        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.4000e-004 | 1.3200e-004 |
| tblVehicleEF | LHD2 | 1.2380e-003 | 1.3620e-003 |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.0400e-004 | 1.2100e-004 |
| tblVehicleEF | LHD2 | 3.3510e-003 | 3.8230e-003 |
| tblVehicleEF | LHD2 | 0.05        | 0.06        |
| tblVehicleEF | LHD2 | 0.01        | 0.02        |
| tblVehicleEF | LHD2 | 1.4060e-003 | 1.5620e-003 |
| tblVehicleEF | LHD2 | 0.12        | 0.13        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |
| tblVehicleEF | LHD2 | 0.11        | 0.05        |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 7.0120e-003 | 7.6850e-003 |
| tblVehicleEF | LHD2 | 2.6600e-004 | 7.7000e-005 |
| tblVehicleEF | LHD2 | 3.3510e-003 | 3.8230e-003 |
| tblVehicleEF | LHD2 | 0.05        | 0.06        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 1.4060e-003 | 1.5620e-003 |
| tblVehicleEF | LHD2 | 0.14        | 0.16        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |
| tblVehicleEF | LHD2 | 0.12        | 0.05        |
| tblVehicleEF | LHD2 | 3.6020e-003 | 3.2780e-003 |
| tblVehicleEF | LHD2 | 9.7880e-003 | 8.4740e-003 |
| tblVehicleEF | LHD2 | 9.5090e-003 | 0.01        |
| tblVehicleEF | LHD2 | 0.12        | 0.14        |
| tblVehicleEF | LHD2 | 0.72        | 0.80        |
| tblVehicleEF | LHD2 | 1.44        | 0.70        |
| tblVehicleEF | LHD2 | 14.25       | 14.51       |
| tblVehicleEF | LHD2 | 720.74      | 795.80      |
| tblVehicleEF | LHD2 | 24.40       | 8.02        |
| tblVehicleEF | LHD2 | 0.11        | 0.11        |
| tblVehicleEF | LHD2 | 1.38        | 1.53        |
| tblVehicleEF | LHD2 | 0.57        | 0.22        |
| tblVehicleEF | LHD2 | 1.2940e-003 | 1.4230e-003 |
| tblVehicleEF | LHD2 | 0.01        | 0.01        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.4000e-004 | 1.3200e-004 |
| tblVehicleEF | LHD2 | 1.2380e-003 | 1.3620e-003 |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 4.0400e-004 | 1.2100e-004 |
| tblVehicleEF | LHD2 | 4.0000e-004 | 4.4200e-004 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.01        | 0.02        |
| tblVehicleEF | LHD2 | 1.5100e-004 | 1.6400e-004 |
| tblVehicleEF | LHD2 | 0.12        | 0.13        |
| tblVehicleEF | LHD2 | 0.10        | 0.31        |
| tblVehicleEF | LHD2 | 0.13        | 0.05        |
| tblVehicleEF | LHD2 | 7.0110e-003 | 7.6850e-003 |
| tblVehicleEF | LHD2 | 2.7000e-004 | 7.9000e-005 |
| tblVehicleEF | LHD2 | 4.0000e-004 | 4.4200e-004 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 1.5100e-004 | 1.6400e-004 |
| tblVehicleEF | LHD2 | 0.14        | 0.15        |
| tblVehicleEF | LHD2 | 0.10        | 0.31        |
| tblVehicleEF | LHD2 | 0.14        | 0.06        |
| tblVehicleEF | MCY  | 0.44        | 0.34        |
| tblVehicleEF | MCY  | 0.17        | 0.26        |
| tblVehicleEF | MCY  | 20.29       | 20.27       |
| tblVehicleEF | MCY  | 10.10       | 8.92        |
| tblVehicleEF | MCY  | 168.00      | 210.86      |
| tblVehicleEF | MCY  | 47.74       | 63.07       |
| tblVehicleEF | MCY  | 1.16        | 1.16        |
| tblVehicleEF | MCY  | 0.32        | 0.27        |
| tblVehicleEF | MCY  | 1.9070e-003 | 1.9340e-003 |
| tblVehicleEF | MCY  | 3.6910e-003 | 3.1980e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MCY | 1.7870e-003 | 1.8120e-003 |
| tblVehicleEF | MCY | 3.4870e-003 | 3.0200e-003 |
| tblVehicleEF | MCY | 1.41        | 1.40        |
| tblVehicleEF | MCY | 0.93        | 0.92        |
| tblVehicleEF | MCY | 0.67        | 0.67        |
| tblVehicleEF | MCY | 2.37        | 2.37        |
| tblVehicleEF | MCY | 0.69        | 2.32        |
| tblVehicleEF | MCY | 2.26        | 2.00        |
| tblVehicleEF | MCY | 2.0800e-003 | 2.0870e-003 |
| tblVehicleEF | MCY | 7.0900e-004 | 6.2400e-004 |
| tblVehicleEF | MCY | 1.41        | 1.40        |
| tblVehicleEF | MCY | 0.93        | 0.92        |
| tblVehicleEF | MCY | 0.67        | 0.67        |
| tblVehicleEF | MCY | 2.89        | 2.89        |
| tblVehicleEF | MCY | 0.69        | 2.32        |
| tblVehicleEF | MCY | 2.46        | 2.17        |
| tblVehicleEF | MCY | 0.43        | 0.34        |
| tblVehicleEF | MCY | 0.14        | 0.22        |
| tblVehicleEF | MCY | 20.52       | 20.50       |
| tblVehicleEF | MCY | 9.12        | 8.02        |
| tblVehicleEF | MCY | 168.00      | 210.96      |
| tblVehicleEF | MCY | 47.74       | 60.52       |
| tblVehicleEF | MCY | 0.97        | 0.97        |
| tblVehicleEF | MCY | 0.29        | 0.25        |
| tblVehicleEF | MCY | 1.9070e-003 | 1.9340e-003 |
| tblVehicleEF | MCY | 3.6910e-003 | 3.1980e-003 |
| tblVehicleEF | MCY | 1.7870e-003 | 1.8120e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MCY | 3.4870e-003 | 3.0200e-003 |
| tblVehicleEF | MCY | 3.91        | 3.89        |
| tblVehicleEF | MCY | 1.50        | 1.50        |
| tblVehicleEF | MCY | 2.18        | 2.16        |
| tblVehicleEF | MCY | 2.30        | 2.30        |
| tblVehicleEF | MCY | 0.68        | 2.28        |
| tblVehicleEF | MCY | 1.89        | 1.66        |
| tblVehicleEF | MCY | 2.0810e-003 | 2.0880e-003 |
| tblVehicleEF | MCY | 6.8200e-004 | 5.9900e-004 |
| tblVehicleEF | MCY | 3.91        | 3.89        |
| tblVehicleEF | MCY | 1.50        | 1.50        |
| tblVehicleEF | MCY | 2.18        | 2.16        |
| tblVehicleEF | MCY | 2.81        | 2.81        |
| tblVehicleEF | MCY | 0.68        | 2.28        |
| tblVehicleEF | MCY | 2.06        | 1.81        |
| tblVehicleEF | MCY | 0.46        | 0.36        |
| tblVehicleEF | MCY | 0.21        | 0.32        |
| tblVehicleEF | MCY | 22.39       | 22.37       |
| tblVehicleEF | MCY | 12.10       | 10.76       |
| tblVehicleEF | MCY | 168.00      | 214.72      |
| tblVehicleEF | MCY | 47.74       | 67.64       |
| tblVehicleEF | MCY | 1.27        | 1.27        |
| tblVehicleEF | MCY | 0.35        | 0.30        |
| tblVehicleEF | MCY | 1.9070e-003 | 1.9340e-003 |
| tblVehicleEF | MCY | 3.6910e-003 | 3.1980e-003 |
| tblVehicleEF | MCY | 1.7870e-003 | 1.8120e-003 |
| tblVehicleEF | MCY | 3.4870e-003 | 3.0200e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MCY | 0.27        | 0.27        |
| tblVehicleEF | MCY | 0.95        | 0.94        |
| tblVehicleEF | MCY | 0.11        | 0.11        |
| tblVehicleEF | MCY | 2.52        | 2.52        |
| tblVehicleEF | MCY | 0.80        | 2.71        |
| tblVehicleEF | MCY | 2.81        | 2.50        |
| tblVehicleEF | MCY | 2.1190e-003 | 2.1250e-003 |
| tblVehicleEF | MCY | 7.5900e-004 | 6.6900e-004 |
| tblVehicleEF | MCY | 0.27        | 0.27        |
| tblVehicleEF | MCY | 0.95        | 0.94        |
| tblVehicleEF | MCY | 0.11        | 0.11        |
| tblVehicleEF | MCY | 3.07        | 3.07        |
| tblVehicleEF | MCY | 0.80        | 2.71        |
| tblVehicleEF | MCY | 3.06        | 2.72        |
| tblVehicleEF | MDV | 0.01        | 5.0650e-003 |
| tblVehicleEF | MDV | 0.02        | 0.09        |
| tblVehicleEF | MDV | 1.32        | 1.09        |
| tblVehicleEF | MDV | 3.39        | 3.48        |
| tblVehicleEF | MDV | 479.92      | 410.48      |
| tblVehicleEF | MDV | 108.64      | 88.11       |
| tblVehicleEF | MDV | 0.16        | 0.11        |
| tblVehicleEF | MDV | 0.30        | 0.40        |
| tblVehicleEF | MDV | 1.8500e-003 | 1.6190e-003 |
| tblVehicleEF | MDV | 2.5310e-003 | 2.0540e-003 |
| tblVehicleEF | MDV | 1.7060e-003 | 1.4940e-003 |
| tblVehicleEF | MDV | 2.3270e-003 | 1.8890e-003 |
| tblVehicleEF | MDV | 0.10        | 0.12        |

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|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.07        | 0.09        |
| tblVehicleEF | MDV | 0.03        | 0.02        |
| tblVehicleEF | MDV | 0.12        | 0.55        |
| tblVehicleEF | MDV | 0.26        | 0.47        |
| tblVehicleEF | MDV | 4.8090e-003 | 4.0580e-003 |
| tblVehicleEF | MDV | 1.1460e-003 | 8.7200e-004 |
| tblVehicleEF | MDV | 0.10        | 0.12        |
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.07        | 0.09        |
| tblVehicleEF | MDV | 0.04        | 0.03        |
| tblVehicleEF | MDV | 0.12        | 0.55        |
| tblVehicleEF | MDV | 0.29        | 0.52        |
| tblVehicleEF | MDV | 0.01        | 5.9710e-003 |
| tblVehicleEF | MDV | 0.02        | 0.08        |
| tblVehicleEF | MDV | 1.67        | 1.38        |
| tblVehicleEF | MDV | 2.78        | 2.84        |
| tblVehicleEF | MDV | 530.44      | 440.57      |
| tblVehicleEF | MDV | 108.64      | 86.82       |
| tblVehicleEF | MDV | 0.14        | 0.10        |
| tblVehicleEF | MDV | 0.28        | 0.37        |
| tblVehicleEF | MDV | 1.8500e-003 | 1.6190e-003 |
| tblVehicleEF | MDV | 2.5310e-003 | 2.0540e-003 |
| tblVehicleEF | MDV | 1.7060e-003 | 1.4940e-003 |
| tblVehicleEF | MDV | 2.3270e-003 | 1.8890e-003 |
| tblVehicleEF | MDV | 0.24        | 0.29        |
| tblVehicleEF | MDV | 0.25        | 0.21        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MDV | 0.18        | 0.22        |
| tblVehicleEF | MDV | 0.03        | 0.03        |
| tblVehicleEF | MDV | 0.12        | 0.54        |
| tblVehicleEF | MDV | 0.21        | 0.39        |
| tblVehicleEF | MDV | 5.3190e-003 | 4.3560e-003 |
| tblVehicleEF | MDV | 1.1350e-003 | 8.5900e-004 |
| tblVehicleEF | MDV | 0.24        | 0.29        |
| tblVehicleEF | MDV | 0.25        | 0.21        |
| tblVehicleEF | MDV | 0.18        | 0.22        |
| tblVehicleEF | MDV | 0.05        | 0.04        |
| tblVehicleEF | MDV | 0.12        | 0.54        |
| tblVehicleEF | MDV | 0.23        | 0.43        |
| tblVehicleEF | MDV | 0.01        | 4.7440e-003 |
| tblVehicleEF | MDV | 0.02        | 0.11        |
| tblVehicleEF | MDV | 1.26        | 1.04        |
| tblVehicleEF | MDV | 4.24        | 4.37        |
| tblVehicleEF | MDV | 466.38      | 402.47      |
| tblVehicleEF | MDV | 108.64      | 89.85       |
| tblVehicleEF | MDV | 0.17        | 0.12        |
| tblVehicleEF | MDV | 0.34        | 0.45        |
| tblVehicleEF | MDV | 1.8500e-003 | 1.6190e-003 |
| tblVehicleEF | MDV | 2.5310e-003 | 2.0540e-003 |
| tblVehicleEF | MDV | 1.7060e-003 | 1.4940e-003 |
| tblVehicleEF | MDV | 2.3270e-003 | 1.8890e-003 |
| tblVehicleEF | MDV | 0.03        | 0.04        |
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.02        | 0.02        |

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|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MDV | 0.03        | 0.02        |
| tblVehicleEF | MDV | 0.15        | 0.66        |
| tblVehicleEF | MDV | 0.32        | 0.57        |
| tblVehicleEF | MDV | 4.6730e-003 | 3.9790e-003 |
| tblVehicleEF | MDV | 1.1610e-003 | 8.8900e-004 |
| tblVehicleEF | MDV | 0.03        | 0.04        |
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.02        | 0.02        |
| tblVehicleEF | MDV | 0.04        | 0.03        |
| tblVehicleEF | MDV | 0.15        | 0.66        |
| tblVehicleEF | MDV | 0.35        | 0.62        |
| tblVehicleEF | MH  | 0.04        | 0.01        |
| tblVehicleEF | MH  | 0.03        | 0.02        |
| tblVehicleEF | MH  | 2.75        | 1.44        |
| tblVehicleEF | MH  | 6.42        | 2.25        |
| tblVehicleEF | MH  | 1,233.39    | 1,603.42    |
| tblVehicleEF | MH  | 60.21       | 19.55       |
| tblVehicleEF | MH  | 1.62        | 1.67        |
| tblVehicleEF | MH  | 0.93        | 0.25        |
| tblVehicleEF | MH  | 0.01        | 0.01        |
| tblVehicleEF | MH  | 0.03        | 0.03        |
| tblVehicleEF | MH  | 1.2010e-003 | 2.7700e-004 |
| tblVehicleEF | MH  | 3.2120e-003 | 3.2610e-003 |
| tblVehicleEF | MH  | 0.03        | 0.03        |
| tblVehicleEF | MH  | 1.1050e-003 | 2.5500e-004 |
| tblVehicleEF | MH  | 1.35        | 1.08        |
| tblVehicleEF | MH  | 0.09        | 0.07        |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |    |             |             |
|--------------|----|-------------|-------------|
| tblVehicleEF | MH | 0.34        | 0.27        |
| tblVehicleEF | MH | 0.12        | 0.09        |
| tblVehicleEF | MH | 0.02        | 1.50        |
| tblVehicleEF | MH | 0.37        | 0.10        |
| tblVehicleEF | MH | 0.01        | 0.02        |
| tblVehicleEF | MH | 7.1400e-004 | 1.9300e-004 |
| tblVehicleEF | MH | 1.35        | 1.08        |
| tblVehicleEF | MH | 0.09        | 0.07        |
| tblVehicleEF | MH | 0.34        | 0.27        |
| tblVehicleEF | MH | 0.17        | 0.12        |
| tblVehicleEF | MH | 0.02        | 1.50        |
| tblVehicleEF | MH | 0.41        | 0.11        |
| tblVehicleEF | MH | 0.04        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.02        |
| tblVehicleEF | MH | 2.87        | 1.49        |
| tblVehicleEF | MH | 5.74        | 2.03        |
| tblVehicleEF | MH | 1,233.39    | 1,603.52    |
| tblVehicleEF | MH | 60.21       | 19.16       |
| tblVehicleEF | MH | 1.48        | 1.54        |
| tblVehicleEF | MH | 0.87        | 0.23        |
| tblVehicleEF | MH | 0.01        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.2010e-003 | 2.7700e-004 |
| tblVehicleEF | MH | 3.2120e-003 | 3.2610e-003 |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.1050e-003 | 2.5500e-004 |
| tblVehicleEF | MH | 3.50        | 2.79        |

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|              |    |             |             |
|--------------|----|-------------|-------------|
| tblVehicleEF | MH | 0.11        | 0.09        |
| tblVehicleEF | MH | 0.89        | 0.72        |
| tblVehicleEF | MH | 0.13        | 0.09        |
| tblVehicleEF | MH | 0.02        | 1.49        |
| tblVehicleEF | MH | 0.34        | 0.10        |
| tblVehicleEF | MH | 0.01        | 0.02        |
| tblVehicleEF | MH | 7.0200e-004 | 1.9000e-004 |
| tblVehicleEF | MH | 3.50        | 2.79        |
| tblVehicleEF | MH | 0.11        | 0.09        |
| tblVehicleEF | MH | 0.89        | 0.72        |
| tblVehicleEF | MH | 0.18        | 0.12        |
| tblVehicleEF | MH | 0.02        | 1.49        |
| tblVehicleEF | MH | 0.38        | 0.11        |
| tblVehicleEF | MH | 0.04        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 2.62        | 1.38        |
| tblVehicleEF | MH | 7.31        | 2.53        |
| tblVehicleEF | MH | 1,233.39    | 1,603.32    |
| tblVehicleEF | MH | 60.21       | 20.02       |
| tblVehicleEF | MH | 1.69        | 1.73        |
| tblVehicleEF | MH | 1.00        | 0.27        |
| tblVehicleEF | MH | 0.01        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.2010e-003 | 2.7700e-004 |
| tblVehicleEF | MH | 3.2120e-003 | 3.2610e-003 |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.1050e-003 | 2.5500e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MH  | 0.38        | 0.31        |
| tblVehicleEF | MH  | 0.10        | 0.08        |
| tblVehicleEF | MH  | 0.09        | 0.08        |
| tblVehicleEF | MH  | 0.12        | 0.08        |
| tblVehicleEF | MH  | 0.03        | 1.61        |
| tblVehicleEF | MH  | 0.40        | 0.11        |
| tblVehicleEF | MH  | 0.01        | 0.02        |
| tblVehicleEF | MH  | 7.2900e-004 | 1.9800e-004 |
| tblVehicleEF | MH  | 0.38        | 0.31        |
| tblVehicleEF | MH  | 0.10        | 0.08        |
| tblVehicleEF | MH  | 0.09        | 0.08        |
| tblVehicleEF | MH  | 0.16        | 0.11        |
| tblVehicleEF | MH  | 0.03        | 1.61        |
| tblVehicleEF | MH  | 0.44        | 0.12        |
| tblVehicleEF | MHD | 0.02        | 4.4660e-003 |
| tblVehicleEF | MHD | 7.5850e-003 | 6.6210e-003 |
| tblVehicleEF | MHD | 0.06        | 0.01        |
| tblVehicleEF | MHD | 0.41        | 0.56        |
| tblVehicleEF | MHD | 0.52        | 0.57        |
| tblVehicleEF | MHD | 6.57        | 1.40        |
| tblVehicleEF | MHD | 147.37      | 150.83      |
| tblVehicleEF | MHD | 1,210.28    | 1,161.69    |
| tblVehicleEF | MHD | 57.55       | 11.51       |
| tblVehicleEF | MHD | 0.76        | 1.37        |
| tblVehicleEF | MHD | 1.79        | 2.35        |
| tblVehicleEF | MHD | 11.25       | 1.28        |
| tblVehicleEF | MHD | 3.8380e-003 | 2.9080e-003 |

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|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.7800e-004 | 1.3400e-004 |
| tblVehicleEF | MHD | 3.6720e-003 | 2.7830e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.1500e-004 | 1.2300e-004 |
| tblVehicleEF | MHD | 1.5080e-003 | 8.7100e-004 |
| tblVehicleEF | MHD | 0.05        | 0.03        |
| tblVehicleEF | MHD | 0.04        | 0.03        |
| tblVehicleEF | MHD | 6.3200e-004 | 3.5700e-004 |
| tblVehicleEF | MHD | 0.07        | 0.10        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.40        | 0.06        |
| tblVehicleEF | MHD | 1.4180e-003 | 1.4290e-003 |
| tblVehicleEF | MHD | 0.01        | 0.01        |
| tblVehicleEF | MHD | 6.9100e-004 | 1.1400e-004 |
| tblVehicleEF | MHD | 1.5080e-003 | 8.7100e-004 |
| tblVehicleEF | MHD | 0.05        | 0.03        |
| tblVehicleEF | MHD | 0.05        | 0.04        |
| tblVehicleEF | MHD | 6.3200e-004 | 3.5700e-004 |
| tblVehicleEF | MHD | 0.09        | 0.12        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.43        | 0.07        |
| tblVehicleEF | MHD | 0.02        | 4.2120e-003 |
| tblVehicleEF | MHD | 7.7620e-003 | 6.7130e-003 |
| tblVehicleEF | MHD | 0.05        | 0.01        |
| tblVehicleEF | MHD | 0.29        | 0.47        |
| tblVehicleEF | MHD | 0.53        | 0.58        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MHD | 6.05        | 1.29        |
| tblVehicleEF | MHD | 156.25      | 153.88      |
| tblVehicleEF | MHD | 1,210.28    | 1,161.71    |
| tblVehicleEF | MHD | 57.55       | 11.32       |
| tblVehicleEF | MHD | 0.78        | 1.39        |
| tblVehicleEF | MHD | 1.67        | 2.20        |
| tblVehicleEF | MHD | 11.19       | 1.27        |
| tblVehicleEF | MHD | 3.2360e-003 | 2.4570e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.7800e-004 | 1.3400e-004 |
| tblVehicleEF | MHD | 3.0960e-003 | 2.3510e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.1500e-004 | 1.2300e-004 |
| tblVehicleEF | MHD | 3.9020e-003 | 2.2650e-003 |
| tblVehicleEF | MHD | 0.07        | 0.04        |
| tblVehicleEF | MHD | 0.03        | 0.03        |
| tblVehicleEF | MHD | 1.6400e-003 | 9.3800e-004 |
| tblVehicleEF | MHD | 0.07        | 0.10        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.37        | 0.06        |
| tblVehicleEF | MHD | 1.5010e-003 | 1.4580e-003 |
| tblVehicleEF | MHD | 0.01        | 0.01        |
| tblVehicleEF | MHD | 6.8200e-004 | 1.1200e-004 |
| tblVehicleEF | MHD | 3.9020e-003 | 2.2650e-003 |
| tblVehicleEF | MHD | 0.07        | 0.04        |
| tblVehicleEF | MHD | 0.04        | 0.04        |
| tblVehicleEF | MHD | 1.6400e-003 | 9.3800e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MHD | 0.09        | 0.12        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.41        | 0.07        |
| tblVehicleEF | MHD | 0.02        | 4.7180e-003 |
| tblVehicleEF | MHD | 7.3890e-003 | 6.5180e-003 |
| tblVehicleEF | MHD | 0.06        | 0.01        |
| tblVehicleEF | MHD | 0.54        | 0.66        |
| tblVehicleEF | MHD | 0.51        | 0.56        |
| tblVehicleEF | MHD | 7.31        | 1.55        |
| tblVehicleEF | MHD | 135.45      | 146.78      |
| tblVehicleEF | MHD | 1,210.28    | 1,161.68    |
| tblVehicleEF | MHD | 57.55       | 11.77       |
| tblVehicleEF | MHD | 0.72        | 1.35        |
| tblVehicleEF | MHD | 1.83        | 2.40        |
| tblVehicleEF | MHD | 11.33       | 1.29        |
| tblVehicleEF | MHD | 4.6700e-003 | 3.5320e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.7800e-004 | 1.3400e-004 |
| tblVehicleEF | MHD | 4.4680e-003 | 3.3790e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.1500e-004 | 1.2300e-004 |
| tblVehicleEF | MHD | 4.3200e-004 | 2.4300e-004 |
| tblVehicleEF | MHD | 0.05        | 0.03        |
| tblVehicleEF | MHD | 0.04        | 0.03        |
| tblVehicleEF | MHD | 1.5900e-004 | 8.8000e-005 |
| tblVehicleEF | MHD | 0.07        | 0.10        |
| tblVehicleEF | MHD | 0.03        | 0.18        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | MHD  | 0.43        | 0.07        |
| tblVehicleEF | MHD  | 1.3050e-003 | 1.3900e-003 |
| tblVehicleEF | MHD  | 0.01        | 0.01        |
| tblVehicleEF | MHD  | 7.0300e-004 | 1.1600e-004 |
| tblVehicleEF | MHD  | 4.3200e-004 | 2.4300e-004 |
| tblVehicleEF | MHD  | 0.05        | 0.03        |
| tblVehicleEF | MHD  | 0.05        | 0.04        |
| tblVehicleEF | MHD  | 1.5900e-004 | 8.8000e-005 |
| tblVehicleEF | MHD  | 0.09        | 0.12        |
| tblVehicleEF | MHD  | 0.03        | 0.18        |
| tblVehicleEF | MHD  | 0.47        | 0.08        |
| tblVehicleEF | OBUS | 0.01        | 8.0330e-003 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 0.03        | 0.02        |
| tblVehicleEF | OBUS | 0.29        | 0.59        |
| tblVehicleEF | OBUS | 0.88        | 1.14        |
| tblVehicleEF | OBUS | 6.77        | 2.49        |
| tblVehicleEF | OBUS | 128.59      | 95.65       |
| tblVehicleEF | OBUS | 1,355.95    | 1,492.53    |
| tblVehicleEF | OBUS | 68.41       | 18.89       |
| tblVehicleEF | OBUS | 0.61        | 0.48        |
| tblVehicleEF | OBUS | 1.94        | 2.02        |
| tblVehicleEF | OBUS | 2.89        | 0.79        |
| tblVehicleEF | OBUS | 1.3800e-004 | 9.1200e-004 |
| tblVehicleEF | OBUS | 8.1910e-003 | 0.03        |
| tblVehicleEF | OBUS | 7.9000e-004 | 1.8600e-004 |
| tblVehicleEF | OBUS | 1.3200e-004 | 8.7300e-004 |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 7.8180e-003 | 0.02        |
| tblVehicleEF | OBUS | 7.2700e-004 | 1.7100e-004 |
| tblVehicleEF | OBUS | 2.2060e-003 | 2.5060e-003 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.04        | 0.05        |
| tblVehicleEF | OBUS | 6.9700e-004 | 7.7500e-004 |
| tblVehicleEF | OBUS | 0.09        | 0.11        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.42        | 0.12        |
| tblVehicleEF | OBUS | 1.2390e-003 | 9.1000e-004 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 8.0300e-004 | 1.8700e-004 |
| tblVehicleEF | OBUS | 2.2060e-003 | 2.5060e-003 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.06        | 0.07        |
| tblVehicleEF | OBUS | 6.9700e-004 | 7.7500e-004 |
| tblVehicleEF | OBUS | 0.11        | 0.14        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.46        | 0.13        |
| tblVehicleEF | OBUS | 0.01        | 8.0990e-003 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 0.03        | 0.02        |
| tblVehicleEF | OBUS | 0.27        | 0.57        |
| tblVehicleEF | OBUS | 0.90        | 1.18        |
| tblVehicleEF | OBUS | 6.09        | 2.25        |
| tblVehicleEF | OBUS | 135.23      | 95.59       |
| tblVehicleEF | OBUS | 1,355.95    | 1,492.59    |



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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 68.41       | 18.47       |
| tblVehicleEF | OBUS | 0.63        | 0.47        |
| tblVehicleEF | OBUS | 1.81        | 1.87        |
| tblVehicleEF | OBUS | 2.82        | 0.77        |
| tblVehicleEF | OBUS | 1.1600e-004 | 7.7400e-004 |
| tblVehicleEF | OBUS | 8.1910e-003 | 0.03        |
| tblVehicleEF | OBUS | 7.9000e-004 | 1.8600e-004 |
| tblVehicleEF | OBUS | 1.1100e-004 | 7.4100e-004 |
| tblVehicleEF | OBUS | 7.8180e-003 | 0.02        |
| tblVehicleEF | OBUS | 7.2700e-004 | 1.7100e-004 |
| tblVehicleEF | OBUS | 5.6160e-003 | 6.4460e-003 |
| tblVehicleEF | OBUS | 0.03        | 0.03        |
| tblVehicleEF | OBUS | 0.04        | 0.06        |
| tblVehicleEF | OBUS | 1.7390e-003 | 1.9550e-003 |
| tblVehicleEF | OBUS | 0.09        | 0.11        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.39        | 0.11        |
| tblVehicleEF | OBUS | 1.3020e-003 | 9.0900e-004 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 7.9100e-004 | 1.8300e-004 |
| tblVehicleEF | OBUS | 5.6160e-003 | 6.4460e-003 |
| tblVehicleEF | OBUS | 0.03        | 0.03        |
| tblVehicleEF | OBUS | 0.06        | 0.07        |
| tblVehicleEF | OBUS | 1.7390e-003 | 1.9550e-003 |
| tblVehicleEF | OBUS | 0.11        | 0.14        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.42        | 0.12        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 0.01        | 7.9510e-003 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 0.04        | 0.02        |
| tblVehicleEF | OBUS | 0.31        | 0.61        |
| tblVehicleEF | OBUS | 0.86        | 1.11        |
| tblVehicleEF | OBUS | 7.61        | 2.80        |
| tblVehicleEF | OBUS | 119.42      | 95.73       |
| tblVehicleEF | OBUS | 1,355.95    | 1,492.47    |
| tblVehicleEF | OBUS | 68.41       | 19.41       |
| tblVehicleEF | OBUS | 0.58        | 0.49        |
| tblVehicleEF | OBUS | 1.99        | 2.08        |
| tblVehicleEF | OBUS | 2.99        | 0.81        |
| tblVehicleEF | OBUS | 1.6800e-004 | 1.1030e-003 |
| tblVehicleEF | OBUS | 8.1910e-003 | 0.03        |
| tblVehicleEF | OBUS | 7.9000e-004 | 1.8600e-004 |
| tblVehicleEF | OBUS | 1.6000e-004 | 1.0550e-003 |
| tblVehicleEF | OBUS | 7.8180e-003 | 0.02        |
| tblVehicleEF | OBUS | 7.2700e-004 | 1.7100e-004 |
| tblVehicleEF | OBUS | 7.4300e-004 | 8.1200e-004 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.04        | 0.05        |
| tblVehicleEF | OBUS | 2.0300e-004 | 2.1700e-004 |
| tblVehicleEF | OBUS | 0.09        | 0.11        |
| tblVehicleEF | OBUS | 0.06        | 0.31        |
| tblVehicleEF | OBUS | 0.45        | 0.13        |
| tblVehicleEF | OBUS | 1.1510e-003 | 9.1000e-004 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 8.1700e-004 | 1.9200e-004 |
| tblVehicleEF | OBUS | 7.4300e-004 | 8.1200e-004 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.06        | 0.07        |
| tblVehicleEF | OBUS | 2.0300e-004 | 2.1700e-004 |
| tblVehicleEF | OBUS | 0.11        | 0.13        |
| tblVehicleEF | OBUS | 0.06        | 0.31        |
| tblVehicleEF | OBUS | 0.49        | 0.14        |
| tblVehicleEF | SBUS | 0.84        | 0.02        |
| tblVehicleEF | SBUS | 0.01        | 6.3810e-003 |
| tblVehicleEF | SBUS | 0.07        | 2.1290e-003 |
| tblVehicleEF | SBUS | 6.73        | 1.20        |
| tblVehicleEF | SBUS | 0.65        | 0.43        |
| tblVehicleEF | SBUS | 6.39        | 0.33        |
| tblVehicleEF | SBUS | 1,201.53    | 336.95      |
| tblVehicleEF | SBUS | 1,096.07    | 1,113.09    |
| tblVehicleEF | SBUS | 44.67       | 1.81        |
| tblVehicleEF | SBUS | 10.71       | 4.00        |
| tblVehicleEF | SBUS | 4.39        | 6.66        |
| tblVehicleEF | SBUS | 13.82       | 0.61        |
| tblVehicleEF | SBUS | 0.01        | 4.9410e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 6.0300e-004 | 2.5000e-005 |
| tblVehicleEF | SBUS | 0.01        | 4.7270e-003 |
| tblVehicleEF | SBUS | 2.6920e-003 | 2.8510e-003 |
| tblVehicleEF | SBUS | 0.02        | 0.04        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 5.5500e-004 | 2.3000e-005 |
| tblVehicleEF | SBUS | 3.5150e-003 | 4.4200e-004 |
| tblVehicleEF | SBUS | 0.03        | 3.0040e-003 |
| tblVehicleEF | SBUS | 0.80        | 0.12        |
| tblVehicleEF | SBUS | 1.1040e-003 | 1.1000e-004 |
| tblVehicleEF | SBUS | 0.11        | 0.11        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |
| tblVehicleEF | SBUS | 0.34        | 0.01        |
| tblVehicleEF | SBUS | 0.01        | 3.1940e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 5.5700e-004 | 1.8000e-005 |
| tblVehicleEF | SBUS | 3.5150e-003 | 4.4200e-004 |
| tblVehicleEF | SBUS | 0.03        | 3.0040e-003 |
| tblVehicleEF | SBUS | 1.15        | 0.17        |
| tblVehicleEF | SBUS | 1.1040e-003 | 1.1000e-004 |
| tblVehicleEF | SBUS | 0.13        | 0.13        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |
| tblVehicleEF | SBUS | 0.37        | 0.01        |
| tblVehicleEF | SBUS | 0.84        | 0.02        |
| tblVehicleEF | SBUS | 0.01        | 6.4430e-003 |
| tblVehicleEF | SBUS | 0.05        | 1.6980e-003 |
| tblVehicleEF | SBUS | 6.59        | 1.15        |
| tblVehicleEF | SBUS | 0.67        | 0.43        |
| tblVehicleEF | SBUS | 4.25        | 0.22        |
| tblVehicleEF | SBUS | 1,259.83    | 349.09      |
| tblVehicleEF | SBUS | 1,096.07    | 1,113.10    |
| tblVehicleEF | SBUS | 44.67       | 1.62        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 11.05       | 4.11        |
| tblVehicleEF | SBUS | 4.10        | 6.22        |
| tblVehicleEF | SBUS | 13.78       | 0.61        |
| tblVehicleEF | SBUS | 9.2190e-003 | 4.1720e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 6.0300e-004 | 2.5000e-005 |
| tblVehicleEF | SBUS | 8.8200e-003 | 3.9920e-003 |
| tblVehicleEF | SBUS | 2.6920e-003 | 2.8510e-003 |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 5.5500e-004 | 2.3000e-005 |
| tblVehicleEF | SBUS | 8.8850e-003 | 1.1690e-003 |
| tblVehicleEF | SBUS | 0.03        | 3.6410e-003 |
| tblVehicleEF | SBUS | 0.80        | 0.12        |
| tblVehicleEF | SBUS | 2.7360e-003 | 3.0900e-004 |
| tblVehicleEF | SBUS | 0.11        | 0.11        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |
| tblVehicleEF | SBUS | 0.27        | 9.6090e-003 |
| tblVehicleEF | SBUS | 0.01        | 3.3090e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 5.2100e-004 | 1.6000e-005 |
| tblVehicleEF | SBUS | 8.8850e-003 | 1.1690e-003 |
| tblVehicleEF | SBUS | 0.03        | 3.6410e-003 |
| tblVehicleEF | SBUS | 1.15        | 0.17        |
| tblVehicleEF | SBUS | 2.7360e-003 | 3.0900e-004 |
| tblVehicleEF | SBUS | 0.13        | 0.13        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 0.29        | 0.01        |
| tblVehicleEF | SBUS | 0.84        | 0.02        |
| tblVehicleEF | SBUS | 0.01        | 6.3170e-003 |
| tblVehicleEF | SBUS | 0.08        | 2.5620e-003 |
| tblVehicleEF | SBUS | 6.91        | 1.26        |
| tblVehicleEF | SBUS | 0.64        | 0.42        |
| tblVehicleEF | SBUS | 8.86        | 0.46        |
| tblVehicleEF | SBUS | 1,121.03    | 320.19      |
| tblVehicleEF | SBUS | 1,096.07    | 1,113.08    |
| tblVehicleEF | SBUS | 44.67       | 2.02        |
| tblVehicleEF | SBUS | 10.24       | 3.85        |
| tblVehicleEF | SBUS | 4.49        | 6.79        |
| tblVehicleEF | SBUS | 13.86       | 0.62        |
| tblVehicleEF | SBUS | 0.01        | 6.0030e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 6.0300e-004 | 2.5000e-005 |
| tblVehicleEF | SBUS | 0.01        | 5.7430e-003 |
| tblVehicleEF | SBUS | 2.6920e-003 | 2.8510e-003 |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 5.5500e-004 | 2.3000e-005 |
| tblVehicleEF | SBUS | 1.2060e-003 | 1.2300e-004 |
| tblVehicleEF | SBUS | 0.03        | 2.9600e-003 |
| tblVehicleEF | SBUS | 0.80        | 0.12        |
| tblVehicleEF | SBUS | 3.3100e-004 | 3.0000e-005 |
| tblVehicleEF | SBUS | 0.10        | 0.11        |
| tblVehicleEF | SBUS | 0.02        | 0.03        |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 0.40        | 0.01        |
| tblVehicleEF | SBUS | 0.01        | 3.0360e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 5.9800e-004 | 2.0000e-005 |
| tblVehicleEF | SBUS | 1.2060e-003 | 1.2300e-004 |
| tblVehicleEF | SBUS | 0.03        | 2.9600e-003 |
| tblVehicleEF | SBUS | 1.16        | 0.17        |
| tblVehicleEF | SBUS | 3.3100e-004 | 3.0000e-005 |
| tblVehicleEF | SBUS | 0.12        | 0.13        |
| tblVehicleEF | SBUS | 0.02        | 0.03        |
| tblVehicleEF | SBUS | 0.44        | 0.02        |
| tblVehicleEF | UBUS | 2.06        | 4.73        |
| tblVehicleEF | UBUS | 0.08        | 0.04        |
| tblVehicleEF | UBUS | 8.75        | 36.91       |
| tblVehicleEF | UBUS | 12.13       | 2.78        |
| tblVehicleEF | UBUS | 1,890.52    | 2,058.02    |
| tblVehicleEF | UBUS | 137.34      | 30.05       |
| tblVehicleEF | UBUS | 6.32        | 0.43        |
| tblVehicleEF | UBUS | 13.54       | 0.26        |
| tblVehicleEF | UBUS | 0.52        | 0.08        |
| tblVehicleEF | UBUS | 0.01        | 0.03        |
| tblVehicleEF | UBUS | 0.06        | 2.9520e-003 |
| tblVehicleEF | UBUS | 1.1160e-003 | 2.3400e-004 |
| tblVehicleEF | UBUS | 0.22        | 0.04        |
| tblVehicleEF | UBUS | 3.0000e-003 | 7.1020e-003 |
| tblVehicleEF | UBUS | 0.06        | 2.8060e-003 |
| tblVehicleEF | UBUS | 1.0260e-003 | 2.1600e-004 |

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|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | UBUS | 7.1780e-003 | 1.3920e-003 |
| tblVehicleEF | UBUS | 0.10        | 0.01        |
| tblVehicleEF | UBUS | 2.8480e-003 | 6.0800e-004 |
| tblVehicleEF | UBUS | 0.52        | 0.07        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 1.08        | 0.15        |
| tblVehicleEF | UBUS | 0.01        | 5.7160e-003 |
| tblVehicleEF | UBUS | 1.5970e-003 | 2.9700e-004 |
| tblVehicleEF | UBUS | 7.1780e-003 | 1.3920e-003 |
| tblVehicleEF | UBUS | 0.10        | 0.01        |
| tblVehicleEF | UBUS | 2.8480e-003 | 6.0800e-004 |
| tblVehicleEF | UBUS | 2.65        | 4.84        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 1.19        | 0.17        |
| tblVehicleEF | UBUS | 2.06        | 4.73        |
| tblVehicleEF | UBUS | 0.07        | 0.03        |
| tblVehicleEF | UBUS | 8.82        | 36.91       |
| tblVehicleEF | UBUS | 9.63        | 2.22        |
| tblVehicleEF | UBUS | 1,890.52    | 2,058.03    |
| tblVehicleEF | UBUS | 137.34      | 29.10       |
| tblVehicleEF | UBUS | 5.87        | 0.42        |
| tblVehicleEF | UBUS | 13.40       | 0.24        |
| tblVehicleEF | UBUS | 0.52        | 0.08        |
| tblVehicleEF | UBUS | 0.01        | 0.03        |
| tblVehicleEF | UBUS | 0.06        | 2.9520e-003 |
| tblVehicleEF | UBUS | 1.1160e-003 | 2.3400e-004 |
| tblVehicleEF | UBUS | 0.22        | 0.04        |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | UBUS | 3.0000e-003 | 7.1020e-003 |
| tblVehicleEF | UBUS | 0.06        | 2.8060e-003 |
| tblVehicleEF | UBUS | 1.0260e-003 | 2.1600e-004 |
| tblVehicleEF | UBUS | 0.02        | 3.6060e-003 |
| tblVehicleEF | UBUS | 0.13        | 0.02        |
| tblVehicleEF | UBUS | 7.2950e-003 | 1.6350e-003 |
| tblVehicleEF | UBUS | 0.53        | 0.07        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 0.95        | 0.13        |
| tblVehicleEF | UBUS | 0.01        | 5.7160e-003 |
| tblVehicleEF | UBUS | 1.5530e-003 | 2.8800e-004 |
| tblVehicleEF | UBUS | 0.02        | 3.6060e-003 |
| tblVehicleEF | UBUS | 0.13        | 0.02        |
| tblVehicleEF | UBUS | 7.2950e-003 | 1.6350e-003 |
| tblVehicleEF | UBUS | 2.66        | 4.84        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 1.04        | 0.15        |
| tblVehicleEF | UBUS | 2.06        | 4.73        |
| tblVehicleEF | UBUS | 0.09        | 0.04        |
| tblVehicleEF | UBUS | 8.69        | 36.90       |
| tblVehicleEF | UBUS | 15.34       | 3.49        |
| tblVehicleEF | UBUS | 1,890.52    | 2,058.02    |
| tblVehicleEF | UBUS | 137.34      | 31.25       |
| tblVehicleEF | UBUS | 6.48        | 0.44        |
| tblVehicleEF | UBUS | 13.69       | 0.28        |
| tblVehicleEF | UBUS | 0.52        | 0.08        |
| tblVehicleEF | UBUS | 0.01        | 0.03        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|                 |        |             |             |
|-----------------|--------|-------------|-------------|
| tblVehicleEF    | UBUS   | 0.06        | 2.9520e-003 |
| tblVehicleEF    | UBUS   | 1.1160e-003 | 2.3400e-004 |
| tblVehicleEF    | UBUS   | 0.22        | 0.04        |
| tblVehicleEF    | UBUS   | 3.0000e-003 | 7.1020e-003 |
| tblVehicleEF    | UBUS   | 0.06        | 2.8060e-003 |
| tblVehicleEF    | UBUS   | 1.0260e-003 | 2.1600e-004 |
| tblVehicleEF    | UBUS   | 2.3740e-003 | 4.5000e-004 |
| tblVehicleEF    | UBUS   | 0.11        | 0.01        |
| tblVehicleEF    | UBUS   | 9.4300e-004 | 1.8200e-004 |
| tblVehicleEF    | UBUS   | 0.52        | 0.07        |
| tblVehicleEF    | UBUS   | 0.03        | 0.10        |
| tblVehicleEF    | UBUS   | 1.24        | 0.18        |
| tblVehicleEF    | UBUS   | 0.01        | 5.7160e-003 |
| tblVehicleEF    | UBUS   | 1.6530e-003 | 3.0900e-004 |
| tblVehicleEF    | UBUS   | 2.3740e-003 | 4.5000e-004 |
| tblVehicleEF    | UBUS   | 0.11        | 0.01        |
| tblVehicleEF    | UBUS   | 9.4300e-004 | 1.8200e-004 |
| tblVehicleEF    | UBUS   | 2.64        | 4.84        |
| tblVehicleEF    | UBUS   | 0.03        | 0.10        |
| tblVehicleEF    | UBUS   | 1.36        | 0.19        |
| tblVehicleTrips | CC_TL  | 7.50        | 5.00        |
| tblVehicleTrips | CNW_TL | 8.50        | 6.50        |
| tblVehicleTrips | CW_TL  | 15.00       | 10.00       |
| tblVehicleTrips | HO_TL  | 8.50        | 6.50        |
| tblVehicleTrips | HS_TL  | 7.50        | 5.00        |
| tblVehicleTrips | HW_TL  | 15.00       | 10.00       |
| tblVehicleTrips | ST_TR  | 6.39        | 5.23        |

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|                 |       |       |      |
|-----------------|-------|-------|------|
| tblVehicleTrips | ST_TR | 21.35 | 0.00 |
| tblVehicleTrips | SU_TR | 5.86  | 4.80 |
| tblVehicleTrips | SU_TR | 17.40 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65  | 5.44 |
| tblVehicleTrips | WD_TR | 14.03 | 0.00 |

## 2.0 Emissions Summary

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## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**2.1 Overall Construction****Unmitigated Construction**

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2020    | 0.0643  | 0.9502 | 0.4355 | 1.6600e-003 | 0.2003        | 0.0286       | 0.2289     | 0.0854         | 0.0264        | 0.1117      | 0.0000   | 155.2783  | 155.2783  | 0.0243 | 0.0000 | 155.8846 |
| 2021    | 0.2131  | 1.6670 | 1.7823 | 3.8000e-003 | 0.1276        | 0.0781       | 0.2057     | 0.0342         | 0.0735        | 0.1077      | 0.0000   | 337.3028  | 337.3028  | 0.0504 | 0.0000 | 338.5623 |
| 2022    | 1.8843  | 1.4443 | 1.6890 | 3.5800e-003 | 0.1156        | 0.0643       | 0.1799     | 0.0310         | 0.0605        | 0.0915      | 0.0000   | 317.5789  | 317.5789  | 0.0502 | 0.0000 | 318.8350 |
| Maximum | 1.8843  | 1.6670 | 1.7823 | 3.8000e-003 | 0.2003        | 0.0781       | 0.2289     | 0.0854         | 0.0735        | 0.1117      | 0.0000   | 337.3028  | 337.3028  | 0.0504 | 0.0000 | 338.5623 |

**Mitigated Construction**

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2020    | 0.0186  | 0.3965 | 0.4401 | 1.6600e-003 | 0.1028        | 2.3800e-003  | 0.1051     | 0.0419         | 2.3200e-003   | 0.0442      | 0.0000   | 155.2782  | 155.2782  | 0.0243 | 0.0000 | 155.8846 |
| 2021    | 0.0873  | 0.4512 | 1.8531 | 3.8000e-003 | 0.1276        | 4.7200e-003  | 0.1323     | 0.0342         | 4.6200e-003   | 0.0389      | 0.0000   | 337.3026  | 337.3026  | 0.0504 | 0.0000 | 338.5621 |
| 2022    | 1.7779  | 0.3958 | 1.7931 | 3.5800e-003 | 0.1156        | 4.4800e-003  | 0.1201     | 0.0310         | 4.4000e-003   | 0.0354      | 0.0000   | 317.5787  | 317.5787  | 0.0502 | 0.0000 | 318.8348 |
| Maximum | 1.7779  | 0.4512 | 1.8531 | 3.8000e-003 | 0.1276        | 4.7200e-003  | 0.1323     | 0.0419         | 4.6200e-003   | 0.0442      | 0.0000   | 337.3026  | 337.3026  | 0.0504 | 0.0000 | 338.5621 |

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|                   | ROG   | NOx   | CO    | SO2  | 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 | 12.86 | 69.38 | -4.59 | 0.00 | 22.00         | 93.23        | 41.83      | 28.88          | 92.92         | 61.89       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|--|--|
| 1       | 9-21-2020  | 12-20-2020 | 0.9834                                       | 0.4154                                     |
| 3       | 3-21-2021  | 6-20-2021  | 0.2351                                       | 0.0674                                     |
| 4       | 6-21-2021  | 9-20-2021  | 0.7725                                       | 0.2215                                     |
| 5       | 9-21-2021  | 12-20-2021 | 0.7666                                       | 0.2215                                     |
| 6       | 12-21-2021 | 3-20-2022  | 0.6945                                       | 0.2122                                     |
| 7       | 3-21-2022  | 6-20-2022  | 0.6988                                       | 0.2138                                     |
| 8       | 6-21-2022  | 9-20-2022  | 1.7164                                       | 1.4731                                     |
| 9       | 9-21-2022  | 9-30-2022  | 0.1834                                       | 0.1819                                     |
|         |            | Highest    | 1.7164                                       | 1.4731                                     |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**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         | 1.3299        | 0.0317        | 2.7463        | 1.4000e-004   |               | 0.0152        | 0.0152        |                | 0.0152        | 0.0152        | 0.0000         | 4.4812            | 4.4812            | 4.3200e-003   | 0.0000        | 4.5893            |
| Energy       | 0.0152        | 0.1305        | 0.0601        | 8.3000e-004   |               | 0.0105        | 0.0105        |                | 0.0105        | 0.0105        | 0.0000         | 479.1810          | 479.1810          | 0.0190        | 6.1900e-003   | 481.5026          |
| Mobile       | 0.6829        | 1.2617        | 5.3915        | 0.0147        | 1.3525        | 0.0154        | 1.3679        | 0.3624         | 0.0144        | 0.3769        | 0.0000         | 1,365.8568        | 1,365.8568        | 0.0804        | 0.0000        | 1,367.8662        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 32.1274        | 0.0000            | 32.1274           | 1.8987        | 0.0000        | 79.5942           |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 6.2636         | 34.0726           | 40.3361           | 0.0232        | 0.0140        | 45.0822           |
| <b>Total</b> | <b>2.0279</b> | <b>1.4239</b> | <b>8.1978</b> | <b>0.0156</b> | <b>1.3525</b> | <b>0.0410</b> | <b>1.3935</b> | <b>0.3624</b>  | <b>0.0401</b> | <b>0.4025</b> | <b>38.3909</b> | <b>1,883.5916</b> | <b>1,921.9825</b> | <b>2.0256</b> | <b>0.0202</b> | <b>1,978.6345</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**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         | 1.3299        | 0.0317        | 2.7463        | 1.4000e-004   |               | 0.0152        | 0.0152        |                | 0.0152        | 0.0152        | 0.0000         | 4.4812            | 4.4812            | 4.3200e-003   | 0.0000        | 4.5893            |
| Energy       | 0.0152        | 0.1305        | 0.0601        | 8.3000e-004   |               | 0.0105        | 0.0105        |                | 0.0105        | 0.0105        | 0.0000         | 479.1810          | 479.1810          | 0.0190        | 6.1900e-003   | 481.5026          |
| Mobile       | 0.6829        | 1.2617        | 5.3915        | 0.0147        | 1.3525        | 0.0154        | 1.3679        | 0.3624         | 0.0144        | 0.3769        | 0.0000         | 1,365.8568        | 1,365.8568        | 0.0804        | 0.0000        | 1,367.8662        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 32.1274        | 0.0000            | 32.1274           | 1.8987        | 0.0000        | 79.5942           |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 6.2636         | 34.0726           | 40.3361           | 0.0232        | 0.0140        | 45.0822           |
| <b>Total</b> | <b>2.0279</b> | <b>1.4239</b> | <b>8.1978</b> | <b>0.0156</b> | <b>1.3525</b> | <b>0.0410</b> | <b>1.3935</b> | <b>0.3624</b>  | <b>0.0401</b> | <b>0.4025</b> | <b>38.3909</b> | <b>1,883.5916</b> | <b>1,921.9825</b> | <b>2.0256</b> | <b>0.0202</b> | <b>1,978.6345</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>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

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| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 10/26/2020 | 11/6/2020  | 5             | 10       |                   |
| 2            | Grading               | Grading               | 11/7/2020  | 11/27/2020 | 5             | 15       |                   |
| 3            | Building Construction | Building Construction | 5/24/2021  | 7/15/2022  | 5             | 300      |                   |
| 4            | Paving                | Paving                | 7/25/2022  | 8/19/2022  | 5             | 20       |                   |
| 5            | Architectural Coating | Architectural Coating | 8/29/2022  | 9/23/2022  | 5             | 20       |                   |

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

**Acres of Grading (Grading Phase): 75**

**Acres of Paving: 5**

**Residential Indoor: 538,650; Residential Outdoor: 179,550; Non-Residential Indoor: 9,450; Non-Residential Outdoor: 3,150; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation      | Rubber Tired Dozers       | 3      | 8.00        | 247         | 0.40        |
| Site Preparation      | Tractors/Loaders/Backhoes | 4      | 8.00        | 97          | 0.37        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 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        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| 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               | 8                       | 20.00              | 0.00               | 2,513.00            | 10.00              | 6.50               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 194.00             | 29.00              | 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                  |
| Architectural Coating | 1                       | 39.00              | 0.00               | 0.00                | 10.00              | 6.50               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

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**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Site Preparation - 2020****Unmitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |               |               |               |                    | 0.0903        | 0.0000        | 0.0903        | 0.0497         | 0.0000        | 0.0497        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 0.0204        | 0.2121        | 0.1076        | 1.9000e-004        |               | 0.0110        | 0.0110        |                | 0.0101        | 0.0101        | 0.0000        | 16.7153        | 16.7153        | 5.4100e-003        | 0.0000        | 16.8505        |
| <b>Total</b>  | <b>0.0204</b> | <b>0.2121</b> | <b>0.1076</b> | <b>1.9000e-004</b> | <b>0.0903</b> | <b>0.0110</b> | <b>0.1013</b> | <b>0.0497</b>  | <b>0.0101</b> | <b>0.0598</b> | <b>0.0000</b> | <b>16.7153</b> | <b>16.7153</b> | <b>5.4100e-003</b> | <b>0.0000</b> | <b>16.8505</b> |

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**3.2 Site Preparation - 2020****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       | 3.4000e-004        | 2.3000e-004        | 2.4900e-003        | 1.0000e-005        | 6.6000e-004        | 0.0000        | 6.7000e-004        | 1.8000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5857        | 0.5857        | 2.0000e-005        | 0.0000        | 0.5861        |
| <b>Total</b> | <b>3.4000e-004</b> | <b>2.3000e-004</b> | <b>2.4900e-003</b> | <b>1.0000e-005</b> | <b>6.6000e-004</b> | <b>0.0000</b> | <b>6.7000e-004</b> | <b>1.8000e-004</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>0.0000</b> | <b>0.5857</b> | <b>0.5857</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.5861</b> |

**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 |                    |               |               |                    | 0.0407        | 0.0000             | 0.0407        | 0.0223         | 0.0000             | 0.0223        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 2.3300e-003        | 0.0101        | 0.1043        | 1.9000e-004        |               | 3.1000e-004        | 3.1000e-004   |                | 3.1000e-004        | 3.1000e-004   | 0.0000        | 16.7153        | 16.7153        | 5.4100e-003        | 0.0000        | 16.8505        |
| <b>Total</b>  | <b>2.3300e-003</b> | <b>0.0101</b> | <b>0.1043</b> | <b>1.9000e-004</b> | <b>0.0407</b> | <b>3.1000e-004</b> | <b>0.0410</b> | <b>0.0223</b>  | <b>3.1000e-004</b> | <b>0.0227</b> | <b>0.0000</b> | <b>16.7153</b> | <b>16.7153</b> | <b>5.4100e-003</b> | <b>0.0000</b> | <b>16.8505</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**3.2 Site Preparation - 2020****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       | 3.4000e-004        | 2.3000e-004        | 2.4900e-003        | 1.0000e-005        | 6.6000e-004        | 0.0000        | 6.7000e-004        | 1.8000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5857        | 0.5857        | 2.0000e-005        | 0.0000        | 0.5861        |
| <b>Total</b> | <b>3.4000e-004</b> | <b>2.3000e-004</b> | <b>2.4900e-003</b> | <b>1.0000e-005</b> | <b>6.6000e-004</b> | <b>0.0000</b> | <b>6.7000e-004</b> | <b>1.8000e-004</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>0.0000</b> | <b>0.5857</b> | <b>0.5857</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.5861</b> |

**3.3 Grading - 2020****Unmitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Fugitive Dust |               |               |               |                    | 0.0870        | 0.0000        | 0.0870        | 0.0294         | 0.0000        | 0.0294        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0334        | 0.3765        | 0.2397        | 4.7000e-004        |               | 0.0163        | 0.0163        |                | 0.0150        | 0.0150        | 0.0000        | 40.8632        | 40.8632        | 0.0132        | 0.0000        | 41.1936        |
| <b>Total</b>  | <b>0.0334</b> | <b>0.3765</b> | <b>0.2397</b> | <b>4.7000e-004</b> | <b>0.0870</b> | <b>0.0163</b> | <b>0.1033</b> | <b>0.0294</b>  | <b>0.0150</b> | <b>0.0444</b> | <b>0.0000</b> | <b>40.8632</b> | <b>40.8632</b> | <b>0.0132</b> | <b>0.0000</b> | <b>41.1936</b> |

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**3.3 Grading - 2020****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      | 9.6600e-003   | 0.3610        | 0.0816        | 9.9000e-004        | 0.0212        | 1.2900e-003        | 0.0225        | 5.8200e-003        | 1.2400e-003        | 7.0600e-003        | 0.0000        | 96.1379        | 96.1379        | 5.5900e-003        | 0.0000        | 96.2777        |
| 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       | 5.6000e-004   | 3.8000e-004   | 4.1500e-003   | 1.0000e-005        | 1.1000e-003   | 1.0000e-005        | 1.1100e-003   | 2.9000e-004        | 1.0000e-005        | 3.0000e-004        | 0.0000        | 0.9761         | 0.9761         | 3.0000e-005        | 0.0000        | 0.9768         |
| <b>Total</b> | <b>0.0102</b> | <b>0.3614</b> | <b>0.0857</b> | <b>1.0000e-003</b> | <b>0.0223</b> | <b>1.3000e-003</b> | <b>0.0236</b> | <b>6.1100e-003</b> | <b>1.2500e-003</b> | <b>7.3600e-003</b> | <b>0.0000</b> | <b>97.1140</b> | <b>97.1140</b> | <b>5.6200e-003</b> | <b>0.0000</b> | <b>97.2544</b> |

**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 |                    |               |               |                    | 0.0392        | 0.0000             | 0.0392        | 0.0133         | 0.0000             | 0.0133        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 5.7100e-003        | 0.0248        | 0.2475        | 4.7000e-004        |               | 7.6000e-004        | 7.6000e-004   |                | 7.6000e-004        | 7.6000e-004   | 0.0000        | 40.8632        | 40.8632        | 0.0132        | 0.0000        | 41.1936        |
| <b>Total</b>  | <b>5.7100e-003</b> | <b>0.0248</b> | <b>0.2475</b> | <b>4.7000e-004</b> | <b>0.0392</b> | <b>7.6000e-004</b> | <b>0.0399</b> | <b>0.0133</b>  | <b>7.6000e-004</b> | <b>0.0140</b> | <b>0.0000</b> | <b>40.8632</b> | <b>40.8632</b> | <b>0.0132</b> | <b>0.0000</b> | <b>41.1936</b> |

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**3.3 Grading - 2020****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      | 9.6600e-003   | 0.3610        | 0.0816        | 9.9000e-004        | 0.0212        | 1.2900e-003        | 0.0225        | 5.8200e-003        | 1.2400e-003        | 7.0600e-003        | 0.0000        | 96.1379        | 96.1379        | 5.5900e-003        | 0.0000        | 96.2777        |
| 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       | 5.6000e-004   | 3.8000e-004   | 4.1500e-003   | 1.0000e-005        | 1.1000e-003   | 1.0000e-005        | 1.1100e-003   | 2.9000e-004        | 1.0000e-005        | 3.0000e-004        | 0.0000        | 0.9761         | 0.9761         | 3.0000e-005        | 0.0000        | 0.9768         |
| <b>Total</b> | <b>0.0102</b> | <b>0.3614</b> | <b>0.0857</b> | <b>1.0000e-003</b> | <b>0.0223</b> | <b>1.3000e-003</b> | <b>0.0236</b> | <b>6.1100e-003</b> | <b>1.2500e-003</b> | <b>7.3600e-003</b> | <b>0.0000</b> | <b>97.1140</b> | <b>97.1140</b> | <b>5.6200e-003</b> | <b>0.0000</b> | <b>97.2544</b> |

**3.4 Building Construction - 2021****Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.1521        | 1.3946        | 1.3260        | 2.1500e-003        |               | 0.0767        | 0.0767        |                | 0.0721        | 0.0721        | 0.0000        | 185.3098        | 185.3098        | 0.0447        | 0.0000        | 186.4275        |
| <b>Total</b> | <b>0.1521</b> | <b>1.3946</b> | <b>1.3260</b> | <b>2.1500e-003</b> |               | <b>0.0767</b> | <b>0.0767</b> |                | <b>0.0721</b> | <b>0.0721</b> | <b>0.0000</b> | <b>185.3098</b> | <b>185.3098</b> | <b>0.0447</b> | <b>0.0000</b> | <b>186.4275</b> |

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**3.4 Building Construction - 2021****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       | 7.3000e-003   | 0.2373        | 0.0634        | 5.7000e-004        | 0.0136        | 6.6000e-004        | 0.0142        | 3.9200e-003    | 6.3000e-004        | 4.5500e-003   | 0.0000        | 54.4376         | 54.4376         | 3.1100e-003        | 0.0000        | 54.5154         |
| Worker       | 0.0537        | 0.0351        | 0.3928        | 1.0800e-003        | 0.1140        | 8.0000e-004        | 0.1148        | 0.0303         | 7.3000e-004        | 0.0311        | 0.0000        | 97.5555         | 97.5555         | 2.5600e-003        | 0.0000        | 97.6195         |
| <b>Total</b> | <b>0.0610</b> | <b>0.2725</b> | <b>0.4562</b> | <b>1.6500e-003</b> | <b>0.1275</b> | <b>1.4600e-003</b> | <b>0.1290</b> | <b>0.0342</b>  | <b>1.3600e-003</b> | <b>0.0356</b> | <b>0.0000</b> | <b>151.9930</b> | <b>151.9930</b> | <b>5.6700e-003</b> | <b>0.0000</b> | <b>152.1348</b> |

**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     | 0.0262        | 0.1788        | 1.3968        | 2.1500e-003        |               | 3.2600e-003        | 3.2600e-003        |                | 3.2600e-003        | 3.2600e-003        | 0.0000        | 185.3096        | 185.3096        | 0.0447        | 0.0000        | 186.4273        |
| <b>Total</b> | <b>0.0262</b> | <b>0.1788</b> | <b>1.3968</b> | <b>2.1500e-003</b> |               | <b>3.2600e-003</b> | <b>3.2600e-003</b> |                | <b>3.2600e-003</b> | <b>3.2600e-003</b> | <b>0.0000</b> | <b>185.3096</b> | <b>185.3096</b> | <b>0.0447</b> | <b>0.0000</b> | <b>186.4273</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**3.4 Building Construction - 2021****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       | 7.3000e-003   | 0.2373        | 0.0634        | 5.7000e-004        | 0.0136        | 6.6000e-004        | 0.0142        | 3.9200e-003    | 6.3000e-004        | 4.5500e-003   | 0.0000        | 54.4376         | 54.4376         | 3.1100e-003        | 0.0000        | 54.5154         |
| Worker       | 0.0537        | 0.0351        | 0.3928        | 1.0800e-003        | 0.1140        | 8.0000e-004        | 0.1148        | 0.0303         | 7.3000e-004        | 0.0311        | 0.0000        | 97.5555         | 97.5555         | 2.5600e-003        | 0.0000        | 97.6195         |
| <b>Total</b> | <b>0.0610</b> | <b>0.2725</b> | <b>0.4562</b> | <b>1.6500e-003</b> | <b>0.1275</b> | <b>1.4600e-003</b> | <b>0.1290</b> | <b>0.0342</b>  | <b>1.3600e-003</b> | <b>0.0356</b> | <b>0.0000</b> | <b>151.9930</b> | <b>151.9930</b> | <b>5.6700e-003</b> | <b>0.0000</b> | <b>152.1348</b> |

**3.4 Building Construction - 2022****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     | 0.1194        | 1.0931        | 1.1454        | 1.8900e-003        |               | 0.0566        | 0.0566        |                | 0.0533        | 0.0533        | 0.0000        | 162.2077        | 162.2077        | 0.0389        | 0.0000        | 163.1792        |
| <b>Total</b> | <b>0.1194</b> | <b>1.0931</b> | <b>1.1454</b> | <b>1.8900e-003</b> |               | <b>0.0566</b> | <b>0.0566</b> |                | <b>0.0533</b> | <b>0.0533</b> | <b>0.0000</b> | <b>162.2077</b> | <b>162.2077</b> | <b>0.0389</b> | <b>0.0000</b> | <b>163.1792</b> |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**3.4 Building Construction - 2022****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       | 5.9300e-003   | 0.1972        | 0.0512        | 4.9000e-004        | 0.0119        | 5.0000e-004        | 0.0124        | 3.4300e-003    | 4.8000e-004        | 3.9100e-003   | 0.0000        | 47.2142         | 47.2142         | 2.6500e-003        | 0.0000        | 47.2803         |
| Worker       | 0.0440        | 0.0276        | 0.3158        | 9.1000e-004        | 0.0997        | 6.8000e-004        | 0.1004        | 0.0265         | 6.3000e-004        | 0.0272        | 0.0000        | 82.3035         | 82.3035         | 2.0100e-003        | 0.0000        | 82.3539         |
| <b>Total</b> | <b>0.0499</b> | <b>0.2248</b> | <b>0.3670</b> | <b>1.4000e-003</b> | <b>0.1116</b> | <b>1.1800e-003</b> | <b>0.1128</b> | <b>0.0300</b>  | <b>1.1100e-003</b> | <b>0.0311</b> | <b>0.0000</b> | <b>129.5177</b> | <b>129.5177</b> | <b>4.6600e-003</b> | <b>0.0000</b> | <b>129.6342</b> |

**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     | 0.0230        | 0.1564        | 1.2222        | 1.8900e-003        |               | 2.8600e-003        | 2.8600e-003        |                | 2.8600e-003        | 2.8600e-003        | 0.0000        | 162.2075        | 162.2075        | 0.0389        | 0.0000        | 163.1790        |
| <b>Total</b> | <b>0.0230</b> | <b>0.1564</b> | <b>1.2222</b> | <b>1.8900e-003</b> |               | <b>2.8600e-003</b> | <b>2.8600e-003</b> |                | <b>2.8600e-003</b> | <b>2.8600e-003</b> | <b>0.0000</b> | <b>162.2075</b> | <b>162.2075</b> | <b>0.0389</b> | <b>0.0000</b> | <b>163.1790</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**3.4 Building Construction - 2022****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       | 5.9300e-003   | 0.1972        | 0.0512        | 4.9000e-004        | 0.0119        | 5.0000e-004        | 0.0124        | 3.4300e-003    | 4.8000e-004        | 3.9100e-003   | 0.0000        | 47.2142         | 47.2142         | 2.6500e-003        | 0.0000        | 47.2803         |
| Worker       | 0.0440        | 0.0276        | 0.3158        | 9.1000e-004        | 0.0997        | 6.8000e-004        | 0.1004        | 0.0265         | 6.3000e-004        | 0.0272        | 0.0000        | 82.3035         | 82.3035         | 2.0100e-003        | 0.0000        | 82.3539         |
| <b>Total</b> | <b>0.0499</b> | <b>0.2248</b> | <b>0.3670</b> | <b>1.4000e-003</b> | <b>0.1116</b> | <b>1.1800e-003</b> | <b>0.1128</b> | <b>0.0300</b>  | <b>1.1100e-003</b> | <b>0.0311</b> | <b>0.0000</b> | <b>129.5177</b> | <b>129.5177</b> | <b>4.6600e-003</b> | <b>0.0000</b> | <b>129.6342</b> |

**3.5 Paving - 2022****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     | 0.0110        | 0.1113        | 0.1458        | 2.3000e-004        |               | 5.6800e-003        | 5.6800e-003        |                | 5.2200e-003        | 5.2200e-003        | 0.0000        | 20.0276        | 20.0276        | 6.4800e-003        | 0.0000        | 20.1895        |
| Paving       | 6.5500e-003   |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0176</b> | <b>0.1113</b> | <b>0.1458</b> | <b>2.3000e-004</b> |               | <b>5.6800e-003</b> | <b>5.6800e-003</b> |                | <b>5.2200e-003</b> | <b>5.2200e-003</b> | <b>0.0000</b> | <b>20.0276</b> | <b>20.0276</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>20.1895</b> |

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**3.5 Paving - 2022****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        | 3.1000e-004        | 3.4900e-003        | 1.0000e-005        | 1.1000e-003        | 1.0000e-005        | 1.1100e-003        | 2.9000e-004        | 1.0000e-005        | 3.0000e-004        | 0.0000        | 0.9091        | 0.9091        | 2.0000e-005        | 0.0000        | 0.9097        |
| <b>Total</b> | <b>4.9000e-004</b> | <b>3.1000e-004</b> | <b>3.4900e-003</b> | <b>1.0000e-005</b> | <b>1.1000e-003</b> | <b>1.0000e-005</b> | <b>1.1100e-003</b> | <b>2.9000e-004</b> | <b>1.0000e-005</b> | <b>3.0000e-004</b> | <b>0.0000</b> | <b>0.9091</b> | <b>0.9091</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.9097</b> |

**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     | 2.8000e-003        | 0.0122        | 0.1730        | 2.3000e-004        |               | 3.7000e-004        | 3.7000e-004        |                | 3.7000e-004        | 3.7000e-004        | 0.0000        | 20.0275        | 20.0275        | 6.4800e-003        | 0.0000        | 20.1895        |
| Paving       | 6.5500e-003        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>9.3500e-003</b> | <b>0.0122</b> | <b>0.1730</b> | <b>2.3000e-004</b> |               | <b>3.7000e-004</b> | <b>3.7000e-004</b> |                | <b>3.7000e-004</b> | <b>3.7000e-004</b> | <b>0.0000</b> | <b>20.0275</b> | <b>20.0275</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>20.1895</b> |

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**3.5 Paving - 2022****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        | 3.1000e-004        | 3.4900e-003        | 1.0000e-005        | 1.1000e-003        | 1.0000e-005        | 1.1100e-003        | 2.9000e-004        | 1.0000e-005        | 3.0000e-004        | 0.0000        | 0.9091        | 0.9091        | 2.0000e-005        | 0.0000        | 0.9097        |
| <b>Total</b> | <b>4.9000e-004</b> | <b>3.1000e-004</b> | <b>3.4900e-003</b> | <b>1.0000e-005</b> | <b>1.1000e-003</b> | <b>1.0000e-005</b> | <b>1.1100e-003</b> | <b>2.9000e-004</b> | <b>1.0000e-005</b> | <b>3.0000e-004</b> | <b>0.0000</b> | <b>0.9091</b> | <b>0.9091</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.9097</b> |

**3.6 Architectural Coating - 2022****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 | 1.6936        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 2.0500e-003   | 0.0141        | 0.0181        | 3.0000e-005        |               | 8.2000e-004        | 8.2000e-004        |                | 8.2000e-004        | 8.2000e-004        | 0.0000        | 2.5533        | 2.5533        | 1.7000e-004        | 0.0000        | 2.5574        |
| <b>Total</b>    | <b>1.6957</b> | <b>0.0141</b> | <b>0.0181</b> | <b>3.0000e-005</b> |               | <b>8.2000e-004</b> | <b>8.2000e-004</b> |                | <b>8.2000e-004</b> | <b>8.2000e-004</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>2.5574</b> |

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**3.6 Architectural Coating - 2022****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       | 1.2600e-003        | 7.9000e-004        | 9.0700e-003        | 3.0000e-005        | 2.8600e-003        | 2.0000e-005        | 2.8800e-003        | 7.6000e-004        | 2.0000e-005        | 7.8000e-004        | 0.0000        | 2.3637        | 2.3637        | 6.0000e-005        | 0.0000        | 2.3651        |
| <b>Total</b> | <b>1.2600e-003</b> | <b>7.9000e-004</b> | <b>9.0700e-003</b> | <b>3.0000e-005</b> | <b>2.8600e-003</b> | <b>2.0000e-005</b> | <b>2.8800e-003</b> | <b>7.6000e-004</b> | <b>2.0000e-005</b> | <b>7.8000e-004</b> | <b>0.0000</b> | <b>2.3637</b> | <b>2.3637</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>2.3651</b> |

**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 | 1.6936        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 3.0000e-004   | 1.2900e-003        | 0.0183        | 3.0000e-005        |               | 4.0000e-005        | 4.0000e-005        |                | 4.0000e-005        | 4.0000e-005        | 0.0000        | 2.5533        | 2.5533        | 1.7000e-004        | 0.0000        | 2.5574        |
| <b>Total</b>    | <b>1.6939</b> | <b>1.2900e-003</b> | <b>0.0183</b> | <b>3.0000e-005</b> |               | <b>4.0000e-005</b> | <b>4.0000e-005</b> |                | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>2.5574</b> |

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**3.6 Architectural Coating - 2022****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       | 1.2600e-003        | 7.9000e-004        | 9.0700e-003        | 3.0000e-005        | 2.8600e-003        | 2.0000e-005        | 2.8800e-003        | 7.6000e-004        | 2.0000e-005        | 7.8000e-004        | 0.0000        | 2.3637        | 2.3637        | 6.0000e-005        | 0.0000        | 2.3651        |
| <b>Total</b> | <b>1.2600e-003</b> | <b>7.9000e-004</b> | <b>9.0700e-003</b> | <b>3.0000e-005</b> | <b>2.8600e-003</b> | <b>2.0000e-005</b> | <b>2.8800e-003</b> | <b>7.6000e-004</b> | <b>2.0000e-005</b> | <b>7.8000e-004</b> | <b>0.0000</b> | <b>2.3637</b> | <b>2.3637</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>2.3651</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|             | ROG     | NOx    | CO     | SO2    | Fugitive 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   | 0.6829  | 1.2617 | 5.3915 | 0.0147 | 1.3525        | 0.0154       | 1.3679     | 0.3624         | 0.0144        | 0.3769      | 0.0000   | 1,365.8568 | 1,365.8568 | 0.0804 | 0.0000 | 1,367.8662 |
| Unmitigated | 0.6829  | 1.2617 | 5.3915 | 0.0147 | 1.3525        | 0.0154       | 1.3679     | 0.3624         | 0.0144        | 0.3769      | 0.0000   | 1,365.8568 | 1,365.8568 | 0.0804 | 0.0000 | 1,367.8662 |

## 4.2 Trip Summary Information

| Land Use               | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|----------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Mid Rise    | 1,447.04                | 1,391.18 | 1276.80  | 3,630,377   | 3,630,377  |
| Other Asphalt Surfaces | 0.00                    | 0.00     | 0.00     |             |            |
| Racquet Club           | 0.00                    | 0.00     | 0.00     |             |            |
| Total                  | 1,447.04                | 1,391.18 | 1,276.80 | 3,630,377   | 3,630,377  |

## 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 |
| Apartments Mid Rise    | 10.00      | 5.00       | 6.50        | 46.50      | 12.50      | 41.00       | 86             | 11       | 3       |
| Other Asphalt Surfaces | 15.00      | 7.50       | 8.50        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Racquet Club           | 10.00      | 5.00       | 6.50        | 11.50      | 69.50      | 19.00       | 52             | 39       | 9       |

## 4.4 Fleet Mix

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

| Land Use               | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Mid Rise    | 0.553424 | 0.054724 | 0.182601 | 0.125932 | 0.026745 | 0.006205 | 0.019388 | 0.020907 | 0.001606 | 0.001367 | 0.005207 | 0.000984 | 0.000911 |
| Other Asphalt Surfaces | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Racquet Club           | 0.553424 | 0.054724 | 0.182601 | 0.125932 | 0.026745 | 0.006205 | 0.019388 | 0.020907 | 0.001606 | 0.001367 | 0.005207 | 0.000984 | 0.000911 |

## 5.0 Energy Detail

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Historical Energy Use: N

## 5.1 Mitigation Measures Energy

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|                         | ROG     | NOx    | CO     | SO2         | Fugitive 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   | 328.7699  | 328.7699  | 0.0162      | 3.4400e-003 | 330.1977 |
| Electricity Unmitigated |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 328.7699  | 328.7699  | 0.0162      | 3.4400e-003 | 330.1977 |
| NaturalGas Mitigated    | 0.0152  | 0.1305 | 0.0601 | 8.3000e-004 |               | 0.0105       | 0.0105     |                | 0.0105        | 0.0105      | 0.0000   | 150.4111  | 150.4111  | 2.8800e-003 | 2.7600e-003 | 151.3049 |
| NaturalGas Unmitigated  | 0.0152  | 0.1305 | 0.0601 | 8.3000e-004 |               | 0.0105       | 0.0105     |                | 0.0105        | 0.0105      | 0.0000   | 150.4111  | 150.4111  | 2.8800e-003 | 2.7600e-003 | 151.3049 |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**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         |                 |                 |                    |                    |                 |
| Apartments Mid Rise    | 2.59299e+006   | 0.0140        | 0.1195        | 0.0508        | 7.6000e-004        |               | 9.6600e-003   | 9.6600e-003   |                | 9.6600e-003   | 9.6600e-003   | 0.0000        | 138.3721        | 138.3721        | 2.6500e-003        | 2.5400e-003        | 139.1943        |
| Other Asphalt Surfaces | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Racquet Club           | 225603         | 1.2200e-003   | 0.0111        | 9.2900e-003   | 7.0000e-005        |               | 8.4000e-004   | 8.4000e-004   |                | 8.4000e-004   | 8.4000e-004   | 0.0000        | 12.0390         | 12.0390         | 2.3000e-004        | 2.2000e-004        | 12.1106         |
| <b>Total</b>           |                | <b>0.0152</b> | <b>0.1305</b> | <b>0.0601</b> | <b>8.3000e-004</b> |               | <b>0.0105</b> | <b>0.0105</b> |                | <b>0.0105</b> | <b>0.0105</b> | <b>0.0000</b> | <b>150.4111</b> | <b>150.4111</b> | <b>2.8800e-003</b> | <b>2.7600e-003</b> | <b>151.3049</b> |

**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         |                 |                 |                    |                    |                 |
| Apartments Mid Rise    | 2.59299e+006   | 0.0140        | 0.1195        | 0.0508        | 7.6000e-004        |               | 9.6600e-003   | 9.6600e-003   |                | 9.6600e-003   | 9.6600e-003   | 0.0000        | 138.3721        | 138.3721        | 2.6500e-003        | 2.5400e-003        | 139.1943        |
| Other Asphalt Surfaces | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Racquet Club           | 225603         | 1.2200e-003   | 0.0111        | 9.2900e-003   | 7.0000e-005        |               | 8.4000e-004   | 8.4000e-004   |                | 8.4000e-004   | 8.4000e-004   | 0.0000        | 12.0390         | 12.0390         | 2.3000e-004        | 2.2000e-004        | 12.1106         |
| <b>Total</b>           |                | <b>0.0152</b> | <b>0.1305</b> | <b>0.0601</b> | <b>8.3000e-004</b> |               | <b>0.0105</b> | <b>0.0105</b> |                | <b>0.0105</b> | <b>0.0105</b> | <b>0.0000</b> | <b>150.4111</b> | <b>150.4111</b> | <b>2.8800e-003</b> | <b>2.7600e-003</b> | <b>151.3049</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                        | Electricity Use | Total CO2       | CH4           | N2O                | CO2e            |
|------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Land Use               | kWh/yr          | MT/yr           |               |                    |                 |
| Apartments Mid Rise    | 1.13222e+006    | 303.1629        | 0.0149        | 3.1700e-003        | 304.4795        |
| Other Asphalt Surfaces | 0               | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Racquet Club           | 95634           | 25.6070         | 1.2600e-003   | 2.7000e-004        | 25.7182         |
| <b>Total</b>           |                 | <b>328.7699</b> | <b>0.0162</b> | <b>3.4400e-003</b> | <b>330.1977</b> |

**Mitigated**

|                        | Electricity Use | Total CO2       | CH4           | N2O                | CO2e            |
|------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Land Use               | kWh/yr          | MT/yr           |               |                    |                 |
| Apartments Mid Rise    | 1.13222e+006    | 303.1629        | 0.0149        | 3.1700e-003        | 304.4795        |
| Other Asphalt Surfaces | 0               | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Racquet Club           | 95634           | 25.6070         | 1.2600e-003   | 2.7000e-004        | 25.7182         |
| <b>Total</b>           |                 | <b>328.7699</b> | <b>0.0162</b> | <b>3.4400e-003</b> | <b>330.1977</b> |

**6.0 Area Detail**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**6.1 Mitigation Measures Area**

|             | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|-------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |        |        |
| Mitigated   | 1.3299  | 0.0317 | 2.7463 | 1.4000e-004 |               | 0.0152       | 0.0152     |                | 0.0152        | 0.0152      | 0.0000   | 4.4812    | 4.4812    | 4.3200e-003 | 0.0000 | 4.5893 |
| Unmitigated | 1.3299  | 0.0317 | 2.7463 | 1.4000e-004 |               | 0.0152       | 0.0152     |                | 0.0152        | 0.0152      | 0.0000   | 4.4812    | 4.4812    | 4.3200e-003 | 0.0000 | 4.5893 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**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 | 0.1694        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Consumer Products     | 1.0776        |               |               |                    |               | 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           | 0.0830        | 0.0317        | 2.7463        | 1.4000e-004        |               | 0.0152        | 0.0152        |                | 0.0152        | 0.0152        | 0.0000        | 4.4812        | 4.4812        | 4.3200e-003        | 0.0000        | 4.5893        |
| <b>Total</b>          | <b>1.3299</b> | <b>0.0317</b> | <b>2.7463</b> | <b>1.4000e-004</b> |               | <b>0.0152</b> | <b>0.0152</b> |                | <b>0.0152</b> | <b>0.0152</b> | <b>0.0000</b> | <b>4.4812</b> | <b>4.4812</b> | <b>4.3200e-003</b> | <b>0.0000</b> | <b>4.5893</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**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 | 0.1694        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Consumer Products     | 1.0776        |               |               |                    |               | 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           | 0.0830        | 0.0317        | 2.7463        | 1.4000e-004        |               | 0.0152        | 0.0152        |                | 0.0152        | 0.0152        | 0.0000        | 4.4812        | 4.4812        | 4.3200e-003        | 0.0000        | 4.5893        |
| <b>Total</b>          | <b>1.3299</b> | <b>0.0317</b> | <b>2.7463</b> | <b>1.4000e-004</b> |               | <b>0.0152</b> | <b>0.0152</b> |                | <b>0.0152</b> | <b>0.0152</b> | <b>0.0000</b> | <b>4.4812</b> | <b>4.4812</b> | <b>4.3200e-003</b> | <b>0.0000</b> | <b>4.5893</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
| Category    | MT/yr     |        |        |         |
| Mitigated   | 40.3361   | 0.0232 | 0.0140 | 45.0822 |
| Unmitigated | 40.3361   | 0.0232 | 0.0140 | 45.0822 |

## 7.2 Water by Land Use

Unmitigated

|                        | Indoor/Outdoor Use  | Total CO2      | CH4           | N2O           | CO2e           |
|------------------------|---------------------|----------------|---------------|---------------|----------------|
| Land Use               | Mgal                | MT/yr          |               |               |                |
| Apartments Mid Rise    | 17.331 / 10.926     | 39.4932        | 0.0227        | 0.0137        | 44.1393        |
| Other Asphalt Surfaces | 0 / 0               | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Racquet Club           | 0.372602 / 0.228369 | 0.8430         | 4.9000e-004   | 2.9000e-004   | 0.9428         |
| <b>Total</b>           |                     | <b>40.3361</b> | <b>0.0232</b> | <b>0.0140</b> | <b>45.0822</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**7.2 Water by Land Use****Mitigated**

|                        | Indoor/Outdoor Use  | Total CO2      | CH4           | N2O           | CO2e           |
|------------------------|---------------------|----------------|---------------|---------------|----------------|
| Land Use               | Mgal                | MT/yr          |               |               |                |
| Apartments Mid Rise    | 17.331 / 10.926     | 39.4932        | 0.0227        | 0.0137        | 44.1393        |
| Other Asphalt Surfaces | 0 / 0               | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Racquet Club           | 0.372602 / 0.228369 | 0.8430         | 4.9000e-004   | 2.9000e-004   | 0.9428         |
| <b>Total</b>           |                     | <b>40.3361</b> | <b>0.0232</b> | <b>0.0140</b> | <b>45.0822</b> |

**8.0 Waste Detail****8.1 Mitigation Measures Waste**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
|             | MT/yr     |        |        |         |
| Mitigated   | 32.1274   | 1.8987 | 0.0000 | 79.5942 |
| Unmitigated | 32.1274   | 1.8987 | 0.0000 | 79.5942 |

**8.2 Waste by Land Use****Unmitigated**

|                        | Waste Disposed | Total CO2      | CH4           | N2O           | CO2e           |
|------------------------|----------------|----------------|---------------|---------------|----------------|
| Land Use               | tons           | MT/yr          |               |               |                |
| Apartments Mid Rise    | 122.36         | 24.8380        | 1.4679        | 0.0000        | 61.5350        |
| Other Asphalt Surfaces | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Racquet Club           | 35.91          | 7.2894         | 0.4308        | 0.0000        | 18.0592        |
| <b>Total</b>           |                | <b>32.1274</b> | <b>1.8987</b> | <b>0.0000</b> | <b>79.5942</b> |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

**8.2 Waste by Land Use****Mitigated**

|                        | Waste Disposed | Total CO2      | CH4           | N2O           | CO2e           |
|------------------------|----------------|----------------|---------------|---------------|----------------|
| Land Use               | tons           | MT/yr          |               |               |                |
| Apartments Mid Rise    | 122.36         | 24.8380        | 1.4679        | 0.0000        | 61.5350        |
| Other Asphalt Surfaces | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Racquet Club           | 35.91          | 7.2894         | 0.4308        | 0.0000        | 18.0592        |
| <b>Total</b>           |                | <b>32.1274</b> | <b>1.8987</b> | <b>0.0000</b> | <b>79.5942</b> |

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Annual

## **11.0 Vegetation**

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## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

## Klotz Ranch Apartments

### Sacramento Metropolitan AQMD Air District, Winter

## 1.0 Project Characteristics

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### 1.1 Land Usage

| Land Uses              | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|------------------------|--------|---------------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 5.00   | Acre          | 5.00        | 217,800.00         | 0          |
| Racquet Club           | 6.30   | 1000sqft      | 0.14        | 6,300.00           | 0          |
| Apartments Mid Rise    | 266.00 | Dwelling Unit | 12.70       | 266,000.00         | 710        |

### 1.2 Other Project Characteristics

|                          |                                       |                          |       |                           |         |
|--------------------------|---------------------------------------|--------------------------|-------|---------------------------|---------|
| Urbanization             | Rural                                 | Wind Speed (m/s)         | 3.5   | Precipitation Freq (Days) | 58      |
| Climate Zone             | 6                                     |                          |       | Operational Year          | 2022    |
| Utility Company          | Sacramento Municipal Utility District |                          |       |                           |         |
| CO2 Intensity (lb/MW hr) | 590.31                                | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr)  | 0.00617 |

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

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

Project Characteristics - PG&E GHG emission factor based on <https://www.pgecurrents.com/2018/03/26/independent-registry-confirms-record-low-carbonemissions-for-pge/>

Land Use - 12.7 acres based on project data. Raquet Club land use represents the 6,300 ft2, two-story clubhouse. Parking/roads estimated to be 5 acres.

Construction Phase - Construction phases based on Project Description

Trips and VMT - per project description.

Grading - Cut and fill volumes provided by client.

Vehicle Trips - Trip rates were updated based on traffic study of 1,448 trips per weekday. The racquet club land use represents a clubhouse and does not attract additional trips, so they are set to zero.

Vehicle Emission Factors - Use of EMFAC2017 Emission Factors

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final mitigation for onsite equipment.

| Table Name              | Column Name                  | Default Value | New Value |
|-------------------------|------------------------------|---------------|-----------|
| tblArchitecturalCoating | ConstArea_Parking            | 13,068.00     | 0.00      |
| tblAreaCoating          | Area_Parking                 | 13068         | 0         |
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed | 0             | 15        |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 3.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 1.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 2.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated   | 0.00          | 9.00      |

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|                         |                            |           |              |
|-------------------------|----------------------------|-----------|--------------|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00      | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                    | 30.00     | 15.00        |
| tblFleetMix             | HHD                        | 0.02      | 0.02         |
| tblFleetMix             | HHD                        | 0.02      | 0.00         |
| tblFleetMix             | HHD                        | 0.02      | 0.02         |
| tblFleetMix             | LDA                        | 0.56      | 0.55         |
| tblFleetMix             | LDA                        | 0.56      | 0.00         |
| tblFleetMix             | LDA                        | 0.56      | 0.55         |
| tblFleetMix             | LDT1                       | 0.04      | 0.05         |
| tblFleetMix             | LDT1                       | 0.04      | 0.00         |
| tblFleetMix             | LDT1                       | 0.04      | 0.05         |
| tblFleetMix             | LDT2                       | 0.21      | 0.18         |
| tblFleetMix             | LDT2                       | 0.21      | 0.00         |
| tblFleetMix             | LDT2                       | 0.21      | 0.18         |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|             |      |             |             |
|-------------|------|-------------|-------------|
| tblFleetMix | LHD1 | 0.02        | 0.03        |
| tblFleetMix | LHD1 | 0.02        | 0.00        |
| tblFleetMix | LHD1 | 0.02        | 0.03        |
| tblFleetMix | LHD2 | 5.2450e-003 | 6.2050e-003 |
| tblFleetMix | LHD2 | 5.2450e-003 | 0.00        |
| tblFleetMix | LHD2 | 5.2450e-003 | 6.2050e-003 |
| tblFleetMix | MCY  | 5.8840e-003 | 5.2070e-003 |
| tblFleetMix | MCY  | 5.8840e-003 | 0.00        |
| tblFleetMix | MCY  | 5.8840e-003 | 5.2070e-003 |
| tblFleetMix | MDV  | 0.12        | 0.13        |
| tblFleetMix | MDV  | 0.12        | 0.00        |
| tblFleetMix | MDV  | 0.12        | 0.13        |
| tblFleetMix | MH   | 8.6500e-004 | 9.1100e-004 |
| tblFleetMix | MH   | 8.6500e-004 | 0.00        |
| tblFleetMix | MH   | 8.6500e-004 | 9.1100e-004 |
| tblFleetMix | MHD  | 0.02        | 0.02        |
| tblFleetMix | MHD  | 0.02        | 0.00        |
| tblFleetMix | MHD  | 0.02        | 0.02        |
| tblFleetMix | OBUS | 2.0310e-003 | 1.6060e-003 |
| tblFleetMix | OBUS | 2.0310e-003 | 0.00        |
| tblFleetMix | OBUS | 2.0310e-003 | 1.6060e-003 |
| tblFleetMix | SBUS | 6.1900e-004 | 9.8400e-004 |
| tblFleetMix | SBUS | 6.1900e-004 | 0.00        |
| tblFleetMix | SBUS | 6.1900e-004 | 9.8400e-004 |
| tblFleetMix | UBUS | 2.0540e-003 | 1.3670e-003 |
| tblFleetMix | UBUS | 2.0540e-003 | 0.00        |
| tblFleetMix | UBUS | 2.0540e-003 | 1.3670e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|                           |                   |          |             |
|---------------------------|-------------------|----------|-------------|
| tblGrading                | AcresOfGrading    | 37.50    | 75.00       |
| tblGrading                | MaterialExported  | 0.00     | 20,100.00   |
| tblLandUse                | LotAcreage        | 7.00     | 12.70       |
| tblProjectCharacteristics | UrbanizationLevel | Urban    | Rural       |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripLength  | 8.50     | 6.50        |
| tblTripsAndVMT            | VendorTripNumber  | 65.00    | 29.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripLength  | 15.00    | 10.00       |
| tblTripsAndVMT            | WorkerTripNumber  | 286.00   | 194.00      |
| tblTripsAndVMT            | WorkerTripNumber  | 57.00    | 39.00       |
| tblVehicleEF              | HHD               | 0.60     | 0.03        |
| tblVehicleEF              | HHD               | 0.07     | 0.06        |
| tblVehicleEF              | HHD               | 0.11     | 0.00        |
| tblVehicleEF              | HHD               | 2.43     | 6.38        |
| tblVehicleEF              | HHD               | 1.02     | 0.46        |
| tblVehicleEF              | HHD               | 3.28     | 5.1820e-003 |
| tblVehicleEF              | HHD               | 4,159.31 | 1,215.64    |
| tblVehicleEF              | HHD               | 1,651.06 | 1,538.11    |
| tblVehicleEF              | HHD               | 9.15     | 0.05        |
| tblVehicleEF              | HHD               | 22.32    | 7.16        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 3.36        | 3.68        |
| tblVehicleEF | HHD | 19.79       | 2.45        |
| tblVehicleEF | HHD | 0.04        | 6.7790e-003 |
| tblVehicleEF | HHD | 0.06        | 0.06        |
| tblVehicleEF | HHD | 0.03        | 0.04        |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 9.0000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 0.03        | 6.4850e-003 |
| tblVehicleEF | HHD | 0.03        | 0.03        |
| tblVehicleEF | HHD | 8.6320e-003 | 8.7710e-003 |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 8.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 1.5300e-004 | 9.0000e-006 |
| tblVehicleEF | HHD | 5.4300e-003 | 2.8400e-004 |
| tblVehicleEF | HHD | 0.63        | 0.47        |
| tblVehicleEF | HHD | 7.2000e-005 | 4.0000e-006 |
| tblVehicleEF | HHD | 0.11        | 0.07        |
| tblVehicleEF | HHD | 8.2400e-004 | 1.8220e-003 |
| tblVehicleEF | HHD | 0.09        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 0.01        |
| tblVehicleEF | HHD | 0.02        | 0.01        |
| tblVehicleEF | HHD | 1.4600e-004 | 1.0000e-006 |
| tblVehicleEF | HHD | 1.5300e-004 | 9.0000e-006 |
| tblVehicleEF | HHD | 5.4300e-003 | 2.8400e-004 |
| tblVehicleEF | HHD | 0.72        | 0.54        |
| tblVehicleEF | HHD | 7.2000e-005 | 4.0000e-006 |
| tblVehicleEF | HHD | 0.20        | 0.14        |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 8.2400e-004 | 1.8220e-003 |
| tblVehicleEF | HHD | 0.10        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.57        | 0.03        |
| tblVehicleEF | HHD | 0.07        | 0.06        |
| tblVehicleEF | HHD | 0.10        | 0.00        |
| tblVehicleEF | HHD | 1.77        | 6.24        |
| tblVehicleEF | HHD | 1.03        | 0.46        |
| tblVehicleEF | HHD | 3.02        | 4.7730e-003 |
| tblVehicleEF | HHD | 4,406.18    | 1,213.68    |
| tblVehicleEF | HHD | 1,651.06    | 1,538.11    |
| tblVehicleEF | HHD | 9.15        | 0.05        |
| tblVehicleEF | HHD | 23.04       | 7.00        |
| tblVehicleEF | HHD | 3.15        | 3.45        |
| tblVehicleEF | HHD | 19.77       | 2.45        |
| tblVehicleEF | HHD | 0.03        | 5.8390e-003 |
| tblVehicleEF | HHD | 0.06        | 0.06        |
| tblVehicleEF | HHD | 0.03        | 0.04        |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 9.0000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 0.03        | 5.5870e-003 |
| tblVehicleEF | HHD | 0.03        | 0.03        |
| tblVehicleEF | HHD | 8.6320e-003 | 8.7710e-003 |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 8.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 4.0400e-004 | 2.5000e-005 |
| tblVehicleEF | HHD | 6.4540e-003 | 3.5200e-004 |
| tblVehicleEF | HHD | 0.59        | 0.49        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 1.9500e-004 | 1.2000e-005 |
| tblVehicleEF | HHD | 0.11        | 0.07        |
| tblVehicleEF | HHD | 8.4500e-004 | 1.9180e-003 |
| tblVehicleEF | HHD | 0.09        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 0.01        |
| tblVehicleEF | HHD | 0.02        | 0.01        |
| tblVehicleEF | HHD | 1.4200e-004 | 1.0000e-006 |
| tblVehicleEF | HHD | 4.0400e-004 | 2.5000e-005 |
| tblVehicleEF | HHD | 6.4540e-003 | 3.5200e-004 |
| tblVehicleEF | HHD | 0.68        | 0.57        |
| tblVehicleEF | HHD | 1.9500e-004 | 1.2000e-005 |
| tblVehicleEF | HHD | 0.20        | 0.14        |
| tblVehicleEF | HHD | 8.4500e-004 | 1.9180e-003 |
| tblVehicleEF | HHD | 0.10        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.65        | 0.03        |
| tblVehicleEF | HHD | 0.07        | 0.06        |
| tblVehicleEF | HHD | 0.12        | 0.00        |
| tblVehicleEF | HHD | 3.34        | 6.59        |
| tblVehicleEF | HHD | 1.01        | 0.46        |
| tblVehicleEF | HHD | 3.67        | 5.7450e-003 |
| tblVehicleEF | HHD | 3,818.40    | 1,218.35    |
| tblVehicleEF | HHD | 1,651.06    | 1,538.11    |
| tblVehicleEF | HHD | 9.15        | 0.06        |
| tblVehicleEF | HHD | 21.33       | 7.39        |
| tblVehicleEF | HHD | 3.43        | 3.75        |
| tblVehicleEF | HHD | 19.81       | 2.45        |
| tblVehicleEF | HHD | 0.04        | 8.0760e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | HHD | 0.06        | 0.06        |
| tblVehicleEF | HHD | 0.03        | 0.04        |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 9.0000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 7.7270e-003 |
| tblVehicleEF | HHD | 0.03        | 0.03        |
| tblVehicleEF | HHD | 8.6320e-003 | 8.7710e-003 |
| tblVehicleEF | HHD | 0.02        | 0.03        |
| tblVehicleEF | HHD | 8.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 4.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 5.5610e-003 | 3.0300e-004 |
| tblVehicleEF | HHD | 0.68        | 0.44        |
| tblVehicleEF | HHD | 1.6000e-005 | 1.0000e-006 |
| tblVehicleEF | HHD | 0.11        | 0.07        |
| tblVehicleEF | HHD | 8.9700e-004 | 1.9320e-003 |
| tblVehicleEF | HHD | 0.10        | 2.0000e-006 |
| tblVehicleEF | HHD | 0.04        | 0.01        |
| tblVehicleEF | HHD | 0.02        | 0.01        |
| tblVehicleEF | HHD | 1.5200e-004 | 1.0000e-006 |
| tblVehicleEF | HHD | 4.3000e-005 | 2.0000e-006 |
| tblVehicleEF | HHD | 5.5610e-003 | 3.0300e-004 |
| tblVehicleEF | HHD | 0.78        | 0.51        |
| tblVehicleEF | HHD | 1.6000e-005 | 1.0000e-006 |
| tblVehicleEF | HHD | 0.20        | 0.14        |
| tblVehicleEF | HHD | 8.9700e-004 | 1.9320e-003 |
| tblVehicleEF | HHD | 0.11        | 2.0000e-006 |
| tblVehicleEF | LDA | 4.2860e-003 | 2.5680e-003 |

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|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | LDA | 5.8650e-003 | 0.06        |
| tblVehicleEF | LDA | 0.61        | 0.69        |
| tblVehicleEF | LDA | 1.26        | 2.30        |
| tblVehicleEF | LDA | 252.52      | 260.95      |
| tblVehicleEF | LDA | 57.68       | 54.67       |
| tblVehicleEF | LDA | 0.05        | 0.04        |
| tblVehicleEF | LDA | 0.08        | 0.20        |
| tblVehicleEF | LDA | 1.7730e-003 | 1.5130e-003 |
| tblVehicleEF | LDA | 2.2990e-003 | 1.9700e-003 |
| tblVehicleEF | LDA | 1.6350e-003 | 1.3940e-003 |
| tblVehicleEF | LDA | 2.1140e-003 | 1.8110e-003 |
| tblVehicleEF | LDA | 0.04        | 0.07        |
| tblVehicleEF | LDA | 0.11        | 0.12        |
| tblVehicleEF | LDA | 0.03        | 0.05        |
| tblVehicleEF | LDA | 0.01        | 0.01        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.08        | 0.26        |
| tblVehicleEF | LDA | 2.5290e-003 | 2.5820e-003 |
| tblVehicleEF | LDA | 5.9800e-004 | 5.4100e-004 |
| tblVehicleEF | LDA | 0.04        | 0.07        |
| tblVehicleEF | LDA | 0.11        | 0.12        |
| tblVehicleEF | LDA | 0.03        | 0.05        |
| tblVehicleEF | LDA | 0.02        | 0.01        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.09        | 0.28        |
| tblVehicleEF | LDA | 5.0150e-003 | 3.0340e-003 |
| tblVehicleEF | LDA | 4.7840e-003 | 0.05        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | LDA | 0.78        | 0.89        |
| tblVehicleEF | LDA | 1.03        | 1.90        |
| tblVehicleEF | LDA | 280.47      | 289.33      |
| tblVehicleEF | LDA | 57.68       | 53.88       |
| tblVehicleEF | LDA | 0.05        | 0.04        |
| tblVehicleEF | LDA | 0.07        | 0.19        |
| tblVehicleEF | LDA | 1.7730e-003 | 1.5130e-003 |
| tblVehicleEF | LDA | 2.2990e-003 | 1.9700e-003 |
| tblVehicleEF | LDA | 1.6350e-003 | 1.3940e-003 |
| tblVehicleEF | LDA | 2.1140e-003 | 1.8110e-003 |
| tblVehicleEF | LDA | 0.11        | 0.18        |
| tblVehicleEF | LDA | 0.13        | 0.15        |
| tblVehicleEF | LDA | 0.08        | 0.12        |
| tblVehicleEF | LDA | 0.01        | 0.01        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.06        | 0.21        |
| tblVehicleEF | LDA | 2.8110e-003 | 2.8620e-003 |
| tblVehicleEF | LDA | 5.9400e-004 | 5.3300e-004 |
| tblVehicleEF | LDA | 0.11        | 0.18        |
| tblVehicleEF | LDA | 0.13        | 0.15        |
| tblVehicleEF | LDA | 0.08        | 0.12        |
| tblVehicleEF | LDA | 0.02        | 0.02        |
| tblVehicleEF | LDA | 0.04        | 0.24        |
| tblVehicleEF | LDA | 0.07        | 0.23        |
| tblVehicleEF | LDA | 4.0630e-003 | 2.3890e-003 |
| tblVehicleEF | LDA | 7.0460e-003 | 0.07        |
| tblVehicleEF | LDA | 0.58        | 0.66        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDA  | 1.57        | 2.88        |
| tblVehicleEF | LDA  | 245.02      | 253.39      |
| tblVehicleEF | LDA  | 57.68       | 55.77       |
| tblVehicleEF | LDA  | 0.06        | 0.05        |
| tblVehicleEF | LDA  | 0.09        | 0.23        |
| tblVehicleEF | LDA  | 1.7730e-003 | 1.5130e-003 |
| tblVehicleEF | LDA  | 2.2990e-003 | 1.9700e-003 |
| tblVehicleEF | LDA  | 1.6350e-003 | 1.3940e-003 |
| tblVehicleEF | LDA  | 2.1140e-003 | 1.8110e-003 |
| tblVehicleEF | LDA  | 0.01        | 0.02        |
| tblVehicleEF | LDA  | 0.11        | 0.12        |
| tblVehicleEF | LDA  | 7.3210e-003 | 0.01        |
| tblVehicleEF | LDA  | 0.01        | 9.6040e-003 |
| tblVehicleEF | LDA  | 0.05        | 0.28        |
| tblVehicleEF | LDA  | 0.10        | 0.31        |
| tblVehicleEF | LDA  | 2.4540e-003 | 2.5070e-003 |
| tblVehicleEF | LDA  | 6.0400e-004 | 5.5200e-004 |
| tblVehicleEF | LDA  | 0.01        | 0.02        |
| tblVehicleEF | LDA  | 0.11        | 0.12        |
| tblVehicleEF | LDA  | 7.3210e-003 | 0.01        |
| tblVehicleEF | LDA  | 0.01        | 0.01        |
| tblVehicleEF | LDA  | 0.05        | 0.28        |
| tblVehicleEF | LDA  | 0.10        | 0.34        |
| tblVehicleEF | LDT1 | 0.01        | 5.4680e-003 |
| tblVehicleEF | LDT1 | 0.02        | 0.08        |
| tblVehicleEF | LDT1 | 1.36        | 1.20        |
| tblVehicleEF | LDT1 | 3.32        | 2.50        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT1 | 313.76      | 308.81      |
| tblVehicleEF | LDT1 | 71.71       | 65.78       |
| tblVehicleEF | LDT1 | 0.13        | 0.10        |
| tblVehicleEF | LDT1 | 0.19        | 0.29        |
| tblVehicleEF | LDT1 | 2.6720e-003 | 2.0500e-003 |
| tblVehicleEF | LDT1 | 3.4480e-003 | 2.6030e-003 |
| tblVehicleEF | LDT1 | 2.4650e-003 | 1.8900e-003 |
| tblVehicleEF | LDT1 | 3.1710e-003 | 2.3940e-003 |
| tblVehicleEF | LDT1 | 0.16        | 0.16        |
| tblVehicleEF | LDT1 | 0.31        | 0.23        |
| tblVehicleEF | LDT1 | 0.10        | 0.10        |
| tblVehicleEF | LDT1 | 0.03        | 0.02        |
| tblVehicleEF | LDT1 | 0.20        | 0.80        |
| tblVehicleEF | LDT1 | 0.23        | 0.41        |
| tblVehicleEF | LDT1 | 3.1540e-003 | 3.0560e-003 |
| tblVehicleEF | LDT1 | 7.7500e-004 | 6.5100e-004 |
| tblVehicleEF | LDT1 | 0.16        | 0.16        |
| tblVehicleEF | LDT1 | 0.31        | 0.23        |
| tblVehicleEF | LDT1 | 0.10        | 0.10        |
| tblVehicleEF | LDT1 | 0.04        | 0.04        |
| tblVehicleEF | LDT1 | 0.20        | 0.80        |
| tblVehicleEF | LDT1 | 0.25        | 0.45        |
| tblVehicleEF | LDT1 | 0.01        | 6.3980e-003 |
| tblVehicleEF | LDT1 | 0.01        | 0.07        |
| tblVehicleEF | LDT1 | 1.70        | 1.51        |
| tblVehicleEF | LDT1 | 2.71        | 2.06        |
| tblVehicleEF | LDT1 | 346.93      | 337.97      |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT1 | 71.71       | 64.82       |
| tblVehicleEF | LDT1 | 0.12        | 0.09        |
| tblVehicleEF | LDT1 | 0.17        | 0.27        |
| tblVehicleEF | LDT1 | 2.6720e-003 | 2.0500e-003 |
| tblVehicleEF | LDT1 | 3.4480e-003 | 2.6030e-003 |
| tblVehicleEF | LDT1 | 2.4650e-003 | 1.8900e-003 |
| tblVehicleEF | LDT1 | 3.1710e-003 | 2.3940e-003 |
| tblVehicleEF | LDT1 | 0.41        | 0.40        |
| tblVehicleEF | LDT1 | 0.40        | 0.30        |
| tblVehicleEF | LDT1 | 0.25        | 0.25        |
| tblVehicleEF | LDT1 | 0.03        | 0.03        |
| tblVehicleEF | LDT1 | 0.19        | 0.79        |
| tblVehicleEF | LDT1 | 0.19        | 0.34        |
| tblVehicleEF | LDT1 | 3.4910e-003 | 3.3440e-003 |
| tblVehicleEF | LDT1 | 7.6400e-004 | 6.4100e-004 |
| tblVehicleEF | LDT1 | 0.41        | 0.40        |
| tblVehicleEF | LDT1 | 0.40        | 0.30        |
| tblVehicleEF | LDT1 | 0.25        | 0.25        |
| tblVehicleEF | LDT1 | 0.05        | 0.04        |
| tblVehicleEF | LDT1 | 0.19        | 0.79        |
| tblVehicleEF | LDT1 | 0.20        | 0.37        |
| tblVehicleEF | LDT1 | 0.01        | 5.1180e-003 |
| tblVehicleEF | LDT1 | 0.02        | 0.09        |
| tblVehicleEF | LDT1 | 1.31        | 1.14        |
| tblVehicleEF | LDT1 | 4.17        | 3.14        |
| tblVehicleEF | LDT1 | 304.87      | 301.05      |
| tblVehicleEF | LDT1 | 71.71       | 67.08       |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT1 | 0.15        | 0.11        |
| tblVehicleEF | LDT1 | 0.21        | 0.32        |
| tblVehicleEF | LDT1 | 2.6720e-003 | 2.0500e-003 |
| tblVehicleEF | LDT1 | 3.4480e-003 | 2.6030e-003 |
| tblVehicleEF | LDT1 | 2.4650e-003 | 1.8900e-003 |
| tblVehicleEF | LDT1 | 3.1710e-003 | 2.3940e-003 |
| tblVehicleEF | LDT1 | 0.04        | 0.04        |
| tblVehicleEF | LDT1 | 0.32        | 0.23        |
| tblVehicleEF | LDT1 | 0.02        | 0.02        |
| tblVehicleEF | LDT1 | 0.03        | 0.02        |
| tblVehicleEF | LDT1 | 0.24        | 0.97        |
| tblVehicleEF | LDT1 | 0.28        | 0.49        |
| tblVehicleEF | LDT1 | 3.0640e-003 | 2.9790e-003 |
| tblVehicleEF | LDT1 | 7.9000e-004 | 6.6400e-004 |
| tblVehicleEF | LDT1 | 0.04        | 0.04        |
| tblVehicleEF | LDT1 | 0.32        | 0.23        |
| tblVehicleEF | LDT1 | 0.02        | 0.02        |
| tblVehicleEF | LDT1 | 0.04        | 0.03        |
| tblVehicleEF | LDT1 | 0.24        | 0.97        |
| tblVehicleEF | LDT1 | 0.30        | 0.54        |
| tblVehicleEF | LDT2 | 6.1470e-003 | 3.8830e-003 |
| tblVehicleEF | LDT2 | 8.5390e-003 | 0.08        |
| tblVehicleEF | LDT2 | 0.83        | 0.94        |
| tblVehicleEF | LDT2 | 1.80        | 2.95        |
| tblVehicleEF | LDT2 | 354.77      | 334.69      |
| tblVehicleEF | LDT2 | 81.19       | 71.98       |
| tblVehicleEF | LDT2 | 0.08        | 0.08        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT2 | 0.15        | 0.33        |
| tblVehicleEF | LDT2 | 1.7350e-003 | 1.4940e-003 |
| tblVehicleEF | LDT2 | 2.3440e-003 | 1.8840e-003 |
| tblVehicleEF | LDT2 | 1.5960e-003 | 1.3750e-003 |
| tblVehicleEF | LDT2 | 2.1550e-003 | 1.7320e-003 |
| tblVehicleEF | LDT2 | 0.06        | 0.09        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.05        | 0.07        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.08        | 0.49        |
| tblVehicleEF | LDT2 | 0.12        | 0.36        |
| tblVehicleEF | LDT2 | 3.5550e-003 | 3.3110e-003 |
| tblVehicleEF | LDT2 | 8.4200e-004 | 7.1200e-004 |
| tblVehicleEF | LDT2 | 0.06        | 0.09        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.05        | 0.07        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.08        | 0.49        |
| tblVehicleEF | LDT2 | 0.13        | 0.40        |
| tblVehicleEF | LDT2 | 7.1660e-003 | 4.5690e-003 |
| tblVehicleEF | LDT2 | 6.9600e-003 | 0.06        |
| tblVehicleEF | LDT2 | 1.06        | 1.20        |
| tblVehicleEF | LDT2 | 1.48        | 2.42        |
| tblVehicleEF | LDT2 | 393.11      | 363.56      |
| tblVehicleEF | LDT2 | 81.19       | 70.93       |
| tblVehicleEF | LDT2 | 0.08        | 0.07        |
| tblVehicleEF | LDT2 | 0.14        | 0.30        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT2 | 1.7350e-003 | 1.4940e-003 |
| tblVehicleEF | LDT2 | 2.3440e-003 | 1.8840e-003 |
| tblVehicleEF | LDT2 | 1.5960e-003 | 1.3750e-003 |
| tblVehicleEF | LDT2 | 2.1550e-003 | 1.7320e-003 |
| tblVehicleEF | LDT2 | 0.16        | 0.24        |
| tblVehicleEF | LDT2 | 0.17        | 0.18        |
| tblVehicleEF | LDT2 | 0.12        | 0.17        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.07        | 0.48        |
| tblVehicleEF | LDT2 | 0.09        | 0.30        |
| tblVehicleEF | LDT2 | 3.9410e-003 | 3.5970e-003 |
| tblVehicleEF | LDT2 | 8.3700e-004 | 7.0200e-004 |
| tblVehicleEF | LDT2 | 0.16        | 0.24        |
| tblVehicleEF | LDT2 | 0.17        | 0.18        |
| tblVehicleEF | LDT2 | 0.12        | 0.17        |
| tblVehicleEF | LDT2 | 0.03        | 0.03        |
| tblVehicleEF | LDT2 | 0.07        | 0.48        |
| tblVehicleEF | LDT2 | 0.10        | 0.32        |
| tblVehicleEF | LDT2 | 5.8250e-003 | 3.6190e-003 |
| tblVehicleEF | LDT2 | 0.01        | 0.09        |
| tblVehicleEF | LDT2 | 0.79        | 0.89        |
| tblVehicleEF | LDT2 | 2.24        | 3.70        |
| tblVehicleEF | LDT2 | 344.50      | 326.99      |
| tblVehicleEF | LDT2 | 81.19       | 73.41       |
| tblVehicleEF | LDT2 | 0.09        | 0.09        |
| tblVehicleEF | LDT2 | 0.17        | 0.37        |
| tblVehicleEF | LDT2 | 1.7350e-003 | 1.4940e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LDT2 | 2.3440e-003 | 1.8840e-003 |
| tblVehicleEF | LDT2 | 1.5960e-003 | 1.3750e-003 |
| tblVehicleEF | LDT2 | 2.1550e-003 | 1.7320e-003 |
| tblVehicleEF | LDT2 | 0.02        | 0.03        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.01        | 0.02        |
| tblVehicleEF | LDT2 | 0.01        | 0.02        |
| tblVehicleEF | LDT2 | 0.09        | 0.59        |
| tblVehicleEF | LDT2 | 0.14        | 0.43        |
| tblVehicleEF | LDT2 | 3.4510e-003 | 3.2350e-003 |
| tblVehicleEF | LDT2 | 8.5000e-004 | 7.2600e-004 |
| tblVehicleEF | LDT2 | 0.02        | 0.03        |
| tblVehicleEF | LDT2 | 0.14        | 0.15        |
| tblVehicleEF | LDT2 | 0.01        | 0.02        |
| tblVehicleEF | LDT2 | 0.02        | 0.02        |
| tblVehicleEF | LDT2 | 0.09        | 0.59        |
| tblVehicleEF | LDT2 | 0.15        | 0.47        |
| tblVehicleEF | LHD1 | 5.3360e-003 | 4.9860e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.01        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 0.15        | 0.18        |
| tblVehicleEF | LHD1 | 1.29        | 1.04        |
| tblVehicleEF | LHD1 | 2.70        | 1.08        |
| tblVehicleEF | LHD1 | 9.21        | 9.34        |
| tblVehicleEF | LHD1 | 701.67      | 805.85      |
| tblVehicleEF | LHD1 | 31.04       | 11.21       |
| tblVehicleEF | LHD1 | 0.09        | 0.08        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 1.97        | 1.40        |
| tblVehicleEF | LHD1 | 1.02        | 0.32        |
| tblVehicleEF | LHD1 | 9.9400e-004 | 9.3400e-004 |
| tblVehicleEF | LHD1 | 0.01        | 9.8680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.8000e-004 | 2.6300e-004 |
| tblVehicleEF | LHD1 | 9.5100e-004 | 8.9400e-004 |
| tblVehicleEF | LHD1 | 2.5200e-003 | 2.4670e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.0100e-004 | 2.4200e-004 |
| tblVehicleEF | LHD1 | 3.5820e-003 | 2.9780e-003 |
| tblVehicleEF | LHD1 | 0.11        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 1.4260e-003 | 1.1800e-003 |
| tblVehicleEF | LHD1 | 0.15        | 0.12        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.28        | 0.08        |
| tblVehicleEF | LHD1 | 9.2000e-005 | 9.0000e-005 |
| tblVehicleEF | LHD1 | 6.8890e-003 | 7.8580e-003 |
| tblVehicleEF | LHD1 | 3.6100e-004 | 1.1100e-004 |
| tblVehicleEF | LHD1 | 3.5820e-003 | 2.9780e-003 |
| tblVehicleEF | LHD1 | 0.11        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.03        |
| tblVehicleEF | LHD1 | 1.4260e-003 | 1.1800e-003 |
| tblVehicleEF | LHD1 | 0.18        | 0.15        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.30        | 0.09        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 5.3360e-003 | 5.0020e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.01        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 0.15        | 0.18        |
| tblVehicleEF | LHD1 | 1.32        | 1.07        |
| tblVehicleEF | LHD1 | 2.48        | 0.99        |
| tblVehicleEF | LHD1 | 9.21        | 9.34        |
| tblVehicleEF | LHD1 | 701.67      | 805.90      |
| tblVehicleEF | LHD1 | 31.04       | 11.06       |
| tblVehicleEF | LHD1 | 0.09        | 0.08        |
| tblVehicleEF | LHD1 | 1.84        | 1.30        |
| tblVehicleEF | LHD1 | 0.95        | 0.30        |
| tblVehicleEF | LHD1 | 9.9400e-004 | 9.3400e-004 |
| tblVehicleEF | LHD1 | 0.01        | 9.8680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.8000e-004 | 2.6300e-004 |
| tblVehicleEF | LHD1 | 9.5100e-004 | 8.9400e-004 |
| tblVehicleEF | LHD1 | 2.5200e-003 | 2.4670e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.0100e-004 | 2.4200e-004 |
| tblVehicleEF | LHD1 | 9.1870e-003 | 7.6550e-003 |
| tblVehicleEF | LHD1 | 0.14        | 0.11        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 3.6360e-003 | 3.0280e-003 |
| tblVehicleEF | LHD1 | 0.15        | 0.12        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.26        | 0.08        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 9.2000e-005 | 9.0000e-005 |
| tblVehicleEF | LHD1 | 6.8890e-003 | 7.8590e-003 |
| tblVehicleEF | LHD1 | 3.5700e-004 | 1.0900e-004 |
| tblVehicleEF | LHD1 | 9.1870e-003 | 7.6550e-003 |
| tblVehicleEF | LHD1 | 0.14        | 0.11        |
| tblVehicleEF | LHD1 | 0.02        | 0.03        |
| tblVehicleEF | LHD1 | 3.6360e-003 | 3.0280e-003 |
| tblVehicleEF | LHD1 | 0.19        | 0.15        |
| tblVehicleEF | LHD1 | 0.35        | 0.61        |
| tblVehicleEF | LHD1 | 0.29        | 0.09        |
| tblVehicleEF | LHD1 | 5.3360e-003 | 4.9680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.01        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 0.15        | 0.18        |
| tblVehicleEF | LHD1 | 1.26        | 1.02        |
| tblVehicleEF | LHD1 | 2.99        | 1.19        |
| tblVehicleEF | LHD1 | 9.21        | 9.34        |
| tblVehicleEF | LHD1 | 701.67      | 805.80      |
| tblVehicleEF | LHD1 | 31.04       | 11.41       |
| tblVehicleEF | LHD1 | 0.09        | 0.08        |
| tblVehicleEF | LHD1 | 2.02        | 1.43        |
| tblVehicleEF | LHD1 | 1.10        | 0.35        |
| tblVehicleEF | LHD1 | 9.9400e-004 | 9.3400e-004 |
| tblVehicleEF | LHD1 | 0.01        | 9.8680e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.8000e-004 | 2.6300e-004 |
| tblVehicleEF | LHD1 | 9.5100e-004 | 8.9400e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD1 | 2.5200e-003 | 2.4670e-003 |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 9.0100e-004 | 2.4200e-004 |
| tblVehicleEF | LHD1 | 1.0290e-003 | 8.4400e-004 |
| tblVehicleEF | LHD1 | 0.12        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.02        |
| tblVehicleEF | LHD1 | 3.7300e-004 | 3.0500e-004 |
| tblVehicleEF | LHD1 | 0.15        | 0.12        |
| tblVehicleEF | LHD1 | 0.39        | 0.67        |
| tblVehicleEF | LHD1 | 0.30        | 0.09        |
| tblVehicleEF | LHD1 | 9.2000e-005 | 9.0000e-005 |
| tblVehicleEF | LHD1 | 6.8880e-003 | 7.8580e-003 |
| tblVehicleEF | LHD1 | 3.6700e-004 | 1.1300e-004 |
| tblVehicleEF | LHD1 | 1.0290e-003 | 8.4400e-004 |
| tblVehicleEF | LHD1 | 0.12        | 0.09        |
| tblVehicleEF | LHD1 | 0.02        | 0.03        |
| tblVehicleEF | LHD1 | 3.7300e-004 | 3.0500e-004 |
| tblVehicleEF | LHD1 | 0.18        | 0.15        |
| tblVehicleEF | LHD1 | 0.39        | 0.67        |
| tblVehicleEF | LHD1 | 0.33        | 0.10        |
| tblVehicleEF | LHD2 | 3.6020e-003 | 3.2890e-003 |
| tblVehicleEF | LHD2 | 9.9840e-003 | 8.6010e-003 |
| tblVehicleEF | LHD2 | 8.8820e-003 | 9.6210e-003 |
| tblVehicleEF | LHD2 | 0.12        | 0.14        |
| tblVehicleEF | LHD2 | 0.73        | 0.81        |
| tblVehicleEF | LHD2 | 1.31        | 0.64        |
| tblVehicleEF | LHD2 | 14.25       | 14.51       |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 720.74      | 795.82      |
| tblVehicleEF | LHD2 | 24.40       | 7.90        |
| tblVehicleEF | LHD2 | 0.11        | 0.11        |
| tblVehicleEF | LHD2 | 1.35        | 1.49        |
| tblVehicleEF | LHD2 | 0.53        | 0.20        |
| tblVehicleEF | LHD2 | 1.2940e-003 | 1.4230e-003 |
| tblVehicleEF | LHD2 | 0.01        | 0.01        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.4000e-004 | 1.3200e-004 |
| tblVehicleEF | LHD2 | 1.2380e-003 | 1.3620e-003 |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.0400e-004 | 1.2100e-004 |
| tblVehicleEF | LHD2 | 1.3190e-003 | 1.4950e-003 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.01        | 0.02        |
| tblVehicleEF | LHD2 | 5.6200e-004 | 6.1600e-004 |
| tblVehicleEF | LHD2 | 0.12        | 0.13        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |
| tblVehicleEF | LHD2 | 0.12        | 0.05        |
| tblVehicleEF | LHD2 | 7.0120e-003 | 7.6850e-003 |
| tblVehicleEF | LHD2 | 2.6800e-004 | 7.8000e-005 |
| tblVehicleEF | LHD2 | 1.3190e-003 | 1.4950e-003 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 5.6200e-004 | 6.1600e-004 |
| tblVehicleEF | LHD2 | 0.14        | 0.15        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 0.13        | 0.05        |
| tblVehicleEF | LHD2 | 3.6020e-003 | 3.2990e-003 |
| tblVehicleEF | LHD2 | 0.01        | 8.7180e-003 |
| tblVehicleEF | LHD2 | 8.3620e-003 | 9.0680e-003 |
| tblVehicleEF | LHD2 | 0.12        | 0.14        |
| tblVehicleEF | LHD2 | 0.74        | 0.82        |
| tblVehicleEF | LHD2 | 1.20        | 0.59        |
| tblVehicleEF | LHD2 | 14.25       | 14.51       |
| tblVehicleEF | LHD2 | 720.74      | 795.84      |
| tblVehicleEF | LHD2 | 24.40       | 7.81        |
| tblVehicleEF | LHD2 | 0.11        | 0.11        |
| tblVehicleEF | LHD2 | 1.26        | 1.40        |
| tblVehicleEF | LHD2 | 0.50        | 0.19        |
| tblVehicleEF | LHD2 | 1.2940e-003 | 1.4230e-003 |
| tblVehicleEF | LHD2 | 0.01        | 0.01        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.4000e-004 | 1.3200e-004 |
| tblVehicleEF | LHD2 | 1.2380e-003 | 1.3620e-003 |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.0400e-004 | 1.2100e-004 |
| tblVehicleEF | LHD2 | 3.3510e-003 | 3.8230e-003 |
| tblVehicleEF | LHD2 | 0.05        | 0.06        |
| tblVehicleEF | LHD2 | 0.01        | 0.02        |
| tblVehicleEF | LHD2 | 1.4060e-003 | 1.5620e-003 |
| tblVehicleEF | LHD2 | 0.12        | 0.13        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |
| tblVehicleEF | LHD2 | 0.11        | 0.05        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 7.0120e-003 | 7.6850e-003 |
| tblVehicleEF | LHD2 | 2.6600e-004 | 7.7000e-005 |
| tblVehicleEF | LHD2 | 3.3510e-003 | 3.8230e-003 |
| tblVehicleEF | LHD2 | 0.05        | 0.06        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 1.4060e-003 | 1.5620e-003 |
| tblVehicleEF | LHD2 | 0.14        | 0.16        |
| tblVehicleEF | LHD2 | 0.09        | 0.28        |
| tblVehicleEF | LHD2 | 0.12        | 0.05        |
| tblVehicleEF | LHD2 | 3.6020e-003 | 3.2780e-003 |
| tblVehicleEF | LHD2 | 9.7880e-003 | 8.4740e-003 |
| tblVehicleEF | LHD2 | 9.5090e-003 | 0.01        |
| tblVehicleEF | LHD2 | 0.12        | 0.14        |
| tblVehicleEF | LHD2 | 0.72        | 0.80        |
| tblVehicleEF | LHD2 | 1.44        | 0.70        |
| tblVehicleEF | LHD2 | 14.25       | 14.51       |
| tblVehicleEF | LHD2 | 720.74      | 795.80      |
| tblVehicleEF | LHD2 | 24.40       | 8.02        |
| tblVehicleEF | LHD2 | 0.11        | 0.11        |
| tblVehicleEF | LHD2 | 1.38        | 1.53        |
| tblVehicleEF | LHD2 | 0.57        | 0.22        |
| tblVehicleEF | LHD2 | 1.2940e-003 | 1.4230e-003 |
| tblVehicleEF | LHD2 | 0.01        | 0.01        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 4.4000e-004 | 1.3200e-004 |
| tblVehicleEF | LHD2 | 1.2380e-003 | 1.3620e-003 |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | LHD2 | 4.0400e-004 | 1.2100e-004 |
| tblVehicleEF | LHD2 | 4.0000e-004 | 4.4200e-004 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.01        | 0.02        |
| tblVehicleEF | LHD2 | 1.5100e-004 | 1.6400e-004 |
| tblVehicleEF | LHD2 | 0.12        | 0.13        |
| tblVehicleEF | LHD2 | 0.10        | 0.31        |
| tblVehicleEF | LHD2 | 0.13        | 0.05        |
| tblVehicleEF | LHD2 | 7.0110e-003 | 7.6850e-003 |
| tblVehicleEF | LHD2 | 2.7000e-004 | 7.9000e-005 |
| tblVehicleEF | LHD2 | 4.0000e-004 | 4.4200e-004 |
| tblVehicleEF | LHD2 | 0.04        | 0.05        |
| tblVehicleEF | LHD2 | 0.02        | 0.02        |
| tblVehicleEF | LHD2 | 1.5100e-004 | 1.6400e-004 |
| tblVehicleEF | LHD2 | 0.14        | 0.15        |
| tblVehicleEF | LHD2 | 0.10        | 0.31        |
| tblVehicleEF | LHD2 | 0.14        | 0.06        |
| tblVehicleEF | MCY  | 0.44        | 0.34        |
| tblVehicleEF | MCY  | 0.17        | 0.26        |
| tblVehicleEF | MCY  | 20.29       | 20.27       |
| tblVehicleEF | MCY  | 10.10       | 8.92        |
| tblVehicleEF | MCY  | 168.00      | 210.86      |
| tblVehicleEF | MCY  | 47.74       | 63.07       |
| tblVehicleEF | MCY  | 1.16        | 1.16        |
| tblVehicleEF | MCY  | 0.32        | 0.27        |
| tblVehicleEF | MCY  | 1.9070e-003 | 1.9340e-003 |
| tblVehicleEF | MCY  | 3.6910e-003 | 3.1980e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MCY | 1.7870e-003 | 1.8120e-003 |
| tblVehicleEF | MCY | 3.4870e-003 | 3.0200e-003 |
| tblVehicleEF | MCY | 1.41        | 1.40        |
| tblVehicleEF | MCY | 0.93        | 0.92        |
| tblVehicleEF | MCY | 0.67        | 0.67        |
| tblVehicleEF | MCY | 2.37        | 2.37        |
| tblVehicleEF | MCY | 0.69        | 2.32        |
| tblVehicleEF | MCY | 2.26        | 2.00        |
| tblVehicleEF | MCY | 2.0800e-003 | 2.0870e-003 |
| tblVehicleEF | MCY | 7.0900e-004 | 6.2400e-004 |
| tblVehicleEF | MCY | 1.41        | 1.40        |
| tblVehicleEF | MCY | 0.93        | 0.92        |
| tblVehicleEF | MCY | 0.67        | 0.67        |
| tblVehicleEF | MCY | 2.89        | 2.89        |
| tblVehicleEF | MCY | 0.69        | 2.32        |
| tblVehicleEF | MCY | 2.46        | 2.17        |
| tblVehicleEF | MCY | 0.43        | 0.34        |
| tblVehicleEF | MCY | 0.14        | 0.22        |
| tblVehicleEF | MCY | 20.52       | 20.50       |
| tblVehicleEF | MCY | 9.12        | 8.02        |
| tblVehicleEF | MCY | 168.00      | 210.96      |
| tblVehicleEF | MCY | 47.74       | 60.52       |
| tblVehicleEF | MCY | 0.97        | 0.97        |
| tblVehicleEF | MCY | 0.29        | 0.25        |
| tblVehicleEF | MCY | 1.9070e-003 | 1.9340e-003 |
| tblVehicleEF | MCY | 3.6910e-003 | 3.1980e-003 |
| tblVehicleEF | MCY | 1.7870e-003 | 1.8120e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MCY | 3.4870e-003 | 3.0200e-003 |
| tblVehicleEF | MCY | 3.91        | 3.89        |
| tblVehicleEF | MCY | 1.50        | 1.50        |
| tblVehicleEF | MCY | 2.18        | 2.16        |
| tblVehicleEF | MCY | 2.30        | 2.30        |
| tblVehicleEF | MCY | 0.68        | 2.28        |
| tblVehicleEF | MCY | 1.89        | 1.66        |
| tblVehicleEF | MCY | 2.0810e-003 | 2.0880e-003 |
| tblVehicleEF | MCY | 6.8200e-004 | 5.9900e-004 |
| tblVehicleEF | MCY | 3.91        | 3.89        |
| tblVehicleEF | MCY | 1.50        | 1.50        |
| tblVehicleEF | MCY | 2.18        | 2.16        |
| tblVehicleEF | MCY | 2.81        | 2.81        |
| tblVehicleEF | MCY | 0.68        | 2.28        |
| tblVehicleEF | MCY | 2.06        | 1.81        |
| tblVehicleEF | MCY | 0.46        | 0.36        |
| tblVehicleEF | MCY | 0.21        | 0.32        |
| tblVehicleEF | MCY | 22.39       | 22.37       |
| tblVehicleEF | MCY | 12.10       | 10.76       |
| tblVehicleEF | MCY | 168.00      | 214.72      |
| tblVehicleEF | MCY | 47.74       | 67.64       |
| tblVehicleEF | MCY | 1.27        | 1.27        |
| tblVehicleEF | MCY | 0.35        | 0.30        |
| tblVehicleEF | MCY | 1.9070e-003 | 1.9340e-003 |
| tblVehicleEF | MCY | 3.6910e-003 | 3.1980e-003 |
| tblVehicleEF | MCY | 1.7870e-003 | 1.8120e-003 |
| tblVehicleEF | MCY | 3.4870e-003 | 3.0200e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MCY | 0.27        | 0.27        |
| tblVehicleEF | MCY | 0.95        | 0.94        |
| tblVehicleEF | MCY | 0.11        | 0.11        |
| tblVehicleEF | MCY | 2.52        | 2.52        |
| tblVehicleEF | MCY | 0.80        | 2.71        |
| tblVehicleEF | MCY | 2.81        | 2.50        |
| tblVehicleEF | MCY | 2.1190e-003 | 2.1250e-003 |
| tblVehicleEF | MCY | 7.5900e-004 | 6.6900e-004 |
| tblVehicleEF | MCY | 0.27        | 0.27        |
| tblVehicleEF | MCY | 0.95        | 0.94        |
| tblVehicleEF | MCY | 0.11        | 0.11        |
| tblVehicleEF | MCY | 3.07        | 3.07        |
| tblVehicleEF | MCY | 0.80        | 2.71        |
| tblVehicleEF | MCY | 3.06        | 2.72        |
| tblVehicleEF | MDV | 0.01        | 5.0650e-003 |
| tblVehicleEF | MDV | 0.02        | 0.09        |
| tblVehicleEF | MDV | 1.32        | 1.09        |
| tblVehicleEF | MDV | 3.39        | 3.48        |
| tblVehicleEF | MDV | 479.92      | 410.48      |
| tblVehicleEF | MDV | 108.64      | 88.11       |
| tblVehicleEF | MDV | 0.16        | 0.11        |
| tblVehicleEF | MDV | 0.30        | 0.40        |
| tblVehicleEF | MDV | 1.8500e-003 | 1.6190e-003 |
| tblVehicleEF | MDV | 2.5310e-003 | 2.0540e-003 |
| tblVehicleEF | MDV | 1.7060e-003 | 1.4940e-003 |
| tblVehicleEF | MDV | 2.3270e-003 | 1.8890e-003 |
| tblVehicleEF | MDV | 0.10        | 0.12        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.07        | 0.09        |
| tblVehicleEF | MDV | 0.03        | 0.02        |
| tblVehicleEF | MDV | 0.12        | 0.55        |
| tblVehicleEF | MDV | 0.26        | 0.47        |
| tblVehicleEF | MDV | 4.8090e-003 | 4.0580e-003 |
| tblVehicleEF | MDV | 1.1460e-003 | 8.7200e-004 |
| tblVehicleEF | MDV | 0.10        | 0.12        |
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.07        | 0.09        |
| tblVehicleEF | MDV | 0.04        | 0.03        |
| tblVehicleEF | MDV | 0.12        | 0.55        |
| tblVehicleEF | MDV | 0.29        | 0.52        |
| tblVehicleEF | MDV | 0.01        | 5.9710e-003 |
| tblVehicleEF | MDV | 0.02        | 0.08        |
| tblVehicleEF | MDV | 1.67        | 1.38        |
| tblVehicleEF | MDV | 2.78        | 2.84        |
| tblVehicleEF | MDV | 530.44      | 440.57      |
| tblVehicleEF | MDV | 108.64      | 86.82       |
| tblVehicleEF | MDV | 0.14        | 0.10        |
| tblVehicleEF | MDV | 0.28        | 0.37        |
| tblVehicleEF | MDV | 1.8500e-003 | 1.6190e-003 |
| tblVehicleEF | MDV | 2.5310e-003 | 2.0540e-003 |
| tblVehicleEF | MDV | 1.7060e-003 | 1.4940e-003 |
| tblVehicleEF | MDV | 2.3270e-003 | 1.8890e-003 |
| tblVehicleEF | MDV | 0.24        | 0.29        |
| tblVehicleEF | MDV | 0.25        | 0.21        |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MDV | 0.18        | 0.22        |
| tblVehicleEF | MDV | 0.03        | 0.03        |
| tblVehicleEF | MDV | 0.12        | 0.54        |
| tblVehicleEF | MDV | 0.21        | 0.39        |
| tblVehicleEF | MDV | 5.3190e-003 | 4.3560e-003 |
| tblVehicleEF | MDV | 1.1350e-003 | 8.5900e-004 |
| tblVehicleEF | MDV | 0.24        | 0.29        |
| tblVehicleEF | MDV | 0.25        | 0.21        |
| tblVehicleEF | MDV | 0.18        | 0.22        |
| tblVehicleEF | MDV | 0.05        | 0.04        |
| tblVehicleEF | MDV | 0.12        | 0.54        |
| tblVehicleEF | MDV | 0.23        | 0.43        |
| tblVehicleEF | MDV | 0.01        | 4.7440e-003 |
| tblVehicleEF | MDV | 0.02        | 0.11        |
| tblVehicleEF | MDV | 1.26        | 1.04        |
| tblVehicleEF | MDV | 4.24        | 4.37        |
| tblVehicleEF | MDV | 466.38      | 402.47      |
| tblVehicleEF | MDV | 108.64      | 89.85       |
| tblVehicleEF | MDV | 0.17        | 0.12        |
| tblVehicleEF | MDV | 0.34        | 0.45        |
| tblVehicleEF | MDV | 1.8500e-003 | 1.6190e-003 |
| tblVehicleEF | MDV | 2.5310e-003 | 2.0540e-003 |
| tblVehicleEF | MDV | 1.7060e-003 | 1.4940e-003 |
| tblVehicleEF | MDV | 2.3270e-003 | 1.8890e-003 |
| tblVehicleEF | MDV | 0.03        | 0.04        |
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.02        | 0.02        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MDV | 0.03        | 0.02        |
| tblVehicleEF | MDV | 0.15        | 0.66        |
| tblVehicleEF | MDV | 0.32        | 0.57        |
| tblVehicleEF | MDV | 4.6730e-003 | 3.9790e-003 |
| tblVehicleEF | MDV | 1.1610e-003 | 8.8900e-004 |
| tblVehicleEF | MDV | 0.03        | 0.04        |
| tblVehicleEF | MDV | 0.21        | 0.18        |
| tblVehicleEF | MDV | 0.02        | 0.02        |
| tblVehicleEF | MDV | 0.04        | 0.03        |
| tblVehicleEF | MDV | 0.15        | 0.66        |
| tblVehicleEF | MDV | 0.35        | 0.62        |
| tblVehicleEF | MH  | 0.04        | 0.01        |
| tblVehicleEF | MH  | 0.03        | 0.02        |
| tblVehicleEF | MH  | 2.75        | 1.44        |
| tblVehicleEF | MH  | 6.42        | 2.25        |
| tblVehicleEF | MH  | 1,233.39    | 1,603.42    |
| tblVehicleEF | MH  | 60.21       | 19.55       |
| tblVehicleEF | MH  | 1.62        | 1.67        |
| tblVehicleEF | MH  | 0.93        | 0.25        |
| tblVehicleEF | MH  | 0.01        | 0.01        |
| tblVehicleEF | MH  | 0.03        | 0.03        |
| tblVehicleEF | MH  | 1.2010e-003 | 2.7700e-004 |
| tblVehicleEF | MH  | 3.2120e-003 | 3.2610e-003 |
| tblVehicleEF | MH  | 0.03        | 0.03        |
| tblVehicleEF | MH  | 1.1050e-003 | 2.5500e-004 |
| tblVehicleEF | MH  | 1.35        | 1.08        |
| tblVehicleEF | MH  | 0.09        | 0.07        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |    |             |             |
|--------------|----|-------------|-------------|
| tblVehicleEF | MH | 0.34        | 0.27        |
| tblVehicleEF | MH | 0.12        | 0.09        |
| tblVehicleEF | MH | 0.02        | 1.50        |
| tblVehicleEF | MH | 0.37        | 0.10        |
| tblVehicleEF | MH | 0.01        | 0.02        |
| tblVehicleEF | MH | 7.1400e-004 | 1.9300e-004 |
| tblVehicleEF | MH | 1.35        | 1.08        |
| tblVehicleEF | MH | 0.09        | 0.07        |
| tblVehicleEF | MH | 0.34        | 0.27        |
| tblVehicleEF | MH | 0.17        | 0.12        |
| tblVehicleEF | MH | 0.02        | 1.50        |
| tblVehicleEF | MH | 0.41        | 0.11        |
| tblVehicleEF | MH | 0.04        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.02        |
| tblVehicleEF | MH | 2.87        | 1.49        |
| tblVehicleEF | MH | 5.74        | 2.03        |
| tblVehicleEF | MH | 1,233.39    | 1,603.52    |
| tblVehicleEF | MH | 60.21       | 19.16       |
| tblVehicleEF | MH | 1.48        | 1.54        |
| tblVehicleEF | MH | 0.87        | 0.23        |
| tblVehicleEF | MH | 0.01        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.2010e-003 | 2.7700e-004 |
| tblVehicleEF | MH | 3.2120e-003 | 3.2610e-003 |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.1050e-003 | 2.5500e-004 |
| tblVehicleEF | MH | 3.50        | 2.79        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |    |             |             |
|--------------|----|-------------|-------------|
| tblVehicleEF | MH | 0.11        | 0.09        |
| tblVehicleEF | MH | 0.89        | 0.72        |
| tblVehicleEF | MH | 0.13        | 0.09        |
| tblVehicleEF | MH | 0.02        | 1.49        |
| tblVehicleEF | MH | 0.34        | 0.10        |
| tblVehicleEF | MH | 0.01        | 0.02        |
| tblVehicleEF | MH | 7.0200e-004 | 1.9000e-004 |
| tblVehicleEF | MH | 3.50        | 2.79        |
| tblVehicleEF | MH | 0.11        | 0.09        |
| tblVehicleEF | MH | 0.89        | 0.72        |
| tblVehicleEF | MH | 0.18        | 0.12        |
| tblVehicleEF | MH | 0.02        | 1.49        |
| tblVehicleEF | MH | 0.38        | 0.11        |
| tblVehicleEF | MH | 0.04        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 2.62        | 1.38        |
| tblVehicleEF | MH | 7.31        | 2.53        |
| tblVehicleEF | MH | 1,233.39    | 1,603.32    |
| tblVehicleEF | MH | 60.21       | 20.02       |
| tblVehicleEF | MH | 1.69        | 1.73        |
| tblVehicleEF | MH | 1.00        | 0.27        |
| tblVehicleEF | MH | 0.01        | 0.01        |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.2010e-003 | 2.7700e-004 |
| tblVehicleEF | MH | 3.2120e-003 | 3.2610e-003 |
| tblVehicleEF | MH | 0.03        | 0.03        |
| tblVehicleEF | MH | 1.1050e-003 | 2.5500e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MH  | 0.38        | 0.31        |
| tblVehicleEF | MH  | 0.10        | 0.08        |
| tblVehicleEF | MH  | 0.09        | 0.08        |
| tblVehicleEF | MH  | 0.12        | 0.08        |
| tblVehicleEF | MH  | 0.03        | 1.61        |
| tblVehicleEF | MH  | 0.40        | 0.11        |
| tblVehicleEF | MH  | 0.01        | 0.02        |
| tblVehicleEF | MH  | 7.2900e-004 | 1.9800e-004 |
| tblVehicleEF | MH  | 0.38        | 0.31        |
| tblVehicleEF | MH  | 0.10        | 0.08        |
| tblVehicleEF | MH  | 0.09        | 0.08        |
| tblVehicleEF | MH  | 0.16        | 0.11        |
| tblVehicleEF | MH  | 0.03        | 1.61        |
| tblVehicleEF | MH  | 0.44        | 0.12        |
| tblVehicleEF | MHD | 0.02        | 4.4660e-003 |
| tblVehicleEF | MHD | 7.5850e-003 | 6.6210e-003 |
| tblVehicleEF | MHD | 0.06        | 0.01        |
| tblVehicleEF | MHD | 0.41        | 0.56        |
| tblVehicleEF | MHD | 0.52        | 0.57        |
| tblVehicleEF | MHD | 6.57        | 1.40        |
| tblVehicleEF | MHD | 147.37      | 150.83      |
| tblVehicleEF | MHD | 1,210.28    | 1,161.69    |
| tblVehicleEF | MHD | 57.55       | 11.51       |
| tblVehicleEF | MHD | 0.76        | 1.37        |
| tblVehicleEF | MHD | 1.79        | 2.35        |
| tblVehicleEF | MHD | 11.25       | 1.28        |
| tblVehicleEF | MHD | 3.8380e-003 | 2.9080e-003 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.7800e-004 | 1.3400e-004 |
| tblVehicleEF | MHD | 3.6720e-003 | 2.7830e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.1500e-004 | 1.2300e-004 |
| tblVehicleEF | MHD | 1.5080e-003 | 8.7100e-004 |
| tblVehicleEF | MHD | 0.05        | 0.03        |
| tblVehicleEF | MHD | 0.04        | 0.03        |
| tblVehicleEF | MHD | 6.3200e-004 | 3.5700e-004 |
| tblVehicleEF | MHD | 0.07        | 0.10        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.40        | 0.06        |
| tblVehicleEF | MHD | 1.4180e-003 | 1.4290e-003 |
| tblVehicleEF | MHD | 0.01        | 0.01        |
| tblVehicleEF | MHD | 6.9100e-004 | 1.1400e-004 |
| tblVehicleEF | MHD | 1.5080e-003 | 8.7100e-004 |
| tblVehicleEF | MHD | 0.05        | 0.03        |
| tblVehicleEF | MHD | 0.05        | 0.04        |
| tblVehicleEF | MHD | 6.3200e-004 | 3.5700e-004 |
| tblVehicleEF | MHD | 0.09        | 0.12        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.43        | 0.07        |
| tblVehicleEF | MHD | 0.02        | 4.2120e-003 |
| tblVehicleEF | MHD | 7.7620e-003 | 6.7130e-003 |
| tblVehicleEF | MHD | 0.05        | 0.01        |
| tblVehicleEF | MHD | 0.29        | 0.47        |
| tblVehicleEF | MHD | 0.53        | 0.58        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MHD | 6.05        | 1.29        |
| tblVehicleEF | MHD | 156.25      | 153.88      |
| tblVehicleEF | MHD | 1,210.28    | 1,161.71    |
| tblVehicleEF | MHD | 57.55       | 11.32       |
| tblVehicleEF | MHD | 0.78        | 1.39        |
| tblVehicleEF | MHD | 1.67        | 2.20        |
| tblVehicleEF | MHD | 11.19       | 1.27        |
| tblVehicleEF | MHD | 3.2360e-003 | 2.4570e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.7800e-004 | 1.3400e-004 |
| tblVehicleEF | MHD | 3.0960e-003 | 2.3510e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.1500e-004 | 1.2300e-004 |
| tblVehicleEF | MHD | 3.9020e-003 | 2.2650e-003 |
| tblVehicleEF | MHD | 0.07        | 0.04        |
| tblVehicleEF | MHD | 0.03        | 0.03        |
| tblVehicleEF | MHD | 1.6400e-003 | 9.3800e-004 |
| tblVehicleEF | MHD | 0.07        | 0.10        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.37        | 0.06        |
| tblVehicleEF | MHD | 1.5010e-003 | 1.4580e-003 |
| tblVehicleEF | MHD | 0.01        | 0.01        |
| tblVehicleEF | MHD | 6.8200e-004 | 1.1200e-004 |
| tblVehicleEF | MHD | 3.9020e-003 | 2.2650e-003 |
| tblVehicleEF | MHD | 0.07        | 0.04        |
| tblVehicleEF | MHD | 0.04        | 0.04        |
| tblVehicleEF | MHD | 1.6400e-003 | 9.3800e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |     |             |             |
|--------------|-----|-------------|-------------|
| tblVehicleEF | MHD | 0.09        | 0.12        |
| tblVehicleEF | MHD | 0.03        | 0.16        |
| tblVehicleEF | MHD | 0.41        | 0.07        |
| tblVehicleEF | MHD | 0.02        | 4.7180e-003 |
| tblVehicleEF | MHD | 7.3890e-003 | 6.5180e-003 |
| tblVehicleEF | MHD | 0.06        | 0.01        |
| tblVehicleEF | MHD | 0.54        | 0.66        |
| tblVehicleEF | MHD | 0.51        | 0.56        |
| tblVehicleEF | MHD | 7.31        | 1.55        |
| tblVehicleEF | MHD | 135.45      | 146.78      |
| tblVehicleEF | MHD | 1,210.28    | 1,161.68    |
| tblVehicleEF | MHD | 57.55       | 11.77       |
| tblVehicleEF | MHD | 0.72        | 1.35        |
| tblVehicleEF | MHD | 1.83        | 2.40        |
| tblVehicleEF | MHD | 11.33       | 1.29        |
| tblVehicleEF | MHD | 4.6700e-003 | 3.5320e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.7800e-004 | 1.3400e-004 |
| tblVehicleEF | MHD | 4.4680e-003 | 3.3790e-003 |
| tblVehicleEF | MHD | 0.01        | 0.04        |
| tblVehicleEF | MHD | 7.1500e-004 | 1.2300e-004 |
| tblVehicleEF | MHD | 4.3200e-004 | 2.4300e-004 |
| tblVehicleEF | MHD | 0.05        | 0.03        |
| tblVehicleEF | MHD | 0.04        | 0.03        |
| tblVehicleEF | MHD | 1.5900e-004 | 8.8000e-005 |
| tblVehicleEF | MHD | 0.07        | 0.10        |
| tblVehicleEF | MHD | 0.03        | 0.18        |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | MHD  | 0.43        | 0.07        |
| tblVehicleEF | MHD  | 1.3050e-003 | 1.3900e-003 |
| tblVehicleEF | MHD  | 0.01        | 0.01        |
| tblVehicleEF | MHD  | 7.0300e-004 | 1.1600e-004 |
| tblVehicleEF | MHD  | 4.3200e-004 | 2.4300e-004 |
| tblVehicleEF | MHD  | 0.05        | 0.03        |
| tblVehicleEF | MHD  | 0.05        | 0.04        |
| tblVehicleEF | MHD  | 1.5900e-004 | 8.8000e-005 |
| tblVehicleEF | MHD  | 0.09        | 0.12        |
| tblVehicleEF | MHD  | 0.03        | 0.18        |
| tblVehicleEF | MHD  | 0.47        | 0.08        |
| tblVehicleEF | OBUS | 0.01        | 8.0330e-003 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 0.03        | 0.02        |
| tblVehicleEF | OBUS | 0.29        | 0.59        |
| tblVehicleEF | OBUS | 0.88        | 1.14        |
| tblVehicleEF | OBUS | 6.77        | 2.49        |
| tblVehicleEF | OBUS | 128.59      | 95.65       |
| tblVehicleEF | OBUS | 1,355.95    | 1,492.53    |
| tblVehicleEF | OBUS | 68.41       | 18.89       |
| tblVehicleEF | OBUS | 0.61        | 0.48        |
| tblVehicleEF | OBUS | 1.94        | 2.02        |
| tblVehicleEF | OBUS | 2.89        | 0.79        |
| tblVehicleEF | OBUS | 1.3800e-004 | 9.1200e-004 |
| tblVehicleEF | OBUS | 8.1910e-003 | 0.03        |
| tblVehicleEF | OBUS | 7.9000e-004 | 1.8600e-004 |
| tblVehicleEF | OBUS | 1.3200e-004 | 8.7300e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 7.8180e-003 | 0.02        |
| tblVehicleEF | OBUS | 7.2700e-004 | 1.7100e-004 |
| tblVehicleEF | OBUS | 2.2060e-003 | 2.5060e-003 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.04        | 0.05        |
| tblVehicleEF | OBUS | 6.9700e-004 | 7.7500e-004 |
| tblVehicleEF | OBUS | 0.09        | 0.11        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.42        | 0.12        |
| tblVehicleEF | OBUS | 1.2390e-003 | 9.1000e-004 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 8.0300e-004 | 1.8700e-004 |
| tblVehicleEF | OBUS | 2.2060e-003 | 2.5060e-003 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.06        | 0.07        |
| tblVehicleEF | OBUS | 6.9700e-004 | 7.7500e-004 |
| tblVehicleEF | OBUS | 0.11        | 0.14        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.46        | 0.13        |
| tblVehicleEF | OBUS | 0.01        | 8.0990e-003 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 0.03        | 0.02        |
| tblVehicleEF | OBUS | 0.27        | 0.57        |
| tblVehicleEF | OBUS | 0.90        | 1.18        |
| tblVehicleEF | OBUS | 6.09        | 2.25        |
| tblVehicleEF | OBUS | 135.23      | 95.59       |
| tblVehicleEF | OBUS | 1,355.95    | 1,492.59    |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 68.41       | 18.47       |
| tblVehicleEF | OBUS | 0.63        | 0.47        |
| tblVehicleEF | OBUS | 1.81        | 1.87        |
| tblVehicleEF | OBUS | 2.82        | 0.77        |
| tblVehicleEF | OBUS | 1.1600e-004 | 7.7400e-004 |
| tblVehicleEF | OBUS | 8.1910e-003 | 0.03        |
| tblVehicleEF | OBUS | 7.9000e-004 | 1.8600e-004 |
| tblVehicleEF | OBUS | 1.1100e-004 | 7.4100e-004 |
| tblVehicleEF | OBUS | 7.8180e-003 | 0.02        |
| tblVehicleEF | OBUS | 7.2700e-004 | 1.7100e-004 |
| tblVehicleEF | OBUS | 5.6160e-003 | 6.4460e-003 |
| tblVehicleEF | OBUS | 0.03        | 0.03        |
| tblVehicleEF | OBUS | 0.04        | 0.06        |
| tblVehicleEF | OBUS | 1.7390e-003 | 1.9550e-003 |
| tblVehicleEF | OBUS | 0.09        | 0.11        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.39        | 0.11        |
| tblVehicleEF | OBUS | 1.3020e-003 | 9.0900e-004 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 7.9100e-004 | 1.8300e-004 |
| tblVehicleEF | OBUS | 5.6160e-003 | 6.4460e-003 |
| tblVehicleEF | OBUS | 0.03        | 0.03        |
| tblVehicleEF | OBUS | 0.06        | 0.07        |
| tblVehicleEF | OBUS | 1.7390e-003 | 1.9550e-003 |
| tblVehicleEF | OBUS | 0.11        | 0.14        |
| tblVehicleEF | OBUS | 0.05        | 0.28        |
| tblVehicleEF | OBUS | 0.42        | 0.12        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 0.01        | 7.9510e-003 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |
| tblVehicleEF | OBUS | 0.04        | 0.02        |
| tblVehicleEF | OBUS | 0.31        | 0.61        |
| tblVehicleEF | OBUS | 0.86        | 1.11        |
| tblVehicleEF | OBUS | 7.61        | 2.80        |
| tblVehicleEF | OBUS | 119.42      | 95.73       |
| tblVehicleEF | OBUS | 1,355.95    | 1,492.47    |
| tblVehicleEF | OBUS | 68.41       | 19.41       |
| tblVehicleEF | OBUS | 0.58        | 0.49        |
| tblVehicleEF | OBUS | 1.99        | 2.08        |
| tblVehicleEF | OBUS | 2.99        | 0.81        |
| tblVehicleEF | OBUS | 1.6800e-004 | 1.1030e-003 |
| tblVehicleEF | OBUS | 8.1910e-003 | 0.03        |
| tblVehicleEF | OBUS | 7.9000e-004 | 1.8600e-004 |
| tblVehicleEF | OBUS | 1.6000e-004 | 1.0550e-003 |
| tblVehicleEF | OBUS | 7.8180e-003 | 0.02        |
| tblVehicleEF | OBUS | 7.2700e-004 | 1.7100e-004 |
| tblVehicleEF | OBUS | 7.4300e-004 | 8.1200e-004 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.04        | 0.05        |
| tblVehicleEF | OBUS | 2.0300e-004 | 2.1700e-004 |
| tblVehicleEF | OBUS | 0.09        | 0.11        |
| tblVehicleEF | OBUS | 0.06        | 0.31        |
| tblVehicleEF | OBUS | 0.45        | 0.13        |
| tblVehicleEF | OBUS | 1.1510e-003 | 9.1000e-004 |
| tblVehicleEF | OBUS | 0.01        | 0.01        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | OBUS | 8.1700e-004 | 1.9200e-004 |
| tblVehicleEF | OBUS | 7.4300e-004 | 8.1200e-004 |
| tblVehicleEF | OBUS | 0.02        | 0.03        |
| tblVehicleEF | OBUS | 0.06        | 0.07        |
| tblVehicleEF | OBUS | 2.0300e-004 | 2.1700e-004 |
| tblVehicleEF | OBUS | 0.11        | 0.13        |
| tblVehicleEF | OBUS | 0.06        | 0.31        |
| tblVehicleEF | OBUS | 0.49        | 0.14        |
| tblVehicleEF | SBUS | 0.84        | 0.02        |
| tblVehicleEF | SBUS | 0.01        | 6.3810e-003 |
| tblVehicleEF | SBUS | 0.07        | 2.1290e-003 |
| tblVehicleEF | SBUS | 6.73        | 1.20        |
| tblVehicleEF | SBUS | 0.65        | 0.43        |
| tblVehicleEF | SBUS | 6.39        | 0.33        |
| tblVehicleEF | SBUS | 1,201.53    | 336.95      |
| tblVehicleEF | SBUS | 1,096.07    | 1,113.09    |
| tblVehicleEF | SBUS | 44.67       | 1.81        |
| tblVehicleEF | SBUS | 10.71       | 4.00        |
| tblVehicleEF | SBUS | 4.39        | 6.66        |
| tblVehicleEF | SBUS | 13.82       | 0.61        |
| tblVehicleEF | SBUS | 0.01        | 4.9410e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 6.0300e-004 | 2.5000e-005 |
| tblVehicleEF | SBUS | 0.01        | 4.7270e-003 |
| tblVehicleEF | SBUS | 2.6920e-003 | 2.8510e-003 |
| tblVehicleEF | SBUS | 0.02        | 0.04        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 5.5500e-004 | 2.3000e-005 |
| tblVehicleEF | SBUS | 3.5150e-003 | 4.4200e-004 |
| tblVehicleEF | SBUS | 0.03        | 3.0040e-003 |
| tblVehicleEF | SBUS | 0.80        | 0.12        |
| tblVehicleEF | SBUS | 1.1040e-003 | 1.1000e-004 |
| tblVehicleEF | SBUS | 0.11        | 0.11        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |
| tblVehicleEF | SBUS | 0.34        | 0.01        |
| tblVehicleEF | SBUS | 0.01        | 3.1940e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 5.5700e-004 | 1.8000e-005 |
| tblVehicleEF | SBUS | 3.5150e-003 | 4.4200e-004 |
| tblVehicleEF | SBUS | 0.03        | 3.0040e-003 |
| tblVehicleEF | SBUS | 1.15        | 0.17        |
| tblVehicleEF | SBUS | 1.1040e-003 | 1.1000e-004 |
| tblVehicleEF | SBUS | 0.13        | 0.13        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |
| tblVehicleEF | SBUS | 0.37        | 0.01        |
| tblVehicleEF | SBUS | 0.84        | 0.02        |
| tblVehicleEF | SBUS | 0.01        | 6.4430e-003 |
| tblVehicleEF | SBUS | 0.05        | 1.6980e-003 |
| tblVehicleEF | SBUS | 6.59        | 1.15        |
| tblVehicleEF | SBUS | 0.67        | 0.43        |
| tblVehicleEF | SBUS | 4.25        | 0.22        |
| tblVehicleEF | SBUS | 1,259.83    | 349.09      |
| tblVehicleEF | SBUS | 1,096.07    | 1,113.10    |
| tblVehicleEF | SBUS | 44.67       | 1.62        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 11.05       | 4.11        |
| tblVehicleEF | SBUS | 4.10        | 6.22        |
| tblVehicleEF | SBUS | 13.78       | 0.61        |
| tblVehicleEF | SBUS | 9.2190e-003 | 4.1720e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 6.0300e-004 | 2.5000e-005 |
| tblVehicleEF | SBUS | 8.8200e-003 | 3.9920e-003 |
| tblVehicleEF | SBUS | 2.6920e-003 | 2.8510e-003 |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 5.5500e-004 | 2.3000e-005 |
| tblVehicleEF | SBUS | 8.8850e-003 | 1.1690e-003 |
| tblVehicleEF | SBUS | 0.03        | 3.6410e-003 |
| tblVehicleEF | SBUS | 0.80        | 0.12        |
| tblVehicleEF | SBUS | 2.7360e-003 | 3.0900e-004 |
| tblVehicleEF | SBUS | 0.11        | 0.11        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |
| tblVehicleEF | SBUS | 0.27        | 9.6090e-003 |
| tblVehicleEF | SBUS | 0.01        | 3.3090e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 5.2100e-004 | 1.6000e-005 |
| tblVehicleEF | SBUS | 8.8850e-003 | 1.1690e-003 |
| tblVehicleEF | SBUS | 0.03        | 3.6410e-003 |
| tblVehicleEF | SBUS | 1.15        | 0.17        |
| tblVehicleEF | SBUS | 2.7360e-003 | 3.0900e-004 |
| tblVehicleEF | SBUS | 0.13        | 0.13        |
| tblVehicleEF | SBUS | 0.01        | 0.02        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 0.29        | 0.01        |
| tblVehicleEF | SBUS | 0.84        | 0.02        |
| tblVehicleEF | SBUS | 0.01        | 6.3170e-003 |
| tblVehicleEF | SBUS | 0.08        | 2.5620e-003 |
| tblVehicleEF | SBUS | 6.91        | 1.26        |
| tblVehicleEF | SBUS | 0.64        | 0.42        |
| tblVehicleEF | SBUS | 8.86        | 0.46        |
| tblVehicleEF | SBUS | 1,121.03    | 320.19      |
| tblVehicleEF | SBUS | 1,096.07    | 1,113.08    |
| tblVehicleEF | SBUS | 44.67       | 2.02        |
| tblVehicleEF | SBUS | 10.24       | 3.85        |
| tblVehicleEF | SBUS | 4.49        | 6.79        |
| tblVehicleEF | SBUS | 13.86       | 0.62        |
| tblVehicleEF | SBUS | 0.01        | 6.0030e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 6.0300e-004 | 2.5000e-005 |
| tblVehicleEF | SBUS | 0.01        | 5.7430e-003 |
| tblVehicleEF | SBUS | 2.6920e-003 | 2.8510e-003 |
| tblVehicleEF | SBUS | 0.02        | 0.04        |
| tblVehicleEF | SBUS | 5.5500e-004 | 2.3000e-005 |
| tblVehicleEF | SBUS | 1.2060e-003 | 1.2300e-004 |
| tblVehicleEF | SBUS | 0.03        | 2.9600e-003 |
| tblVehicleEF | SBUS | 0.80        | 0.12        |
| tblVehicleEF | SBUS | 3.3100e-004 | 3.0000e-005 |
| tblVehicleEF | SBUS | 0.10        | 0.11        |
| tblVehicleEF | SBUS | 0.02        | 0.03        |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | SBUS | 0.40        | 0.01        |
| tblVehicleEF | SBUS | 0.01        | 3.0360e-003 |
| tblVehicleEF | SBUS | 0.01        | 0.01        |
| tblVehicleEF | SBUS | 5.9800e-004 | 2.0000e-005 |
| tblVehicleEF | SBUS | 1.2060e-003 | 1.2300e-004 |
| tblVehicleEF | SBUS | 0.03        | 2.9600e-003 |
| tblVehicleEF | SBUS | 1.16        | 0.17        |
| tblVehicleEF | SBUS | 3.3100e-004 | 3.0000e-005 |
| tblVehicleEF | SBUS | 0.12        | 0.13        |
| tblVehicleEF | SBUS | 0.02        | 0.03        |
| tblVehicleEF | SBUS | 0.44        | 0.02        |
| tblVehicleEF | UBUS | 2.06        | 4.73        |
| tblVehicleEF | UBUS | 0.08        | 0.04        |
| tblVehicleEF | UBUS | 8.75        | 36.91       |
| tblVehicleEF | UBUS | 12.13       | 2.78        |
| tblVehicleEF | UBUS | 1,890.52    | 2,058.02    |
| tblVehicleEF | UBUS | 137.34      | 30.05       |
| tblVehicleEF | UBUS | 6.32        | 0.43        |
| tblVehicleEF | UBUS | 13.54       | 0.26        |
| tblVehicleEF | UBUS | 0.52        | 0.08        |
| tblVehicleEF | UBUS | 0.01        | 0.03        |
| tblVehicleEF | UBUS | 0.06        | 2.9520e-003 |
| tblVehicleEF | UBUS | 1.1160e-003 | 2.3400e-004 |
| tblVehicleEF | UBUS | 0.22        | 0.04        |
| tblVehicleEF | UBUS | 3.0000e-003 | 7.1020e-003 |
| tblVehicleEF | UBUS | 0.06        | 2.8060e-003 |
| tblVehicleEF | UBUS | 1.0260e-003 | 2.1600e-004 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | UBUS | 7.1780e-003 | 1.3920e-003 |
| tblVehicleEF | UBUS | 0.10        | 0.01        |
| tblVehicleEF | UBUS | 2.8480e-003 | 6.0800e-004 |
| tblVehicleEF | UBUS | 0.52        | 0.07        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 1.08        | 0.15        |
| tblVehicleEF | UBUS | 0.01        | 5.7160e-003 |
| tblVehicleEF | UBUS | 1.5970e-003 | 2.9700e-004 |
| tblVehicleEF | UBUS | 7.1780e-003 | 1.3920e-003 |
| tblVehicleEF | UBUS | 0.10        | 0.01        |
| tblVehicleEF | UBUS | 2.8480e-003 | 6.0800e-004 |
| tblVehicleEF | UBUS | 2.65        | 4.84        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 1.19        | 0.17        |
| tblVehicleEF | UBUS | 2.06        | 4.73        |
| tblVehicleEF | UBUS | 0.07        | 0.03        |
| tblVehicleEF | UBUS | 8.82        | 36.91       |
| tblVehicleEF | UBUS | 9.63        | 2.22        |
| tblVehicleEF | UBUS | 1,890.52    | 2,058.03    |
| tblVehicleEF | UBUS | 137.34      | 29.10       |
| tblVehicleEF | UBUS | 5.87        | 0.42        |
| tblVehicleEF | UBUS | 13.40       | 0.24        |
| tblVehicleEF | UBUS | 0.52        | 0.08        |
| tblVehicleEF | UBUS | 0.01        | 0.03        |
| tblVehicleEF | UBUS | 0.06        | 2.9520e-003 |
| tblVehicleEF | UBUS | 1.1160e-003 | 2.3400e-004 |
| tblVehicleEF | UBUS | 0.22        | 0.04        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|              |      |             |             |
|--------------|------|-------------|-------------|
| tblVehicleEF | UBUS | 3.0000e-003 | 7.1020e-003 |
| tblVehicleEF | UBUS | 0.06        | 2.8060e-003 |
| tblVehicleEF | UBUS | 1.0260e-003 | 2.1600e-004 |
| tblVehicleEF | UBUS | 0.02        | 3.6060e-003 |
| tblVehicleEF | UBUS | 0.13        | 0.02        |
| tblVehicleEF | UBUS | 7.2950e-003 | 1.6350e-003 |
| tblVehicleEF | UBUS | 0.53        | 0.07        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 0.95        | 0.13        |
| tblVehicleEF | UBUS | 0.01        | 5.7160e-003 |
| tblVehicleEF | UBUS | 1.5530e-003 | 2.8800e-004 |
| tblVehicleEF | UBUS | 0.02        | 3.6060e-003 |
| tblVehicleEF | UBUS | 0.13        | 0.02        |
| tblVehicleEF | UBUS | 7.2950e-003 | 1.6350e-003 |
| tblVehicleEF | UBUS | 2.66        | 4.84        |
| tblVehicleEF | UBUS | 0.02        | 0.08        |
| tblVehicleEF | UBUS | 1.04        | 0.15        |
| tblVehicleEF | UBUS | 2.06        | 4.73        |
| tblVehicleEF | UBUS | 0.09        | 0.04        |
| tblVehicleEF | UBUS | 8.69        | 36.90       |
| tblVehicleEF | UBUS | 15.34       | 3.49        |
| tblVehicleEF | UBUS | 1,890.52    | 2,058.02    |
| tblVehicleEF | UBUS | 137.34      | 31.25       |
| tblVehicleEF | UBUS | 6.48        | 0.44        |
| tblVehicleEF | UBUS | 13.69       | 0.28        |
| tblVehicleEF | UBUS | 0.52        | 0.08        |
| tblVehicleEF | UBUS | 0.01        | 0.03        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|                 |        |             |             |
|-----------------|--------|-------------|-------------|
| tblVehicleEF    | UBUS   | 0.06        | 2.9520e-003 |
| tblVehicleEF    | UBUS   | 1.1160e-003 | 2.3400e-004 |
| tblVehicleEF    | UBUS   | 0.22        | 0.04        |
| tblVehicleEF    | UBUS   | 3.0000e-003 | 7.1020e-003 |
| tblVehicleEF    | UBUS   | 0.06        | 2.8060e-003 |
| tblVehicleEF    | UBUS   | 1.0260e-003 | 2.1600e-004 |
| tblVehicleEF    | UBUS   | 2.3740e-003 | 4.5000e-004 |
| tblVehicleEF    | UBUS   | 0.11        | 0.01        |
| tblVehicleEF    | UBUS   | 9.4300e-004 | 1.8200e-004 |
| tblVehicleEF    | UBUS   | 0.52        | 0.07        |
| tblVehicleEF    | UBUS   | 0.03        | 0.10        |
| tblVehicleEF    | UBUS   | 1.24        | 0.18        |
| tblVehicleEF    | UBUS   | 0.01        | 5.7160e-003 |
| tblVehicleEF    | UBUS   | 1.6530e-003 | 3.0900e-004 |
| tblVehicleEF    | UBUS   | 2.3740e-003 | 4.5000e-004 |
| tblVehicleEF    | UBUS   | 0.11        | 0.01        |
| tblVehicleEF    | UBUS   | 9.4300e-004 | 1.8200e-004 |
| tblVehicleEF    | UBUS   | 2.64        | 4.84        |
| tblVehicleEF    | UBUS   | 0.03        | 0.10        |
| tblVehicleEF    | UBUS   | 1.36        | 0.19        |
| tblVehicleTrips | CC_TL  | 7.50        | 5.00        |
| tblVehicleTrips | CNW_TL | 8.50        | 6.50        |
| tblVehicleTrips | CW_TL  | 15.00       | 10.00       |
| tblVehicleTrips | HO_TL  | 8.50        | 6.50        |
| tblVehicleTrips | HS_TL  | 7.50        | 5.00        |
| tblVehicleTrips | HW_TL  | 15.00       | 10.00       |
| tblVehicleTrips | ST_TR  | 6.39        | 5.23        |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|                 |       |       |      |
|-----------------|-------|-------|------|
| tblVehicleTrips | ST_TR | 21.35 | 0.00 |
| tblVehicleTrips | SU_TR | 5.86  | 4.80 |
| tblVehicleTrips | SU_TR | 17.40 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65  | 5.44 |
| tblVehicleTrips | WD_TR | 14.03 | 0.00 |

## 2.0 Emissions Summary

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## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

|         | ROG      | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|---------|----------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Year    | lb/day   |         |         |        |               |              |            |                |               |             | lb/day   |                 |                 |        |        |                 |
| 2020    | 5.8426   | 98.6365 | 43.8723 | 0.1941 | 18.2032       | 2.3505       | 20.4016    | 9.9670         | 2.1689        | 11.9895     | 0.0000   | 20,148.41<br>09 | 20,148.41<br>09 | 2.7899 | 0.0000 | 20,218.15<br>79 |
| 2021    | 2.7119   | 20.8844 | 22.3880 | 0.0470 | 1.6503        | 0.9771       | 2.6273     | 0.4417         | 0.9186        | 1.3603      | 0.0000   | 4,598.083<br>5  | 4,598.083<br>5  | 0.6957 | 0.0000 | 4,615.476<br>0  |
| 2022    | 169.7021 | 18.8674 | 21.6983 | 0.0465 | 1.6502        | 0.8262       | 2.4764     | 0.4417         | 0.7772        | 1.2189      | 0.0000   | 4,545.729<br>6  | 4,545.729<br>6  | 0.7164 | 0.0000 | 4,562.898<br>8  |
| Maximum | 169.7021 | 98.6365 | 43.8723 | 0.1941 | 18.2032       | 2.3505       | 20.4016    | 9.9670         | 2.1689        | 11.9895     | 0.0000   | 20,148.41<br>09 | 20,148.41<br>09 | 2.7899 | 0.0000 | 20,218.15<br>79 |

**Mitigated Construction**

|         | ROG      | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|---------|----------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Year    | lb/day   |         |         |        |               |              |            |                |               |             | lb/day   |                 |                 |        |        |                 |
| 2020    | 2.1541   | 51.7391 | 44.9132 | 0.1941 | 8.2875        | 0.2781       | 8.5657     | 4.5051         | 0.2705        | 4.5681      | 0.0000   | 20,148.41<br>09 | 20,148.41<br>09 | 2.7899 | 0.0000 | 20,218.15<br>79 |
| 2021    | 1.1388   | 5.6870  | 23.2730 | 0.0470 | 1.6503        | 0.0592       | 1.7095     | 0.4417         | 0.0581        | 0.4998      | 0.0000   | 4,598.083<br>5  | 4,598.083<br>5  | 0.6957 | 0.0000 | 4,615.476<br>0  |
| 2022    | 169.5272 | 5.4865  | 22.7951 | 0.0465 | 1.6502        | 0.0580       | 1.7082     | 0.4417         | 0.0569        | 0.4985      | 0.0000   | 4,545.729<br>6  | 4,545.729<br>6  | 0.7164 | 0.0000 | 4,562.898<br>8  |
| Maximum | 169.5272 | 51.7391 | 44.9132 | 0.1941 | 8.2875        | 0.2781       | 8.5657     | 4.5051         | 0.2705        | 4.5681      | 0.0000   | 20,148.41<br>09 | 20,148.41<br>09 | 2.7899 | 0.0000 | 20,218.15<br>79 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|                   | ROG  | NOx   | CO    | SO2  | 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 | 3.05 | 54.54 | -3.44 | 0.00 | 46.11         | 90.48        | 53.02      | 50.34          | 90.03         | 61.79       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**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         | 7.4960         | 0.2534        | 21.9701        | 1.1600e-003   |               | 0.1214        | 0.1214        |                | 0.1214        | 0.1214        | 0.0000        | 39.5174           | 39.5174           | 0.0381        | 0.0000        | 40.4706           |
| Energy       | 0.0833         | 0.7153        | 0.3295         | 4.5400e-003   |               | 0.0575        | 0.0575        |                | 0.0575        | 0.0575        |               | 908.4924          | 908.4924          | 0.0174        | 0.0167        | 913.8911          |
| Mobile       | 3.8958         | 7.4606        | 31.6844        | 0.0810        | 7.8690        | 0.0865        | 7.9555        | 2.1025         | 0.0814        | 2.1838        |               | 8,317.5441        | 8,317.5441        | 0.5311        |               | 8,330.8207        |
| <b>Total</b> | <b>11.4751</b> | <b>8.4293</b> | <b>53.9840</b> | <b>0.0867</b> | <b>7.8690</b> | <b>0.2654</b> | <b>8.1344</b> | <b>2.1025</b>  | <b>0.2603</b> | <b>2.3628</b> | <b>0.0000</b> | <b>9,265.5539</b> | <b>9,265.5539</b> | <b>0.5866</b> | <b>0.0167</b> | <b>9,285.1824</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         | 7.4960         | 0.2534        | 21.9701        | 1.1600e-003   |               | 0.1214        | 0.1214        |                | 0.1214        | 0.1214        | 0.0000        | 39.5174           | 39.5174           | 0.0381        | 0.0000        | 40.4706           |
| Energy       | 0.0833         | 0.7153        | 0.3295         | 4.5400e-003   |               | 0.0575        | 0.0575        |                | 0.0575        | 0.0575        |               | 908.4924          | 908.4924          | 0.0174        | 0.0167        | 913.8911          |
| Mobile       | 3.8958         | 7.4606        | 31.6844        | 0.0810        | 7.8690        | 0.0865        | 7.9555        | 2.1025         | 0.0814        | 2.1838        |               | 8,317.5441        | 8,317.5441        | 0.5311        |               | 8,330.8207        |
| <b>Total</b> | <b>11.4751</b> | <b>8.4293</b> | <b>53.9840</b> | <b>0.0867</b> | <b>7.8690</b> | <b>0.2654</b> | <b>8.1344</b> | <b>2.1025</b>  | <b>0.2603</b> | <b>2.3628</b> | <b>0.0000</b> | <b>9,265.5539</b> | <b>9,265.5539</b> | <b>0.5866</b> | <b>0.0167</b> | <b>9,285.1824</b> |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|                   | ROG  | NOx  | CO   | SO2  | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**3.0 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      | 10/26/2020 | 11/6/2020  | 5             | 10       |                   |
| 2            | Grading               | Grading               | 11/7/2020  | 11/27/2020 | 5             | 15       |                   |
| 3            | Building Construction | Building Construction | 5/24/2021  | 7/15/2022  | 5             | 300      |                   |
| 4            | Paving                | Paving                | 7/25/2022  | 8/19/2022  | 5             | 20       |                   |
| 5            | Architectural Coating | Architectural Coating | 8/29/2022  | 9/23/2022  | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 75****Acres of Paving: 5****Residential Indoor: 538,650; Residential Outdoor: 179,550; Non-Residential Indoor: 9,450; Non-Residential Outdoor: 3,150; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation      | Rubber Tired Dozers       | 3      | 8.00        | 247         | 0.40        |
| Site Preparation      | Tractors/Loaders/Backhoes | 4      | 8.00        | 97          | 0.37        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 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        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| 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               | 8                       | 20.00              | 0.00               | 2,513.00            | 10.00              | 6.50               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 194.00             | 29.00              | 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                  |
| Architectural Coating | 1                       | 39.00              | 0.00               | 0.00                | 10.00              | 6.50               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Site Preparation - 2020****Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |                | lb/day   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 18.0663        | 0.0000        | 18.0663        | 9.9307         | 0.0000        | 9.9307         |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 4.0765        | 42.4173        | 21.5136        | 0.0380        |                | 2.1974        | 2.1974         |                | 2.0216        | 2.0216         |          | 3,685.1016        | 3,685.1016        | 1.1918        |     | 3,714.8975        |
| <b>Total</b>  | <b>4.0765</b> | <b>42.4173</b> | <b>21.5136</b> | <b>0.0380</b> | <b>18.0663</b> | <b>2.1974</b> | <b>20.2637</b> | <b>9.9307</b>  | <b>2.0216</b> | <b>11.9523</b> |          | <b>3,685.1016</b> | <b>3,685.1016</b> | <b>1.1918</b> |     | <b>3,714.8975</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.2 Site Preparation - 2020****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       | 0.0714        | 0.0509        | 0.5032        | 1.2600e-003        | 0.1369        | 9.5000e-004        | 0.1379        | 0.0363         | 8.8000e-004        | 0.0372        |          | 125.4399        | 125.4399        | 3.6100e-003        |     | 125.5301        |
| <b>Total</b> | <b>0.0714</b> | <b>0.0509</b> | <b>0.5032</b> | <b>1.2600e-003</b> | <b>0.1369</b> | <b>9.5000e-004</b> | <b>0.1379</b> | <b>0.0363</b>  | <b>8.8000e-004</b> | <b>0.0372</b> |          | <b>125.4399</b> | <b>125.4399</b> | <b>3.6100e-003</b> |     | <b>125.5301</b> |

**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 |               |               |                |               | 8.1298        | 0.0000        | 8.1298        | 4.4688         | 0.0000        | 4.4688        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4656        | 2.0175        | 20.8690        | 0.0380        |               | 0.0621        | 0.0621        |                | 0.0621        | 0.0621        | 0.0000        | 3,685.1016        | 3,685.1016        | 1.1918        |     | 3,714.8975        |
| <b>Total</b>  | <b>0.4656</b> | <b>2.0175</b> | <b>20.8690</b> | <b>0.0380</b> | <b>8.1298</b> | <b>0.0621</b> | <b>8.1919</b> | <b>4.4688</b>  | <b>0.0621</b> | <b>4.5309</b> | <b>0.0000</b> | <b>3,685.1016</b> | <b>3,685.1016</b> | <b>1.1918</b> |     | <b>3,714.8975</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.2 Site Preparation - 2020****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       | 0.0714        | 0.0509        | 0.5032        | 1.2600e-003        | 0.1369        | 9.5000e-004        | 0.1379        | 0.0363         | 8.8000e-004        | 0.0372        |          | 125.4399        | 125.4399        | 3.6100e-003        |     | 125.5301        |
| <b>Total</b> | <b>0.0714</b> | <b>0.0509</b> | <b>0.5032</b> | <b>1.2600e-003</b> | <b>0.1369</b> | <b>9.5000e-004</b> | <b>0.1379</b> | <b>0.0363</b>  | <b>8.8000e-004</b> | <b>0.0372</b> |          | <b>125.4399</b> | <b>125.4399</b> | <b>3.6100e-003</b> |     | <b>125.5301</b> |

**3.3 Grading - 2020****Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |               | lb/day   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 11.6017        | 0.0000        | 11.6017        | 3.9247         | 0.0000        | 3.9247        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 4.4501        | 50.1975        | 31.9583        | 0.0620        |                | 2.1739        | 2.1739         |                | 2.0000        | 2.0000        |          | 6,005.8653        | 6,005.8653        | 1.9424        |     | 6,054.4257        |
| <b>Total</b>  | <b>4.4501</b> | <b>50.1975</b> | <b>31.9583</b> | <b>0.0620</b> | <b>11.6017</b> | <b>2.1739</b> | <b>13.7756</b> | <b>3.9247</b>  | <b>2.0000</b> | <b>5.9247</b> |          | <b>6,005.8653</b> | <b>6,005.8653</b> | <b>1.9424</b> |     | <b>6,054.4257</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.3 Grading - 2020****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      | 1.3132        | 48.3825        | 11.3549        | 0.1307        | 2.9146        | 0.1755        | 3.0901        | 0.7977         | 0.1679        | 0.9656        |          | 14,003.1679        | 14,003.1679        | 0.8435        |     | 14,024.2543        |
| 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       | 0.0794        | 0.0565         | 0.5591         | 1.4000e-003   | 0.1521        | 1.0600e-003   | 0.1532        | 0.0404         | 9.7000e-004   | 0.0413        |          | 139.3777           | 139.3777           | 4.0100e-003   |     | 139.4779           |
| <b>Total</b> | <b>1.3925</b> | <b>48.4390</b> | <b>11.9140</b> | <b>0.1321</b> | <b>3.0667</b> | <b>0.1766</b> | <b>3.2433</b> | <b>0.8380</b>  | <b>0.1689</b> | <b>1.0069</b> |          | <b>14,142.5456</b> | <b>14,142.5456</b> | <b>0.8475</b> |     | <b>14,163.7322</b> |

**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 |               |               |                |               | 5.2208        | 0.0000        | 5.2208        | 1.7661         | 0.0000        | 1.7661        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.7616        | 3.3000        | 32.9991        | 0.0620        |               | 0.1015        | 0.1015        |                | 0.1015        | 0.1015        | 0.0000        | 6,005.8653        | 6,005.8653        | 1.9424        |     | 6,054.4257        |
| <b>Total</b>  | <b>0.7616</b> | <b>3.3000</b> | <b>32.9991</b> | <b>0.0620</b> | <b>5.2208</b> | <b>0.1015</b> | <b>5.3223</b> | <b>1.7661</b>  | <b>0.1015</b> | <b>1.8677</b> | <b>0.0000</b> | <b>6,005.8653</b> | <b>6,005.8653</b> | <b>1.9424</b> |     | <b>6,054.4257</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.3 Grading - 2020****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      | 1.3132        | 48.3825        | 11.3549        | 0.1307        | 2.9146        | 0.1755        | 3.0901        | 0.7977         | 0.1679        | 0.9656        |          | 14,003.1679        | 14,003.1679        | 0.8435        |     | 14,024.2543        |
| 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       | 0.0794        | 0.0565         | 0.5591         | 1.4000e-003   | 0.1521        | 1.0600e-003   | 0.1532        | 0.0404         | 9.7000e-004   | 0.0413        |          | 139.3777           | 139.3777           | 4.0100e-003   |     | 139.4779           |
| <b>Total</b> | <b>1.3925</b> | <b>48.4390</b> | <b>11.9140</b> | <b>0.1321</b> | <b>3.0667</b> | <b>0.1766</b> | <b>3.2433</b> | <b>0.8380</b>  | <b>0.1689</b> | <b>1.0069</b> |          | <b>14,142.5456</b> | <b>14,142.5456</b> | <b>0.8475</b> |     | <b>14,163.7322</b> |

**3.4 Building Construction - 2021****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.9009        | 17.4321        | 16.5752        | 0.0269        |               | 0.9586        | 0.9586        |                | 0.9013        | 0.9013        |          | 2,553.3639        | 2,553.3639        | 0.6160        |     | 2,568.7643        |
| <b>Total</b> | <b>1.9009</b> | <b>17.4321</b> | <b>16.5752</b> | <b>0.0269</b> |               | <b>0.9586</b> | <b>0.9586</b> |                | <b>0.9013</b> | <b>0.9013</b> |          | <b>2,553.3639</b> | <b>2,553.3639</b> | <b>0.6160</b> |     | <b>2,568.7643</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.4 Building Construction - 2021****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       | 0.0949        | 2.9607        | 0.8626        | 6.9700e-003   | 0.1745        | 8.4900e-003   | 0.1830        | 0.0502         | 8.1200e-003   | 0.0583        |          | 738.7810          | 738.7810          | 0.0449        |     | 739.9030          |
| Worker       | 0.7160        | 0.4916        | 4.9502        | 0.0131        | 1.4758        | 9.9600e-003   | 1.4857        | 0.3915         | 9.1800e-003   | 0.4006        |          | 1,305.9386        | 1,305.9386        | 0.0348        |     | 1,306.8087        |
| <b>Total</b> | <b>0.8110</b> | <b>3.4523</b> | <b>5.8128</b> | <b>0.0201</b> | <b>1.6503</b> | <b>0.0185</b> | <b>1.6687</b> | <b>0.4417</b>  | <b>0.0173</b> | <b>0.4590</b> |          | <b>2,044.7196</b> | <b>2,044.7196</b> | <b>0.0797</b> |     | <b>2,046.7117</b> |

**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     | 0.3278        | 2.2347        | 17.4603        | 0.0269        |               | 0.0408        | 0.0408        |                | 0.0408        | 0.0408        | 0.0000        | 2,553.3639        | 2,553.3639        | 0.6160        |     | 2,568.7643        |
| <b>Total</b> | <b>0.3278</b> | <b>2.2347</b> | <b>17.4603</b> | <b>0.0269</b> |               | <b>0.0408</b> | <b>0.0408</b> |                | <b>0.0408</b> | <b>0.0408</b> | <b>0.0000</b> | <b>2,553.3639</b> | <b>2,553.3639</b> | <b>0.6160</b> |     | <b>2,568.7643</b> |



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.4 Building Construction - 2021****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       | 0.0949        | 2.9607        | 0.8626        | 6.9700e-003   | 0.1745        | 8.4900e-003   | 0.1830        | 0.0502         | 8.1200e-003   | 0.0583        |          | 738.7810          | 738.7810          | 0.0449        |     | 739.9030          |
| Worker       | 0.7160        | 0.4916        | 4.9502        | 0.0131        | 1.4758        | 9.9600e-003   | 1.4857        | 0.3915         | 9.1800e-003   | 0.4006        |          | 1,305.9386        | 1,305.9386        | 0.0348        |     | 1,306.8087        |
| <b>Total</b> | <b>0.8110</b> | <b>3.4523</b> | <b>5.8128</b> | <b>0.0201</b> | <b>1.6503</b> | <b>0.0185</b> | <b>1.6687</b> | <b>0.4417</b>  | <b>0.0173</b> | <b>0.4590</b> |          | <b>2,044.7196</b> | <b>2,044.7196</b> | <b>0.0797</b> |     | <b>2,046.7117</b> |

**3.4 Building Construction - 2022****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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.4 Building Construction - 2022****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       | 0.0881        | 2.8098        | 0.7956        | 6.9100e-003   | 0.1745        | 7.4600e-003   | 0.1819        | 0.0502         | 7.1300e-003   | 0.0573        |          | 732.2166          | 732.2166          | 0.0436        |     | 733.3068          |
| Worker       | 0.6696        | 0.4419        | 4.5393        | 0.0126        | 1.4758        | 9.7000e-003   | 1.4855        | 0.3915         | 8.9400e-003   | 0.4004        |          | 1,259.1794        | 1,259.1794        | 0.0312        |     | 1,259.9598        |
| <b>Total</b> | <b>0.7577</b> | <b>3.2518</b> | <b>5.3349</b> | <b>0.0196</b> | <b>1.6502</b> | <b>0.0172</b> | <b>1.6674</b> | <b>0.4417</b>  | <b>0.0161</b> | <b>0.4577</b> |          | <b>1,991.3961</b> | <b>1,991.3961</b> | <b>0.0748</b> |     | <b>1,993.2666</b> |

**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     | 0.3278        | 2.2347        | 17.4603        | 0.0269        |               | 0.0408        | 0.0408        |                | 0.0408        | 0.0408        | 0.0000        | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>0.3278</b> | <b>2.2347</b> | <b>17.4603</b> | <b>0.0269</b> |               | <b>0.0408</b> | <b>0.0408</b> |                | <b>0.0408</b> | <b>0.0408</b> | <b>0.0000</b> | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.4 Building Construction - 2022****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       | 0.0881        | 2.8098        | 0.7956        | 6.9100e-003   | 0.1745        | 7.4600e-003   | 0.1819        | 0.0502         | 7.1300e-003   | 0.0573        |          | 732.2166          | 732.2166          | 0.0436        |     | 733.3068          |
| Worker       | 0.6696        | 0.4419        | 4.5393        | 0.0126        | 1.4758        | 9.7000e-003   | 1.4855        | 0.3915         | 8.9400e-003   | 0.4004        |          | 1,259.1794        | 1,259.1794        | 0.0312        |     | 1,259.9598        |
| <b>Total</b> | <b>0.7577</b> | <b>3.2518</b> | <b>5.3349</b> | <b>0.0196</b> | <b>1.6502</b> | <b>0.0172</b> | <b>1.6674</b> | <b>0.4417</b>  | <b>0.0161</b> | <b>0.4577</b> |          | <b>1,991.3961</b> | <b>1,991.3961</b> | <b>0.0748</b> |     | <b>1,993.2666</b> |

**3.5 Paving - 2022****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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.6550        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.7578</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.5 Paving - 2022****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       | 0.0518        | 0.0342        | 0.3510        | 9.8000e-004        | 0.1141        | 7.5000e-004        | 0.1149        | 0.0303         | 6.9000e-004        | 0.0310        |          | 97.3592        | 97.3592        | 2.4100e-003        |     | 97.4196        |
| <b>Total</b> | <b>0.0518</b> | <b>0.0342</b> | <b>0.3510</b> | <b>9.8000e-004</b> | <b>0.1141</b> | <b>7.5000e-004</b> | <b>0.1149</b> | <b>0.0303</b>  | <b>6.9000e-004</b> | <b>0.0310</b> |          | <b>97.3592</b> | <b>97.3592</b> | <b>2.4100e-003</b> |     | <b>97.4196</b> |

**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     | 0.2805        | 1.2154        | 17.2957        | 0.0228        |               | 0.0374        | 0.0374        |                | 0.0374        | 0.0374        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.6550        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.9355</b> | <b>1.2154</b> | <b>17.2957</b> | <b>0.0228</b> |               | <b>0.0374</b> | <b>0.0374</b> |                | <b>0.0374</b> | <b>0.0374</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.5 Paving - 2022****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       | 0.0518        | 0.0342        | 0.3510        | 9.8000e-004        | 0.1141        | 7.5000e-004        | 0.1149        | 0.0303         | 6.9000e-004        | 0.0310        |          | 97.3592        | 97.3592        | 2.4100e-003        |     | 97.4196        |
| <b>Total</b> | <b>0.0518</b> | <b>0.0342</b> | <b>0.3510</b> | <b>9.8000e-004</b> | <b>0.1141</b> | <b>7.5000e-004</b> | <b>0.1149</b> | <b>0.0303</b>  | <b>6.9000e-004</b> | <b>0.0310</b> |          | <b>97.3592</b> | <b>97.3592</b> | <b>2.4100e-003</b> |     | <b>97.4196</b> |

**3.6 Architectural Coating - 2022****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 | 169.3629        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.2045          | 1.4085        | 1.8136        | 2.9700e-003        |               | 0.0817        | 0.0817        |                | 0.0817        | 0.0817        |          | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>169.5674</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.6 Architectural Coating - 2022****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       | 0.1346        | 0.0888        | 0.9125        | 2.5400e-003        | 0.2967        | 1.9500e-003        | 0.2986        | 0.0787         | 1.8000e-003        | 0.0805        |          | 253.1340        | 253.1340        | 6.2700e-003        |     | 253.2909        |
| <b>Total</b> | <b>0.1346</b> | <b>0.0888</b> | <b>0.9125</b> | <b>2.5400e-003</b> | <b>0.2967</b> | <b>1.9500e-003</b> | <b>0.2986</b> | <b>0.0787</b>  | <b>1.8000e-003</b> | <b>0.0805</b> |          | <b>253.1340</b> | <b>253.1340</b> | <b>6.2700e-003</b> |     | <b>253.2909</b> |

**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 | 169.3629        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297          | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>169.3926</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**3.6 Architectural Coating - 2022****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       | 0.1346        | 0.0888        | 0.9125        | 2.5400e-003        | 0.2967        | 1.9500e-003        | 0.2986        | 0.0787         | 1.8000e-003        | 0.0805        |          | 253.1340        | 253.1340        | 6.2700e-003        |     | 253.2909        |
| <b>Total</b> | <b>0.1346</b> | <b>0.0888</b> | <b>0.9125</b> | <b>2.5400e-003</b> | <b>0.2967</b> | <b>1.9500e-003</b> | <b>0.2986</b> | <b>0.0787</b>  | <b>1.8000e-003</b> | <b>0.0805</b> |          | <b>253.1340</b> | <b>253.1340</b> | <b>6.2700e-003</b> |     | <b>253.2909</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

|             | ROG    | NOx    | CO      | SO2    | Fugitive 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   | 3.8958 | 7.4606 | 31.6844 | 0.0810 | 7.8690        | 0.0865       | 7.9555     | 2.1025         | 0.0814        | 2.1838      |          | 8,317.544<br>1 | 8,317.544<br>1 | 0.5311 |     | 8,330.820<br>7 |
| Unmitigated | 3.8958 | 7.4606 | 31.6844 | 0.0810 | 7.8690        | 0.0865       | 7.9555     | 2.1025         | 0.0814        | 2.1838      |          | 8,317.544<br>1 | 8,317.544<br>1 | 0.5311 |     | 8,330.820<br>7 |

## 4.2 Trip Summary Information

| Land Use               | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|----------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Mid Rise    | 1,447.04                | 1,391.18 | 1276.80  | 3,630,377   | 3,630,377  |
| Other Asphalt Surfaces | 0.00                    | 0.00     | 0.00     |             |            |
| Racquet Club           | 0.00                    | 0.00     | 0.00     |             |            |
| Total                  | 1,447.04                | 1,391.18 | 1,276.80 | 3,630,377   | 3,630,377  |

## 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 |
| Apartments Mid Rise    | 10.00      | 5.00       | 6.50        | 46.50      | 12.50      | 41.00       | 86             | 11       | 3       |
| Other Asphalt Surfaces | 15.00      | 7.50       | 8.50        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Racquet Club           | 10.00      | 5.00       | 6.50        | 11.50      | 69.50      | 19.00       | 52             | 39       | 9       |

## 4.4 Fleet Mix



## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

| Land Use               | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Mid Rise    | 0.553424 | 0.054724 | 0.182601 | 0.125932 | 0.026745 | 0.006205 | 0.019388 | 0.020907 | 0.001606 | 0.001367 | 0.005207 | 0.000984 | 0.000911 |
| Other Asphalt Surfaces | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Racquet Club           | 0.553424 | 0.054724 | 0.182601 | 0.125932 | 0.026745 | 0.006205 | 0.019388 | 0.020907 | 0.001606 | 0.001367 | 0.005207 | 0.000984 | 0.000911 |

## 5.0 Energy Detail

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Historical Energy Use: N

## 5.1 Mitigation Measures Energy

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|                        | ROG    | NOx    | CO     | SO2         | Fugitive 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   | 0.0833 | 0.7153 | 0.3295 | 4.5400e-003 |               | 0.0575       | 0.0575     |                | 0.0575        | 0.0575      |          | 908.4924  | 908.4924  | 0.0174 | 0.0167 | 913.8911 |
| NaturalGas Unmitigated | 0.0833 | 0.7153 | 0.3295 | 4.5400e-003 |               | 0.0575       | 0.0575     |                | 0.0575        | 0.0575      |          | 908.4924  | 908.4924  | 0.0174 | 0.0167 | 913.8911 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**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   |                 |                 |               |               |                 |
| Apartments Mid Rise    | 7104.09        | 0.0766        | 0.6547        | 0.2786        | 4.1800e-003        |               | 0.0529        | 0.0529        |                | 0.0529        | 0.0529        |          | 835.7759        | 835.7759        | 0.0160        | 0.0153        | 840.7425        |
| Other Asphalt Surfaces | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Racquet Club           | 618.09         | 6.6700e-003   | 0.0606        | 0.0509        | 3.6000e-004        |               | 4.6100e-003   | 4.6100e-003   |                | 4.6100e-003   | 4.6100e-003   |          | 72.7165         | 72.7165         | 1.3900e-003   | 1.3300e-003   | 73.1486         |
| <b>Total</b>           |                | <b>0.0833</b> | <b>0.7153</b> | <b>0.3295</b> | <b>4.5400e-003</b> |               | <b>0.0575</b> | <b>0.0575</b> |                | <b>0.0575</b> | <b>0.0575</b> |          | <b>908.4924</b> | <b>908.4924</b> | <b>0.0174</b> | <b>0.0167</b> | <b>913.8911</b> |

**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   |                 |                 |               |               |                 |
| Apartments Mid Rise    | 7.10409        | 0.0766        | 0.6547        | 0.2786        | 4.1800e-003        |               | 0.0529        | 0.0529        |                | 0.0529        | 0.0529        |          | 835.7759        | 835.7759        | 0.0160        | 0.0153        | 840.7425        |
| Other Asphalt Surfaces | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Racquet Club           | 0.61809        | 6.6700e-003   | 0.0606        | 0.0509        | 3.6000e-004        |               | 4.6100e-003   | 4.6100e-003   |                | 4.6100e-003   | 4.6100e-003   |          | 72.7165         | 72.7165         | 1.3900e-003   | 1.3300e-003   | 73.1486         |
| <b>Total</b>           |                | <b>0.0833</b> | <b>0.7153</b> | <b>0.3295</b> | <b>4.5400e-003</b> |               | <b>0.0575</b> | <b>0.0575</b> |                | <b>0.0575</b> | <b>0.0575</b> |          | <b>908.4924</b> | <b>908.4924</b> | <b>0.0174</b> | <b>0.0167</b> | <b>913.8911</b> |

**6.0 Area Detail**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**6.1 Mitigation Measures Area**

|             | ROG    | NOx    | CO      | SO2         | Fugitive 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   | 7.4960 | 0.2534 | 21.9701 | 1.1600e-003 |               | 0.1214       | 0.1214     |                | 0.1214        | 0.1214      | 0.0000   | 39.5174   | 39.5174   | 0.0381 | 0.0000 | 40.4706 |
| Unmitigated | 7.4960 | 0.2534 | 21.9701 | 1.1600e-003 |               | 0.1214       | 0.1214     |                | 0.1214        | 0.1214      | 0.0000   | 39.5174   | 39.5174   | 0.0381 | 0.0000 | 40.4706 |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**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 | 0.9280        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 5.9044        |               |                |                    |               | 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           | 0.6637        | 0.2534        | 21.9701        | 1.1600e-003        |               | 0.1214        | 0.1214        |                | 0.1214        | 0.1214        |               | 39.5174        | 39.5174        | 0.0381        |               | 40.4706        |
| <b>Total</b>          | <b>7.4960</b> | <b>0.2534</b> | <b>21.9701</b> | <b>1.1600e-003</b> |               | <b>0.1214</b> | <b>0.1214</b> |                | <b>0.1214</b> | <b>0.1214</b> | <b>0.0000</b> | <b>39.5174</b> | <b>39.5174</b> | <b>0.0381</b> | <b>0.0000</b> | <b>40.4706</b> |

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**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 | 0.9280        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 5.9044        |               |                |                    |               | 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           | 0.6637        | 0.2534        | 21.9701        | 1.1600e-003        |               | 0.1214        | 0.1214        |                | 0.1214        | 0.1214        |               | 39.5174        | 39.5174        | 0.0381        |               | 40.4706        |
| <b>Total</b>          | <b>7.4960</b> | <b>0.2534</b> | <b>21.9701</b> | <b>1.1600e-003</b> |               | <b>0.1214</b> | <b>0.1214</b> |                | <b>0.1214</b> | <b>0.1214</b> | <b>0.0000</b> | <b>39.5174</b> | <b>39.5174</b> | <b>0.0381</b> | <b>0.0000</b> | <b>40.4706</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment**

## Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, Winter

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

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Unmitigated

| Construction Year        | NO <sub>x</sub> (ppd) | PM <sub>10</sub> (ppd) | PM <sub>2.5</sub> (ppd) | PM <sub>10</sub> (tpy) | PM <sub>2.5</sub> (tpy) |
|--------------------------|-----------------------|------------------------|-------------------------|------------------------|-------------------------|
| 2020                     | 111.60                | 20.43                  | 12.00                   | 0.18                   | 0.09                    |
| 2021                     | 18.18                 | 2.81                   | 1.43                    | 0.23                   | 0.12                    |
| 2022                     | 16.27                 | 2.66                   | 1.29                    | 0.18                   | 0.09                    |
| SMAQMD Thresholds        | 85                    | 0                      | 0                       | 0                      | 0                       |
| Maximum Emissions        | 111.60                | 20.43                  | 12.00                   | 0.23                   | 0.12                    |
| Significant (Yes or No)? | Yes                   | Yes                    | Yes                     | Yes                    | Yes                     |

Mitigated

| Construction Year        | NO <sub>x</sub> (ppd) | PM <sub>10</sub> (ppd) | PM <sub>2.5</sub> (ppd) | PM <sub>10</sub> (tpy) | PM <sub>2.5</sub> (tpy) |
|--------------------------|-----------------------|------------------------|-------------------------|------------------------|-------------------------|
| 2020                     | 64.70                 | 10.19                  | 4.58                    | 0.10                   | 0.04                    |
| 2021                     | 2.98                  | 1.90                   | 0.57                    | 0.16                   | 0.05                    |
| 2022                     | 2.89                  | 1.89                   | 0.57                    | 0.13                   | 0.04                    |
| SMAQMD Thresholds        | 85                    | 0                      | 0                       | 0                      | 0                       |
| Maximum Emissions        | 64.70                 | 10.19                  | 4.58                    | 0.16                   | 0.05                    |
| Significant (Yes or No)? | No                    | No                     | No                      | No                     | No                      |

Construction Emissions - Unmitigated

| Phase   | Source    | NOx   | PM10 (lbs/day) |       |       | PM2.5 (lbs/day) |      |       | PM10 (ttons/year) |      |       | PM2.5 (tons/year) |      |       |
|---|-----------|-------|----------------|-------|-------|-----------------|------|-------|-------------------|------|-------|-------------------|------|-------|
|   |           |       | Exhaust        | Dust  | Total | Exhaust         | Dust | Total | Exhaust           | Dust | Total | Exhaust           | Dust | Total |
| Peak Construction Emissions - 2020 (pounds/day) |           |       |                |       |       |                 |      |       |                   |      |       |                   |      |       |
| Site Preparation                                | Equipment | 42.40 | 2.20           | 18.07 | 20.27 | 2.02            | 9.93 | 11.95 | 0.01              | 0.09 | 0.10  | 0.01              | 0.05 | 0.06  |
|   | Vehicles  | 0.06  | 0.02           | 0.14  | 0.16  | 0.01            | 0.04 | 0.04  | 0.00              | 0.00 | 0.00  | 0.00              | 0.00 | 0.00  |
| Total   |           | 42.46 | 2.22           | 18.21 | 20.43 | 2.03            | 9.97 | 12.00 | 0.01              | 0.09 | 0.10  | 0.01              | 0.05 | 0.06  |

|         |           |        |      |       |       |      |      |      |      |      |      |      |      |      |
|---------|-----------|--------|------|-------|-------|------|------|------|------|------|------|------|------|------|
| Grading | Equipment | 50.20  | 2.17 | 11.60 | 13.77 | 2.00 | 3.92 | 5.92 | 0.02 | 0.13 | 0.15 | 0.02 | 0.05 | 0.07 |
|         | Vehicles  | 61.40  | 1.80 | 3.07  | 4.86  | 1.28 | 0.84 | 2.12 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 |
| Total   |           | 111.60 | 3.97 | 14.67 | 18.64 | 3.28 | 4.76 | 8.04 | 0.03 | 0.15 | 0.18 | 0.02 | 0.06 | 0.09 |

|   |           |       |      |      |      |      |      |      |      |      |      |      |      |      |
|---|-----------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| Peak Construction Emissions - 2021 (pounds/day) |           |       |      |      |      |      |      |      |      |      |      |      |      |      |
| Building Construction                           | Equipment | 17.43 | 0.96 | 0.00 | 0.96 | 0.90 | 0.00 | 0.90 | 0.08 | 0.00 | 0.08 | 0.07 | 0.00 | 0.07 |
|   | Vehicles  | 0.75  | 0.21 | 1.65 | 1.86 | 0.09 | 0.44 | 0.53 | 0.03 | 0.13 | 0.16 | 0.01 | 0.03 | 0.05 |
|   | Total     | 18.18 | 1.16 | 1.65 | 2.81 | 0.99 | 0.44 | 1.43 | 0.11 | 0.13 | 0.23 | 0.08 | 0.03 | 0.12 |

|   |           |       |      |      |      |      |      |      |      |      |      |      |      |      |
|---|-----------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| Peak Construction Emissions - 2022 (pounds/day) |           |       |      |      |      |      |      |      |      |      |      |      |      |      |
| Building Construction                           | Equipment | 15.62 | 0.81 | 0.00 | 0.81 | 0.76 | 0.00 | 0.76 | 0.06 | 0.00 | 0.06 | 0.05 | 0.00 | 0.05 |
|   | Vehicles  | 0.65  | 0.20 | 1.65 | 1.85 | 0.09 | 0.44 | 0.53 | 0.01 | 0.11 | 0.13 | 0.01 | 0.03 | 0.04 |
|   | Total     | 16.27 | 1.01 | 1.65 | 2.66 | 0.85 | 0.44 | 1.29 | 0.07 | 0.11 | 0.18 | 0.06 | 0.03 | 0.09 |

|        |           |       |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|-----------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| Paving | Equipment | 11.12 | 0.57 | 0.00 | 0.57 | 0.52 | 0.00 | 0.52 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 |
|        | Vehicles  | 0.04  | 0.02 | 0.11 | 0.13 | 0.01 | 0.03 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total  |           | 11.17 | 0.58 | 0.11 | 0.70 | 0.53 | 0.03 | 0.56 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 |

|                       |           |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Architectural Coating | Equipment | 1.41 | 0.08 | 0.00 | 0.08 | 0.08 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|                       | Vehicles  | 0.11 | 0.04 | 0.30 | 0.34 | 0.02 | 0.08 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total                 |           | 1.52 | 0.12 | 0.30 | 0.42 | 0.10 | 0.08 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Construction Emissions - mitigated

| Phase   | Source    | NOx  | PM10 (lbs/day) |      |       | PM2.5 (lbs/day) |      |       | PM10 (tons/year) |      |       | PM2.5 (tons/year) |      |       |
|---|-----------|------|----------------|------|-------|-----------------|------|-------|------------------|------|-------|-------------------|------|-------|
|   |           |      | Exhaust        | Dust | Total | Exhaust         | Dust | Total | Exhaust          | Dust | Total | Exhaust           | Dust | Total |
| Peak Construction Emissions - 2020 (pounds/day) |           |      |                |      |       |                 |      |       |                  |      |       |                   |      |       |
| Site Preparation                                | Equipment | 2.02 | 0.06           | 8.13 | 8.19  | 0.06            | 4.47 | 4.53  | 0.00             | 0.04 | 0.04  | 0.00              | 0.02 | 0.02  |
|   | Vehicles  | 0.06 | 0.02           | 0.14 | 0.16  | 0.01            | 0.04 | 0.04  | 0.00             | 0.00 | 0.00  | 0.00              | 0.00 | 0.00  |
| Total   |           | 2.08 | 0.08           | 8.27 | 8.35  | 0.07            | 4.51 | 4.58  | 0.00             | 0.04 | 0.04  | 0.00              | 0.02 | 0.02  |

|         |           |       |      |      |       |      |      |      |      |      |      |      |      |      |
|---------|-----------|-------|------|------|-------|------|------|------|------|------|------|------|------|------|
| Grading | Equipment | 3.30  | 0.10 | 5.22 | 5.32  | 0.10 | 1.77 | 1.87 | 0.00 | 0.06 | 0.06 | 0.00 | 0.02 | 0.03 |
|         | Vehicles  | 61.40 | 1.80 | 3.07 | 4.86  | 1.28 | 0.84 | 2.12 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 |
| Total   |           | 64.70 | 1.90 | 8.29 | 10.19 | 1.38 | 2.60 | 3.99 | 0.01 | 0.08 | 0.10 | 0.01 | 0.03 | 0.04 |

|   |           |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Peak Construction Emissions - 2021 (pounds/day) |           |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Building Construction                           | Equipment | 2.23 | 0.04 | 0.00 | 0.04 | 0.04 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|   | Vehicles  | 0.75 | 0.21 | 1.65 | 1.86 | 0.09 | 0.44 | 0.53 | 0.03 | 0.13 | 0.16 | 0.01 | 0.03 | 0.05 |
|   | Total     | 2.98 | 0.25 | 1.65 | 1.90 | 0.13 | 0.44 | 0.57 | 0.03 | 0.13 | 0.16 | 0.02 | 0.03 | 0.05 |

|   |           |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Peak Construction Emissions - 2022 (pounds/day) |           |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Building Construction                           | Equipment | 2.23 | 0.04 | 0.00 | 0.04 | 0.04 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|   | Vehicles  | 0.65 | 0.20 | 1.65 | 1.85 | 0.09 | 0.44 | 0.53 | 0.01 | 0.11 | 0.13 | 0.01 | 0.03 | 0.04 |
|   | Total     | 2.89 | 0.24 | 1.65 | 1.89 | 0.13 | 0.44 | 0.57 | 0.02 | 0.11 | 0.13 | 0.01 | 0.03 | 0.04 |

|        |           |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Paving | Equipment | 1.22 | 0.04 | 0.00 | 0.04 | 0.04 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|        | Vehicles  | 0.04 | 0.02 | 0.11 | 0.13 | 0.01 | 0.03 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total  |           | 1.26 | 0.05 | 0.11 | 0.17 | 0.04 | 0.03 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

|                       |           |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Architectural Coating | Equipment | 0.13 | 0.08 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|                       | Vehicles  | 0.11 | 0.04 | 0.30 | 0.34 | 0.02 | 0.08 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total                 |           | 0.24 | 0.12 | 0.30 | 0.42 | 0.02 | 0.08 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Construction Vehicle Trip Emissions for 2020 (tons/year)

| Phase            | tons/year |      |       |       | metric tons/year |      |      |        |
|------------------|-----------|------|-------|-------|------------------|------|------|--------|
|                  | ROG       | NOx  | PM10  | PM2.5 | CO2              | CH4  | N2O  | CO2e   |
| Site Preparation | 0.00      | 0.00 | 0.000 | 0.00  | 0.60             | 0.00 | 0.00 | 0.61   |
| Grading          | 0.03      | 0.46 | 0.013 | 0.01  | 100.95           | 0.00 | 0.02 | 105.68 |

Notes: Global Warming Potential for CH4 = 25; GWP for N2O = 298.

Construction Vehicle Trip Emissions for 2020 (pounds/day)

| Phase            | ROG  | NOx   | PM10 | PM2.5 |
|------------------|------|-------|------|-------|
| Site Preparation | 0.11 | 0.06  | 0.02 | 0.01  |
| Grading          | 4.30 | 61.40 | 1.80 | 1.28  |

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: SACRAMENTO METROPOLITAN AQMD

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

| Region                | Calendar Yea | Vehicle Categ | Model Year | Speed      | Fuel | Population | VMT      | Trips    | ROG_RUNE | ROG_IDLEX | ROG_STREX | ROG_HOTSC | ROG_RUNLC | ROG_RESTL | ROG_DIURN | NOx_RUNEX | NOx_IDLEX | NOx_STREX | CO2_RUNEX | CO2_IDLEX | CO2_STREX | CH4_RUNEX | CH4_IDLEX | CH4_STREX | PM10_RUNE | PM10_IDLEX | PM10_STRE | PM10_PMTW | PM10_PMBW | PM2.5_RUNI | PM2.5_IDLE | PM2.5_STRE | PM2.5_PMTI | PM2.5_PMBI | N2O_RUNEX | N2O_IDLEX | N2O_STREX |
|-----------------------|--------------|---------------|------------|------------|------|------------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|-----------|-----------|-----------|
| SACRAMENTO METROPOLIT | 2020         | LDT1          | Aggregated | Aggregated | GAS  | 62565.85   | 2093110  | 283205.1 | 0.033291 | 0         | 0.509023  | 0.270958  | 0.939295  | 0.506158  | 0.831969  | 0.129797  | 0         | 0.337071  | 326.5274  | 0         | 69.74572  | 0.007442  | 0         | 0.096401  | 0.002244  | 0          | 0.002999  | 0.008     | 0.03675   | 0.002063   | 0          | 0.002758   | 0.002      | 0.01575    | 0.009697  | 0         | 0.033256  |
| SACRAMENTO METROPOLIT | 2020         | T7 single cc  | Aggregated | Aggregated | DSL  | 296.9415   | 20942.79 | 1342.461 | 0.527049 | 1.571257  | 0         | 0         | 0         | 0         | 0         | 7.554607  | 23.26478  | 3.313673  | 1892.046  | 3866.101  | 0         | 0.02448   | 0.072981  | 0         | 0.141891  | 0.039488   | 0         | 0.036     | 0.06174   | 0.135753   | 0.03778    | 0          | 0.009      | 0.02646    | 0.297403  | 0.607697  | 0         |

2020 Construction Vehicle Emissions

Running Emissions

| Running Emission Factors (grams/mile) | Vehicle Type | ROG  | Nox  | PM10 | PM10TW | PM10BW | PM10Tot | PM2.5 | PM2.5TW | PM2.5BW | PM2.5Tot | CO2      | CH4  | N2O  |
|---------------------------------------|--------------|------|------|------|--------|--------|---------|-------|---------|---------|----------|----------|------|------|
| Worker                                | LDT1         | 0.03 | 0.13 | 0.00 | 0.01   | 0.04   | 0.05    | 0.00  | 0.00    | 0.02    | 0.02     | 326.53   | 0.01 | 0.01 |
| Haul                                  | T7 sc        | 0.53 | 7.55 | 0.14 | 0.04   | 0.06   | 0.24    | 0.14  | 0.01    | 0.03    | 0.17     | 1,892.05 | 0.02 | 0.30 |

| Workers          | Trips/day | Trip Length | Days | tons/year |      |      |       | metric tons/year |      |      |
|------------------|-----------|-------------|------|-----------|------|------|-------|------------------|------|------|
|                  |           |             |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Site Preparation | 18        | 10          | 10   | 0.00      | 0.00 | 0.00 | 0.00  | 0.59             | 0.00 | 0.00 |
| Grading          | 20        | 10          | 15   | 0.00      | 0.00 | 0.00 | 0.00  | 0.98             | 0.00 | 0.00 |

| Workers          | Trips/day | Trip Length | pounds/day |      |      |       |
|------------------|-----------|-------------|------------|------|------|-------|
|                  |           |             | ROG        | NOx  | PM10 | PM2.5 |
| Site Preparation | 18        | 10          | 0.01       | 0.05 | 0.02 | 0.01  |
| Grading          | 20        | 10          | 0.01       | 0.06 | 0.02 | 0.01  |

| Haul Trucks | Total Trips | Trip Length | tons/year |      |      |       | metric tons/year |      |      |
|-------------|-------------|-------------|-----------|------|------|-------|------------------|------|------|
|             |             |             | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Grading     | 2513        | 20          | 0.03      | 0.42 | 0.01 | 0.01  | 95.09            | 0.00 | 0.01 |

| Haul Trucks | Total Trips | Days | Trips/day | Trip Length | pounds/day |       |      |       |
|-------------|-------------|------|-----------|-------------|------------|-------|------|-------|
|             |             |      |           |             | ROG        | NOx   | PM10 | PM2.5 |
| Grading     | 2513        | 15   | 168       | 20          | 3.89       | 55.81 | 1.77 | 1.26  |

Start-Up Emission

| Start-Up Emission Factors (gram/trip) | Vehicle Type | ROG ST | ROG HOT | ROG Loss | ROG Tot. | NOx  | PM10 | PM2.5 | CO2   | CH4  | N2O  |
|---------------------------------------|--------------|--------|---------|----------|----------|------|------|-------|-------|------|------|
| worker                                | LDT1         | 0.51   | 0.27    | 0.94     | 1.72     | 0.34 | 0.00 | 0.00  | 69.75 | 0.10 | 0.03 |
| Haul                                  | T7 sc        | 0.00   | 0.00    | 0.00     | 0.00     | 3.31 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 |

| Workers          | Trips/day | Days | tons/year |      |      |       | metric tons/year |      |      |
|------------------|-----------|------|-----------|------|------|-------|------------------|------|------|
|                  |           |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Site Preparation | 18        | 10   | 0.00      | 0.00 | 0.00 | 0.00  | 0.01             | 0.00 | 0.00 |
| Grading          | 20        | 15   | 0.00      | 0.00 | 0.00 | 0.00  | 0.02             | 0.00 | 0.00 |

| Workers          | Trips/day | ROG  | NOx  | PM10 | PM2.5 |
|------------------|-----------|------|------|------|-------|
|                  |           |      |      |      |       |
| Site Preparation | 18        | 0.07 | 0.01 | 0.00 | 0.00  |
| Grading          | 20        | 0.08 | 0.01 | 0.00 | 0.00  |

| Haul Trucks | Trips/day | Days | tons/year |      |       |       | metric tons/year |      |      |
|-------------|-----------|------|-----------|------|-------|-------|------------------|------|------|
|             |           |      | ROG       | NOx  | PM10  | PM2.5 | CO2              | CH4  | N2O  |
| Grading     | 168       | 15   | 0.00      | 0.01 | 0.000 | 0.00  | 0.00             | 0.00 | 0.00 |

| Haul Trucks | Trips | Days | Trips/day | pounds/day |      |      |       |
|-------------|-------|------|-----------|------------|------|------|-------|
|             |       |      |           | ROG        | NOx  | PM10 | PM2.5 |
| Grading     | 2513  | 15   | 168       | 0.00       | 1.22 | 0.00 | 0.00  |

Idling Emissions

| Idling Emission Factors (g/vehicle/day) | Vehicle Type | ROG Idle | ROG Rest | ROG Di | ROG Tot. | Nox   | PM10 | PM2.5 | CO2      | CH4  | N2O  |
|---|--------------|----------|----------|--------|----------|-------|------|-------|----------|------|------|
| worker                                  | LDT1         | 0.00     | 0.51     | 0.83   | 1.34     | 0.00  | 0.00 | 0.00  | 0.00     | 0.00 | 0.00 |
| Haul                                    | T7 sc        | 1.57     | 0.00     | 0.00   | 1.57     | 23.26 | 0.04 | 0.04  | 3,866.10 | 0.07 | 0.61 |

| Workers          | Trips/day | Veh./day | Days | tons/year |      |      |       | metric tons/year |      |      |
|------------------|-----------|----------|------|-----------|------|------|-------|------------------|------|------|
|                  |           |          |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Site Preparation | 18        | 9        | 10   | 0.00      | 0.00 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |
| Grading          | 20        | 10       | 30   | 0.00      | 0.00 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |

| Workers          | Trips/day | Veh./day | pounds/day |      |      |       |
|------------------|-----------|----------|------------|------|------|-------|
|                  |           |          | ROG        | NOx  | PM10 | PM2.5 |
| Site Preparation | 18        | 9        | 0.03       | 0.00 | 0.00 | 0.00  |
| Grading          | 20        | 10       | 0.03       | 0.00 | 0.00 | 0.00  |

| Haul Trucks | Trips | Vehicles | tons/year |      |        |       | metric tons/year |      |      |
|-------------|-------|----------|-----------|------|--------|-------|------------------|------|------|
|             |       |          | ROG       | NOx  | PM10   | PM2.5 | CO2              | CH4  | N2O  |
| Grading     | 2513  | 1256.5   | 0.00      | 0.03 | 0.0001 | 0.00  | 4.86             | 0.00 | 0.00 |

| Haul Trucks | Trips | Vehicles | Days | Veh./day | pounds/day |      |      |       |
|-------------|-------|----------|------|----------|------------|------|------|-------|
|             |       |          |      |          | ROG        | NOx  | PM10 | PM2.5 |
| Grading     | 2513  | 1256.5   | 15   | 83.77    | 0.29       | 4.30 | 0.01 | 0.01  |



Construction Vehicle Trip Emissions for 2021 (tons/year)

| Phase                 | tons/year |      |      |       | metric tons/year |      |      |        |
|-----------------------|-----------|------|------|-------|------------------|------|------|--------|
|                       | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  | CO2e   |
| Building Construction | 0.11      | 0.10 | 0.03 | 0.01  | 188.07           | 0.01 | 0.01 | 190.04 |

Notes: Global Warming Potential for CH4 = 25; GWP for N2O = 298.

Construction Vehicle Trip Emissions for 2021 (pounds/day)

| Phase                 | ROG  | NOx  | PM10 | PM2.5 |
|-----------------------|------|------|------|-------|
| Building Construction | 1.07 | 0.75 | 0.21 | 0.09  |

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: SACRAMENTO METROPOLITAN AQMD

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

| Region                  | Calendar Yea | Vehicle Cate  | Model Year | Speed      | Fuel | Population | VMT       | Trips     | ROG_RUNE  | ROG_IDLEX | ROG_STREX | ROG_HOTSC | ROG_RUNLC | ROG_RESTL | ROG_DIURN | NOx_RUNEX | NOx_IDLEX | NOx_STREX | CO2_RUNEX | CO2_IDLEX | CO2_STREX | CH4_RUNEX | CH4_IDLEX | CH4_STREX | PM10_RUNE | PM10_IDLEX | PM10_STRE | PM10_PMTV | PM10_PMBW | PM2_5_RUN | PM2_5_IDLE | PM2_5_STRE | PM2_5_PMT | PM2_5_PMB | N2O_RUNEX | N2O_IDLEX | N2O_STREX |
|-------------------------|--------------|---------------|------------|------------|------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|-----------|
| SACRAMENTO METROPOLITAN | 2021         | LDT1          | Aggregated | Aggregated | GAS  | 63439.28   | 2114017.8 | 287695.62 | 0.02836   | 0         | 0.459525  | 0.2522123 | 0.8703402 | 0.4759252 | 0.7696374 | 0.1114682 | 0         | 0.3118066 | 318.71266 | 0         | 68.068714 | 0.0063965 | 0         | 0.0881777 | 0.0020842 | 0          | 0.0028061 | 0.008     | 0.03675   | 0.0019164 | 0          | 0.0025803  | 0.002     | 0.01575   | 0.0086118 | 0         | 0.0319072 |
| SACRAMENTO METROPOLITAN | 2021         | T7 single cor | Aggregated | Aggregated | DSL  | 309.89959  | 21790.03  | 1401.044  | 0.4260365 | 1.578025  | 0         | 0         | 0         | 0         | 0         | 6.4922476 | 22.672825 | 3.5166048 | 1859.7827 | 3917.7919 | 0         | 0.0197883 | 0.0732952 | 0         | 0.1152589 | 0.0323544  | 0         | 0.036     | 0.06174   | 0.1102729 | 0.0309548  | 0          | 0.009     | 0.02646   | 0.2923319 | 0.6158223 | 0         |

2022 Construction Vehicle Emissions

Running Emissions

| Running Emission Factors (grams/mile) | Vehicle Type | ROG  | Nox  | PM10 | PM10TW | PM10BW | PM10Tot | PM2.5 | PM2.5TW | PM2.5BW | PM2.5Tot | CO2      | CH4  | N2O  |
|---------------------------------------|--------------|------|------|------|--------|--------|---------|-------|---------|---------|----------|----------|------|------|
| Worker                                | LDT1         | 0.03 | 0.11 | 0.00 | 0.01   | 0.04   | 0.05    | 0.00  | 0.00    | 0.02    | 0.02     | 318.71   | 0.01 | 0.01 |
| Haul                                  | T7 sc        | 0.43 | 6.49 | 0.12 | 0.04   | 0.06   | 0.21    | 0.11  | 0.01    | 0.03    | 0.15     | 1,859.78 | 0.02 | 0.29 |

| Workers               | Trips/day | Trip Length | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|-------------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |             |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 194       | 10          | 300  | 0.02      | 0.07 | 0.03 | 0.01  | 185.49           | 0.00 | 0.01 |

| Workers               | Trips/day | Trip Length | pounds/day |      |      |       |
|-----------------------|-----------|-------------|------------|------|------|-------|
|                       |           |             | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 194       | 10          | 0.12       | 0.48 | 0.20 | 0.08  |

| Haul Trucks           | Trips | Trip Length | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-------|-------------|-----------|------|------|-------|------------------|------|------|
|                       |       |             | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 29    | 6.5         | 0.00      | 0.00 | 0.00 | 0.00  | 0.35             | 0.00 | 0.00 |

| Haul Trucks           | Trips | Days | Trips/day | Trip Length | pounds/day |      |      |       |
|-----------------------|-------|------|-----------|-------------|------------|------|------|-------|
|                       |       |      |           |             | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 29    | 160  | 0         | 50          | 0.01       | 0.13 | 0.00 | 0.00  |

Start-Up Emission

| Start-Up Emission Factors (gram/trip) | Vehicle Type | ROG ST | ROG HOT | ROG Loss | ROG Tot. | NOx  | PM10 | PM2.5 | CO2   | CH4  | N2O  |
|---------------------------------------|--------------|--------|---------|----------|----------|------|------|-------|-------|------|------|
| worker                                | LDT1         | 0.46   | 0.25    | 0.87     | 1.58     | 0.31 | 0.00 | 0.00  | 68.07 | 0.09 | 0.03 |
| Haul                                  | T7 sc        | 0.00   | 0.00    | 0.00     | 0.00     | 3.52 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 |

| Workers               | Trips/day | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 194       | 160  | 0.05      | 0.01 | 0.00 | 0.00  | 2.11             | 0.00 | 0.00 |

| Workers               | Trips/day | pounds/day |      |      |       |
|-----------------------|-----------|------------|------|------|-------|
|                       |           | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 194       | 0.68       | 0.13 | 0.00 | 0.00  |

| Haul Trucks           | Trips/day | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 29        | 160  | 0.00      | 0.02 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |

| Haul Trucks           | Trips | Days | Trips/day | pounds/day |      |      |       |
|-----------------------|-------|------|-----------|------------|------|------|-------|
|                       |       |      |           | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 29    | 160  | 0         | 0.00       | 0.00 | 0.00 | 0.00  |

Idling Emissions

| Idling Emission Factors (g/vehicle/day) | Vehicle Type | ROG Idle | ROG Rest | ROG Di | ROG Tot. | Nox   | PM10 | PM2.5 | CO2      | CH4  | N2O  |
|---|--------------|----------|----------|--------|----------|-------|------|-------|----------|------|------|
| worker                                  | LDT1         | 0.00     | 0.48     | 0.77   | 1.25     | 0.00  | 0.00 | 0.00  | 0.00     | 0.00 | 0.00 |
| Haul                                    | T7 sc        | 1.58     | 0.00     | 0.00   | 1.58     | 22.67 | 0.03 | 0.03  | 3,917.79 | 0.07 | 0.62 |

| Workers               | Trips/day | Veh./day | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|----------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |          |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 194       | 97       | 300  | 0.04      | 0.00 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |

| Workers               | Trips/day | Veh./day | pounds/day |      |      |       |
|-----------------------|-----------|----------|------------|------|------|-------|
|                       |           |          | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 194       | 97       | 0.27       | 0.00 | 0.00 | 0.00  |

| Haul Trucks           | Trips | Vehicles | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-------|----------|-----------|------|------|-------|------------------|------|------|
|                       |       |          | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 29    | 29       | 0.00      | 0.00 | 0.00 | 0.00  | 0.11             | 0.00 | 0.00 |

| Haul Trucks           | Trips | Vehicles | Days | Veh./day | pounds/day |        |        |        |
|-----------------------|-------|----------|------|----------|------------|--------|--------|--------|
|                       |       |          |      |          | ROG        | NOx    | PM10   | PM2.5  |
| Building Construction | 29    | 29       | 160  | 0.18     | 0.0006     | 0.0091 | 0.0000 | 0.0000 |

Construction Vehicle Trip Emissions for 2022 (tons/year)

| Phase                 | tons/year |        |        |        | metric tons/year |      |         |       |
|-----------------------|-----------|--------|--------|--------|------------------|------|---------|-------|
|                       | ROG       | NOx    | PM10   | PM2.5  | CO2              | CH4  | N2O     | CO2e  |
| Building Construction | 0.07      | 0.06   | 0.01   | 0.01   | 86.69            | 0.00 | 0.00299 | 87.68 |
| Paving                | 0.0008    | 0.0004 | 0.0002 | 0.0001 | 0.95             | 0.00 | 0.00003 | 0.96  |
| Architectural Coating | 0.0020    | 0.0011 | 0.0004 | 0.0002 | 2.48             | 0.00 | 0.00008 | 2.50  |

Notes: Global Warming Potential for CH4 = 25; GWP for N2O = 298.

Construction Vehicle Trip Emissions for 2022 (pounds/day)

| Phase                 | ROG  | NOx  | PM10 | PM2.5 |
|-----------------------|------|------|------|-------|
| Building Construction | 0.98 | 0.65 | 0.20 | 0.09  |
| Paving                | 0.08 | 0.04 | 0.02 | 0.01  |
| Architectural Coating | 0.20 | 0.11 | 0.04 | 0.02  |

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: SACRAMENTO METROPOLITAN AQMD

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

| Region                  | Calendar Year | Vehicle Category | Model Year | Speed      | Fuel | Population | VMT       | Trips     | ROG       | RUNEX     | ROG_IDLEX | ROG_STREX | ROG_HOTSK | ROG_RUNL  | CROG      | RESTL     | ROG_DIURN | NOx       | RUNEX     | NOx_IDLEX | NOx_STREX | CO2       | RUNEX     | CO2_IDLEX | CO2_STREX | CH4       | RUNEX     | CH4_IDLEX | CH4_STREX | PM10      | RUNE      | PM10_IDLEX | PM10_STREX | PM10_PMTW | PM10_PMBW | PM2.5     | RUNIP     | PM2.5_IDLEX | PM2.5_STREX | PM2.5_PMTW | PM2.5_PMBW | N2O | RUNEX | N2O_IDLEX | N2O_STREX |
|-------------------------|---------------|------------------|------------|------------|------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|-------------|-------------|------------|------------|-----|-------|-----------|-----------|
| SACRAMENTO METROPOLITAN | 2022          | LDT1             | Aggregated | Aggregated | GAS  | 64366.141  | 2129386.5 | 292380.94 | 0.0241836 | 0         | 0.4147061 | 0.2344728 | 0.809658  | 0.4468336 | 0.7115684 | 0.0960365 | 0         | 0.2887163 | 310.86835 | 0         | 66.385218 | 0.0055086 | 0         | 0.08066   | 0.0019394 | 0         | 0.0026272 | 0.008     | 0.03675   | 0.0017833 | 0         | 0.0024157  | 0.002      | 0.01575   | 0.0076902 | 0         | 0.0306076 |             |             |            |            |     |       |           |           |
| SACRAMENTO METROPOLITAN | 2022          | T7 single cor    | Aggregated | Aggregated | DSL  | 324.17374  | 22645.649 | 1465.5769 | 0.1784707 | 1.5842155 | 0         | 0         | 0         | 0         | 0         | 4.7102469 | 21.412373 | 3.9868911 | 1793.7626 | 4085.2459 | 0         | 0.0082895 | 0.0735827 | 0         | 0.0442251 | 0.0131744 | 0         | 0.036     | 0.06174   | 0.0423119 | 0.0126045 | 0          | 0.009      | 0.02646   | 0.2819545 | 0.6421438 | 0         |             |             |            |            |     |       |           |           |

2022 Construction Vehicle Emissions

| Running Emissions                        |              |      |      |      |        |        |         |       |         |         |          |          |      |      |
|--|--------------|------|------|------|--------|--------|---------|-------|---------|---------|----------|----------|------|------|
| Running Emission Factors<br>(grams/mile) | Vehicle Type | ROG  | Nox  | PM10 | PM10TW | PM10BW | PM10Tot | PM2.5 | PM2.5TW | PM2.5BW | PM2.5Tot | CO2      | CH4  | N2O  |
| Worker                                   | LDT1         | 0.02 | 0.10 | 0.00 | 0.01   | 0.04   | 0.05    | 0.00  | 0.00    | 0.02    | 0.02     | 310.87   | 0.01 | 0.01 |
| Haul                                     | T7 sc        | 0.18 | 4.71 | 0.04 | 0.04   | 0.06   | 0.14    | 0.04  | 0.01    | 0.03    | 0.08     | 1,793.76 | 0.01 | 0.28 |

| Workers               | Trips/day | Trip Length | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|-------------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |             |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 194       | 10          | 140  | 0.01      | 0.03 | 0.01 | 0.01  | 84.43            | 0.00 | 0.00 |
| Paving                | 15        | 10          | 20   | 0.00      | 0.00 | 0.00 | 0.00  | 0.93             | 0.00 | 0.00 |
| Architectural Coating | 39        | 10          | 20   | 0.00      | 0.00 | 0.00 | 0.00  | 2.42             | 0.00 | 0.00 |

| Workers               | Trips/day | Trip Length | pounds/day |      |      |       |
|-----------------------|-----------|-------------|------------|------|------|-------|
|                       |           |             | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 194       | 10          | 0.10       | 0.41 | 0.20 | 0.08  |
| Paving                | 15        | 10          | 0.01       | 0.03 | 0.02 | 0.01  |
| Architectural Coating | 39        | 10          | 0.02       | 0.08 | 0.04 | 0.02  |

| Haul Trucks           | Trips | Trip Length | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-------|-------------|-----------|------|------|-------|------------------|------|------|
|                       |       |             | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 29    | 6.5         | 0.00      | 0.00 | 0.00 | 0.00  | 0.34             | 0.00 | 0.00 |

| Haul Trucks           | Trips | Days | Trips/day | Trip Length | pounds/day |      |      |       |
|-----------------------|-------|------|-----------|-------------|------------|------|------|-------|
|                       |       |      |           |             | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 29    | 140  | 0         | 50          | 0.00       | 0.11 | 0.00 | 0.00  |

| Start-Up Emission                     |              |        |         |          |          |      |      |       |       |      |      |
|---------------------------------------|--------------|--------|---------|----------|----------|------|------|-------|-------|------|------|
| Start-Up Emission Factors (gram/trip) | Vehicle Type | ROG ST | ROG HOT | ROG Loss | ROG Tot. | NOx  | PM10 | PM2.5 | CO2   | CH4  | N2O  |
| worker                                | LDT1         | 0.41   | 0.23    | 0.81     | 1.46     | 0.29 | 0.00 | 0.00  | 66.39 | 0.08 | 0.03 |
| Haul                                  | T7 sc        | 0.00   | 0.00    | 0.00     | 0.00     | 3.99 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 |

| Workers               | Trips/day | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 194       | 140  | 0.04      | 0.01 | 0.00 | 0.00  | 1.80             | 0.00 | 0.00 |
| Paving                | 15        | 20   | 0.00      | 0.00 | 0.00 | 0.00  | 0.02             | 0.00 | 0.00 |
| Architectural Coating | 39        | 20   | 0.00      | 0.00 | 0.00 | 0.00  | 0.05             | 0.00 | 0.00 |

| Workers               | Trips/day | pounds/day |      |      |       |
|-----------------------|-----------|------------|------|------|-------|
|                       |           | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 194       | 0.62       | 0.12 | 0.00 | 0.00  |
| Paving                | 15        | 0.05       | 0.01 | 0.00 | 0.00  |
| Architectural Coating | 39        | 0.13       | 0.02 | 0.00 | 0.00  |

| Haul Trucks           | Trips/day | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 29        | 140  | 0.00      | 0.02 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |

| Haul Trucks           | Trips | Days | Trips/day | pounds/day |      |      |       |
|-----------------------|-------|------|-----------|------------|------|------|-------|
|                       |       |      |           | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 29    | 140  | 0         | 0.00       | 0.00 | 0.00 | 0.00  |

| Idling Emissions                        |              |          |          |        |          |       |      |       |          |      |      |
|---|--------------|----------|----------|--------|----------|-------|------|-------|----------|------|------|
| Idling Emission Factors (g/vehicle/day) | Vehicle Type | ROG Idle | ROG Rest | ROG DI | ROG Tot. | Nox   | PM10 | PM2.5 | CO2      | CH4  | N2O  |
| worker                                  | LDT1         | 0.00     | 0.45     | 0.71   | 1.16     | 0.00  | 0.00 | 0.00  | 0.00     | 0.00 | 0.00 |
| Haul                                    | T7 sc        | 1.58     | 0.00     | 0.00   | 1.58     | 21.41 | 0.01 | 0.01  | 4,085.25 | 0.07 | 0.64 |

| Workers               | Trips/day | Veh./day | Days | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-----------|----------|------|-----------|------|------|-------|------------------|------|------|
|                       |           |          |      | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 194       | 97       | 140  | 0.02      | 0.00 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |
| Paving                | 15        | 7.5      | 20   | 0.00      | 0.00 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |
| Architectural Coating | 39        | 19.5     | 20   | 0.00      | 0.00 | 0.00 | 0.00  | 0.00             | 0.00 | 0.00 |

| Workers               | Trips/day | Veh./day | pounds/day |      |      |       |
|-----------------------|-----------|----------|------------|------|------|-------|
|                       |           |          | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 194       | 97       | 0.25       | 0.00 | 0.00 | 0.00  |
| Paving                | 15        | 7.5      | 0.02       | 0.00 | 0.00 | 0.00  |
| Architectural Coating | 39        | 19.5     | 0.05       | 0.00 | 0.00 | 0.00  |

| Haul Trucks           | Trips | Vehicles | tons/year |      |      |       | metric tons/year |      |      |
|-----------------------|-------|----------|-----------|------|------|-------|------------------|------|------|
|                       |       |          | ROG       | NOx  | PM10 | PM2.5 | CO2              | CH4  | N2O  |
| Building Construction | 29    | 29       | 0.00      | 0.00 | 0.00 | 0.00  | 0.12             | 0.00 | 0.00 |

| Haul Trucks           | Trips | Vehicles | Days | Veh./day | pounds/day |      |      |       |
|-----------------------|-------|----------|------|----------|------------|------|------|-------|
|                       |       |          |      |          | ROG        | NOx  | PM10 | PM2.5 |
| Building Construction | 29    | 29       | 140  | 0.21     | 0.00       | 0.01 | 0.00 | 0.00  |

### Greenhouse Gas Construction Emissions

| Phase                          | Source    | CO2e  |
|--------------------------------|-----------|-------|
| <b>2020 (metric tons/year)</b> |           |       |
| Site Preparation               | Equipment | 16.9  |
|                                | Vehicles  | 0.6   |
| Grading                        | Equipment | 41.2  |
|                                | Vehicles  | 105.7 |
| Total (metric tons/year)       |           | 164.3 |
| <b>2021 (metric tons/year)</b> |           |       |
| Building Construction          | Equipment | 186.4 |
|                                | Vehicles  | 190.0 |
| Total (metric tons/year)       |           | 376.5 |

|                                   |           |              |
|-----------------------------------|-----------|--------------|
| <b>2022 (metric tons/year)</b>    |           |              |
| Building Construction             | Equipment | 163.2        |
|                                   | Vehicles  | 87.7         |
| Paving                            | Equipment | 20.2         |
|                                   | Vehicles  | 1.0          |
| Architectural Coating             | Equipment | 2.6          |
|                                   | Vehicles  | 2.5          |
| Total (metric tons/year)          |           | 277.1        |
| <b>Grand Total (metric tons)</b>  |           | <b>817.9</b> |
| <b>Amortized Total (40 years)</b> |           | <b>20.4</b>  |

### Greenhouse Gas Operational Emissions 2022

| Source                   | CO2e   |
|--------------------------|--------|
| Area                     | 4.6    |
| Energy                   | 481.5  |
| Mobile                   | 1367.9 |
| Waste                    | 79.6   |
| Water                    | 45.1   |
| Total (metric tons/year) | 1978.6 |

### Greenhouse Gas Construction+ Operational Emissions

| Source                           | CO2e   |
|----------------------------------|--------|
| Amortized Construction Emissions | 20.4   |
| Total Operational Emissions      | 1978.6 |
| Total (metric tons/year)         | 1999.1 |

| Source   | CO <sub>2</sub> e<br>(MT/year) |
|--|--------------------------------|
| Operational Emissions  | 1978.6                         |
| Amortized Construction Emissions                             | 20.4                           |
| <b>Total Annual GHG Emissions (Operation + Construction)</b> | <b>1999.1</b>                  |
| Project Efficiency Metric (MT/Service Population)            | 2.7                            |
| Efficiency Significance Threshold                            | 1.6                            |
| <b>Exceeds Efficiency Threshold?</b>                         | <b>Yes</b>                     |

| Service Population |            |
|--------------------|------------|
| Residents          | 742        |
| Employees          | 7          |
| <b>Total</b>       | <b>749</b> |

HRA Klotz Ranch Apartments Construction

| Sensitive Receptors            | Distance |     | AERSCREEN OUT<br>[ug/m³]/[ g/s] |        |
|--------------------------------|----------|-----|---------------------------------|--------|
|                                | (ft)     | (m) | max                             | annual |
| Residence to West (MEIR)       | 656      | 200 | 225.9                           | 22.6   |
| Day Care Receptor <sup>1</sup> | 1250     | 381 | 80.1                            | 8.0    |

<sup>1</sup>Her Daycare WeeCare center located approx. 1,250 feet (381 meters) east of the project site.

|              | DPM Exhaust<br>(tons) <sup>2</sup> | DPM Exhaust<br>(tons) <sup>2</sup> | Start Date <sup>3</sup> | End Date <sup>3</sup> | Duration |
|--------------|------------------------------------|------------------------------------|-------------------------|-----------------------|----------|
|              | Unmitigated                        | Mitigated                          |                         |                       | Days     |
| Construction | 0.1671                             | 0.0076                             | 10/26/2020              | 9/23/2022             | 698      |

<sup>2</sup>CalEEMod PM<sub>10</sub> exhaust, construction years 2020, 2021, and 2022

<sup>3</sup>See construction schedule screenshot from CalEEMod

|              | DPM Exhaust<br>(g/s) | DPM Exhaust<br>(g/s) |
|--------------|----------------------|----------------------|
|              | Unmitigated          | Mitigated            |
| Construction | 0.0025               | 0.0001               |

**Cancer Risk = Dose inhalation × Inhalation CPF × ASF × ED/AT × FAH** **(Equation 8.2.4 A)**

Where:

- Cancer Risk = residential inhalation cancer risk
- Dose inhalation (mg/kg-day) = C<sub>AIR</sub> × DBR × A × EF × 10<sup>-6</sup>** **(Equation 5.4.1.1)**
- Inhalation CPF = inhalation cancer potency factor ([mg/kg/day]<sup>-1</sup>)
- ASF = age sensitivity factor for a specified age group (unitless)
- ED = exposure duration for a specified age group (years)
- AT = averaging time period over which exposure is averaged in days (years)
- FAH = fraction of time at home (unitless)

Where:

- C<sub>AIR</sub> = concentration of compound in air in micrograms per cubic meter (µg/m<sup>3</sup>)
- DBR = daily breathing rate in liter per kilogram of body weight per day (L/kg-body weight/day)
- A = inhalation absorption factor (1 for DPM, unitless)
- EF = exposure frequency in days per year (unitless, days/365 days)
- 10<sup>-6</sup> = micrograms to milligrams conversion, liters to cubic meters conversion

**Hazard Quotient = C<sub>air</sub> / REL** **(Section 8.3.1)**

Where:

- Hazard Quotient = chronic non-cancer hazard
- C<sub>AIR</sub> = concentration of compound in air in micrograms per cubic meter (µg/m<sup>3</sup>)
- REL = Chronic non-cancer Reference Exposure Level for substance (µg/m<sup>3</sup>)

| Dose Inhalation Inputs  |                   |                    | Unmitigated                 | Mitigated |                   |                 |                   |
|-------------------------|-------------------|--------------------|-----------------------------|-----------|-------------------|-----------------|-------------------|
| Receptor Type           | Exposure Scenario | Receptor Group Age | C <sub>AIR</sub><br>(µg/m³) |           | DBR<br>(L/kg-day) | A<br>(unitless) | EF<br>(days/year) |
| Off-Site Child Resident | Construction      | 3rd Trimester      | 5.68E-02                    | 2.58E-03  | 361               | 1               | 0.96              |
|                         |                   | Age 0<2            | 5.68E-02                    | 2.58E-03  | 1090              | 1               | 0.96              |
| Daycare Center          | Construction      | Age 0<2            | 2.01E-02                    | 9.16E-04  | 1200              | 1               | 0.68              |

Daily breathing rate is based on the OEHHHA 95th percentile (Table 5.7).

| Dose Inhalation Outputs |                   |                    | Unmitigated                    | Mitigated |
|-------------------------|-------------------|--------------------|--------------------------------|-----------|
| Receptor Type           | Exposure Scenario | Receptor Group Age | Dose inhalation<br>(mg/kg-day) |           |
| Off-Site Child Resident | Construction      | 3rd Trimester      | 1.97E-05                       | 8.94E-07  |
|                         |                   | Age 0<2            | 5.94E-05                       | 2.70E-06  |
| Daycare Center          | Construction      | Age 0<2            | 1.66E-05                       | 7.53E-07  |

| Risk Inputs             |                   |                    |                                   |                   | Unmitigated   | Mitigated     |                   |                   |                   |
|-------------------------|-------------------|--------------------|-----------------------------------|-------------------|---------------|---------------|-------------------|-------------------|-------------------|
| Receptor Type           | Exposure Scenario | Receptor Group Age | CPF<br>(mg/kg-day <sup>-1</sup> ) | ASF<br>(unitless) | ED<br>(years) | AT<br>(years) | FAH<br>(unitless) | FAH<br>(unitless) | MAF<br>(unitless) |
| Off-Site Child Resident | Construction      | 3rd Trimester      | 1.1                               | 10                | 0.25          | 70.00         | 1                 | 0.85              | 1                 |
|                         |                   | Age 0<2            | 1.1                               | 10                | 1.66          | 70.00         | 1                 | 0.85              | 1                 |
| Daycare Center          | Construction      | Age 0<2            | 1.1                               | 10                | 1.91          | 70.00         | 0.33              | 0.33              | 4.2               |

Inhalation cancer potency factor from Table 7.1

Fraction of time at home is set to 1 for residential since the nearest school unmitigated cancer risk is >1 per million, per OEHHHA Table 8.4.

| Risk Outputs                               |                   |                    | Unmitigated | Mitigated | Unmitigated  | Mitigated |
|--|-------------------|--------------------|-------------|-----------|--------------|-----------|
| Receptor Type                              | Exposure Scenario | Receptor Group Age | Cancer Risk |           | Hazard Index |           |
| Off-Site Child Resident                    | Construction      | 3rd Trimester      | 7.72E-07    | 2.99E-08  | 0.01         | 0.001     |
|  |                   | Age 0<2            | 1.55E-05    | 6.00E-07  |              |           |
| Daycare Center                             | Construction      | Age 0<2            | 6.89E-06    | 3.14E-07  | 0.0040       | 0.0002    |
| Total Cancer Risk (per million) , Resident |                   |                    | 16.29       | 0.63      |              |           |
| Total Cancer Risk (per million) , Daycare  |                   |                    | 6.89        | 0.31      |              |           |

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February.

CONSTRUCTION SCHEDULE

Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District,

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|
| 1            | Site Preparation      | Site Preparation      | 10/26/2020 | 11/6/2020  | 5             | 10       |
| 2            | Grading               | Grading               | 11/7/2020  | 11/27/2020 | 5             | 15       |
| 3            | Building Construction | Building Construction | 5/24/2021  | 7/15/2022  | 5             | 300      |
| 4            | Paving                | Paving                | 7/25/2022  | 8/19/2022  | 5             | 20       |
| 5            | Architectural Coating | Architectural Coating | 8/29/2022  | 9/23/2022  | 5             | 20       |

HRA Klotz Ranch Apartments Construction Haul and Vendor Trucks

MEIR

| Distance from Area Source to Residence to N of Pocket Rd <sup>1</sup> | Distance |     | AERSCREEN OUT<br>[ug/m <sup>3</sup> ]/[ g/s] |        |
|---|----------|-----|--|--------|
|   | (ft)     | (m) | max  | annual |
| Area source 1   | 131      | 40  | 2740.4                                       | 274.0  |
| Area source 2   | 148      | 45  | 2256.7                                       | 225.7  |
| Area source 3   | 197      | 60  | 1404.4                                       | 140.4  |
| Area source 4   | 259      | 79  | 892.3  | 89.2   |
| Area source 5   | 328      | 100 | 612.9  | 61.3   |
| Total Contribution to Residence                                       |          |     | 7906.8                                       | 790.7  |

|              | DPM Exhaust<br>(tons) <sup>1</sup> | Grading and Bldg<br>Construction Start<br>Date <sup>2</sup> | Grading and Bldg<br>Construction End<br>Date <sup>2</sup> | Duration |
|--------------|------------------------------------|---|---|----------|
|              | Unmitigated                        |   |   | Days     |
| Construction | 1.85E-05                           | 11/7/2020   | 7/15/2022   | 616      |

<sup>1</sup>CalEEMod PM<sub>10</sub> exhaust, grading and building construction haul trip length of 20 and 6.5 miles, respectively.

CalEEMod emissions were scaled to 25 meters to represent emissions per area source length. CalEEMod emissions from grading and building construction are presented in screenshots in this tab.

<sup>2</sup>See construction schedule screenshot from CalEEMod

|              | DPM Exhaust<br>(g/s) |
|--------------|----------------------|
|              | Unmitigated          |
| Construction | 3.16E-07             |

**Cancer Risk = Dose inhalation × Inhalation CPF × ASF × ED/AT × FAH**

Where:

Cancer Risk = residential inhalation cancer risk

**Dose inhalation (mg/kg-day) = C<sub>AIR</sub> × DBR × A × EF × 10<sup>-6</sup>**

Inhalation CPF = inhalation cancer potency factor ([mg/kg/day]<sup>-1</sup>)

ASF = age sensitivity factor for a specified age group (unitless)

ED = exposure duration for a specified age group (years)

AT = averaging time period over which exposure is averaged in days (years)

FAH = fraction of time at home (unitless)

(Equation 8.2.4 A)

(Equation 5.4.1.1)

Where:

C<sub>AIR</sub> = concentration of compound in air in micrograms per cubic meter (µg/m<sup>3</sup>)  
DBR = daily breathing rate in liter per kilogram of body weight per day (L/kg-body weight/day)  
A = inhalation absorption factor (1 for DPM, unitless)  
EF = exposure frequency in days per year (unitless, days/365 days)  
10<sup>-6</sup> = micrograms to milligrams conversion, liters to cubic meters conversior

**Hazard Quotient = C<sub>air</sub> / REL**

Where:

Hazard Quotient = chronic non-cancer hazard

C<sub>AIR</sub> = concentration of compound in air in micrograms per cubic meter (µg/m<sup>3</sup>)

REL = Chronic non-cancer Reference Exposure Level for substance (µg/n<sup>3</sup>)

(Section 8.3.1)

Dose Inhalation Inputs

| Receptor Type           | Exposure Scenario | Receptor Group Age | Unmitigated                              | DBR<br>(L/kg-day) | A<br>(unitless) | EF (days/year) |
|-------------------------|-------------------|--------------------|--|-------------------|-----------------|----------------|
|                         |                   |                    | C <sub>AIR</sub><br>(µg/m <sup>3</sup> ) |                   |                 |                |
| Off-Site Child Resident | Construction      | 3rd Trimester      | 2.50E-04                                 | 361               | 1               | 0.96           |
|                         |                   | Age 0<2            | 2.50E-04                                 | 1090              | 1               | 0.96           |

Daily breathing rate is based on the OEHHA 95th percentile (Table 5.7).

Dose Inhalation Outputs

| Receptor Type           | Exposure Scenario | Receptor Group Age | Unmitigated                    |
|-------------------------|-------------------|--------------------|--------------------------------|
|                         |                   |                    | Dose inhalation<br>(mg/kg-day) |
| Off-Site Child Resident | Construction      | 3rd Trimester      | 8.64E-08                       |
|                         |                   | Age 0<2            | 2.61E-07                       |

Risk Inputs

| Receptor Type           | Exposure Scenario | Receptor Group Age | CPF<br>(mg/kg-day <sup>-1</sup> ) | ASF<br>(unitless) | ED<br>(years) | AT<br>(years) | FAH<br>(unitless) | MAF<br>(unitless) |
|-------------------------|-------------------|--------------------|-----------------------------------|-------------------|---------------|---------------|-------------------|-------------------|
| Off-Site Child Resident | Construction      | 3rd Trimester      | 1.1                               | 10                | 0.25          | 70.00         | 0.85              | 1                 |
|                         |                   | Age 0<2            | 1.1                               | 10                | 1.44          | 70.00         | 0.85              | 1                 |

Inhalation cancer potency factor from Table 7.1

Fraction of time at home is set to 1 for residential since the nearest school unmitigated cancer risk is >1 per million, per OEHHA Table 8.4.

Risk Outputs

| Risk Outputs            |                   |                                 | Unmitigated | Unmitigated |
|-------------------------|-------------------|---------------------------------|-------------|-------------|
| Receptor Type           | Exposure Scenario | Receptor Group Age              | Cancer Risk | Hazard Risk |
| Off-Site Child Resident | Construction      | 3rd Trimester                   | 2.89E-09    | 5.0E-05     |
|                         |                   | Age 0<2                         | 5.02E-08    |             |
|                         |                   | Total Cancer Risk (per million) |             |             |

SOURCE: Office of Environmental Health Hazard Assessment, 2015.*Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February.

Construction Phases from CalEEMod

| Klotz Ranch Apartments - Sacramento Metropolitan AQMD Air District, / |                       |                       |            |            |               |          |
|---|-----------------------|-----------------------|------------|------------|---------------|----------|
| Phase Number  | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days |
| 1   | Site Preparation      | Site Preparation      | 10/26/2020 | 11/6/2020  | 5             | 10       |
| 2   | Grading               | Grading               | 11/7/2020  | 11/27/2020 | 5             | 15       |
| 3   | Building Construction | Building Construction | 5/24/2021  | 7/15/2022  | 5             | 300      |
| 4   | Paving                | Paving                | 7/25/2022  | 8/19/2022  | 5             | 20       |
| 5   | Architectural Coating | Architectural Coating | 8/29/2022  | 9/23/2022  | 5             | 20       |

3.3 Grading - 2020

Unmitigated Construction Off-Site

|          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total |
|----------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|
| Category | tons/yr     |             |             |             |               |              |             |                |               |             |
| Hauling  | 9.6600e-003 | 0.3610      | 0.0816      | 9.9000e-004 | 0.0212        | 1.2900e-003  | 0.0225      | 5.8200e-003    | 1.2400e-003   | 7.0600e-003 |
| Vendor   | 0.0000      | 0.0000      | 0.0000      | 0.0000      | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      |
| Worker   | 5.6000e-004 | 3.8000e-004 | 4.1500e-003 | 1.0000e-005 | 1.1000e-003   | 1.0000e-005  | 1.1100e-003 | 2.9000e-004    | 1.0000e-005   | 3.0000e-004 |
| Total    | 0.0102      | 0.3614      | 0.0857      | 1.0000e-003 | 0.0223        | 1.3000e-003  | 0.0236      | 6.1100e-003    | 1.2500e-003   | 7.3600e-003 |

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total |
|----------|-------------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|
| Category | tons/yr     |        |        |             |               |              |            |                |               |             |
| Hauling  | 0.0000      | 0.0000 | 0.0000 | 0.0000      | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |
| Vendor   | 7.3000e-003 | 0.2373 | 0.0634 | 5.7000e-004 | 0.0136        | 6.6000e-004  | 0.0142     | 3.9200e-003    | 6.3000e-004   | 4.5500e-003 |
| Worker   | 0.0537      | 0.0351 | 0.3928 | 1.0800e-003 | 0.1140        | 8.0000e-004  | 0.1148     | 0.0303         | 7.3000e-004   | 0.0311      |
| Total    | 0.0610      | 0.2725 | 0.4562 | 1.6500e-003 | 0.1275        | 1.4600e-003  | 0.1290     | 0.0342         | 1.3600e-003   | 0.0356      |

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

|          | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total |
|----------|-------------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|
| Category | tons/yr     |        |        |             |               |              |            |                |               |             |
| Hauling  | 0.0000      | 0.0000 | 0.0000 | 0.0000      | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |
| Vendor   | 5.9300e-003 | 0.1972 | 0.0512 | 4.9000e-004 | 0.0119        | 5.0000e-004  | 0.0124     | 3.4300e-003    | 4.8000e-004   | 3.9100e-003 |
| Worker   | 0.0440      | 0.0276 | 0.3158 | 9.1000e-004 | 0.0997        | 6.8000e-004  | 0.1004     | 0.0265         | 6.3000e-004   | 0.0272      |
| Total    | 0.0499      | 0.2248 | 0.3670 | 1.4000e-003 | 0.1116        | 1.1800e-003  | 0.1128     | 0.0300         | 1.1100e-003   | 0.0311      |





## TITLE: HAUL TRUCK AREA SOURCE

## \*\*\*\*\* AREA PARAMETERS \*\*\*\*\*

|                             |                    |                      |
|-----------------------------|--------------------|----------------------|
| SOURCE EMISSION RATE:       | 1.0000 g/s         | 7.937 lb/hr          |
| AREA EMISSION RATE:         | 0.444E-02 g/(s-m2) | 0.353E-01 lb/(hr-m2) |
| AREA HEIGHT:                | 2.55 meters        | 8.37 feet            |
| AREA SOURCE LONG SIDE:      | 25.00 meters       | 82.02 feet           |
| AREA SOURCE SHORT SIDE:     | 9.00 meters        | 29.53 feet           |
| INITIAL VERTICAL DIMENSION: | 2.37 meters        | 7.78 feet            |
| RURAL OR URBAN:             | URBAN              |                      |
| POPULATION:                 | 501901             |                      |
| FLAGPOLE RECEPTOR HEIGHT:   | 1.50 meters        | 4.92 feet            |
| INITIAL PROBE DISTANCE =    | 5000. meters       | 16404. feet          |

## \*\*\*\*\* BUILDING DOWNWASH PARAMETERS \*\*\*\*\*

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

## \*\*\*\*\* FLOW SECTOR ANALYSIS \*\*\*\*\*

25 meter receptor spacing: 1. meters - 5000. meters

## MAXIMUM IMPACT RECEPTOR

| Zo<br>SECTOR | SURFACE<br>ROUGHNESS | 1-HR CONC<br>(ug/m3) | RADIAL<br>(deg) | DIST<br>(m) | TEMPORAL<br>PERIOD |
|--------------|----------------------|----------------------|-----------------|-------------|--------------------|
| 1*           | 1.000                | 0.1949E+05           | 0               | 1.0         | AUT                |

\* = worst case diagonal

\*\*\*\*\* MAKEMET METEOROLOGY PARAMETERS \*\*\*\*\*

MIN/MAX TEMPERATURE: 271.0 / 318.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Average Moisture

DOMINANT SEASON: Autumn

ALBEDO: 0.18

BOWEN RATIO: 2.00

ROUGHNESS LENGTH: 1.000 (meters)

SURFACE FRICTION VELOCITY (U\*) ADJUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

-- -- -- -- --  
10 01 02 2 12

| H0   | U*    | W*    | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0    | BOWEN | ALBEDO | REF WS |
|------|-------|-------|-------|-------|-------|---------|-------|-------|--------|--------|
| 1.88 | 0.104 | 0.300 | 0.020 | 479.  | 77.   | -50.4   | 1.000 | 2.00  | 0.18   | 0.50   |

| HT   | REF TA | HT  |
|------|--------|-----|
| 10.0 | 271.0  | 2.0 |

\*\*\*\*\* AERSCREEN AUTOMATED DISTANCES \*\*\*\*\*  
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

| DIST<br>(m) | MAXIMUM<br>1-HR CONC<br>(ug/m3) | DIST<br>(m) | MAXIMUM<br>1-HR CONC<br>(ug/m3) |
|-------------|---------------------------------|-------------|---------------------------------|
|-------------|---------------------------------|-------------|---------------------------------|



|         |            |         |       |
|---------|------------|---------|-------|
| -----   |            | -----   |       |
| 1.00    | 0.1949E+05 | 2525.00 | 6.880 |
| 25.00   | 6364.      | 2550.00 | 6.788 |
| 50.00   | 1718.      | 2575.00 | 6.698 |
| 75.00   | 933.7      | 2600.00 | 6.610 |
| 100.00  | 612.9      | 2625.00 | 6.524 |
| 125.00  | 444.4      | 2650.00 | 6.440 |
| 150.00  | 342.6      | 2675.00 | 6.357 |
| 175.00  | 275.4      | 2700.00 | 6.277 |
| 200.00  | 228.1      | 2725.00 | 6.198 |
| 225.00  | 193.4      | 2750.00 | 6.121 |
| 250.00  | 166.9      | 2775.00 | 6.046 |
| 275.00  | 146.1      | 2800.00 | 5.972 |
| 300.00  | 129.4      | 2825.00 | 5.900 |
| 325.00  | 115.8      | 2850.00 | 5.829 |
| 350.00  | 104.5      | 2875.00 | 5.759 |
| 375.00  | 94.92      | 2900.00 | 5.692 |
| 400.00  | 86.79      | 2925.00 | 5.625 |
| 425.00  | 79.80      | 2950.00 | 5.560 |
| 450.00  | 73.72      | 2975.00 | 5.496 |
| 475.00  | 68.41      | 3000.00 | 5.433 |
| 500.00  | 63.73      | 3025.00 | 5.372 |
| 525.00  | 59.57      | 3050.00 | 5.312 |
| 550.00  | 55.86      | 3074.99 | 5.253 |
| 575.00  | 52.53      | 3100.00 | 5.195 |
| 600.00  | 49.54      | 3125.00 | 5.138 |
| 625.00  | 46.82      | 3150.00 | 5.082 |
| 649.99  | 44.36      | 3174.99 | 5.028 |
| 675.00  | 42.11      | 3199.99 | 4.974 |
| 699.99  | 40.05      | 3225.00 | 4.921 |
| 725.00  | 38.16      | 3250.00 | 4.869 |
| 749.99  | 36.42      | 3275.00 | 4.819 |
| 775.00  | 34.82      | 3300.00 | 4.769 |
| 800.00  | 33.33      | 3325.00 | 4.720 |
| 825.00  | 31.94      | 3350.00 | 4.672 |
| 850.00  | 30.66      | 3375.00 | 4.624 |
| 875.00  | 29.46      | 3400.00 | 4.578 |
| 900.00  | 28.34      | 3425.00 | 4.532 |
| 925.00  | 27.29      | 3450.00 | 4.487 |
| 950.00  | 26.31      | 3475.00 | 4.443 |
| 975.00  | 25.39      | 3500.00 | 4.400 |
| 1000.00 | 24.52      | 3525.00 | 4.357 |
| 1025.00 | 23.70      | 3550.00 | 4.315 |
| 1050.00 | 22.93      | 3575.00 | 4.274 |
| 1075.00 | 22.20      | 3600.00 | 4.233 |
| 1100.00 | 21.51      | 3625.00 | 4.193 |
| 1125.00 | 20.85      | 3650.00 | 4.154 |
| 1150.00 | 20.23      | 3675.00 | 4.115 |
| 1175.00 | 19.64      | 3700.00 | 4.077 |
| 1200.00 | 19.08      | 3725.00 | 4.040 |

|         |       |         |       |
|---------|-------|---------|-------|
| 1225.00 | 18.55 | 3750.00 | 4.003 |
| 1250.00 | 18.04 | 3775.00 | 3.967 |
| 1275.00 | 17.56 | 3800.00 | 3.931 |
| 1300.00 | 17.10 | 3825.00 | 3.896 |
| 1325.00 | 16.66 | 3850.00 | 3.862 |
| 1350.00 | 16.23 | 3875.00 | 3.828 |
| 1375.00 | 15.83 | 3900.00 | 3.794 |
| 1400.00 | 15.44 | 3925.00 | 3.761 |
| 1425.00 | 15.07 | 3950.00 | 3.728 |
| 1450.00 | 14.72 | 3975.00 | 3.696 |
| 1475.00 | 14.38 | 4000.00 | 3.665 |
| 1500.00 | 14.05 | 4025.00 | 3.634 |
| 1525.00 | 13.73 | 4050.00 | 3.603 |
| 1550.00 | 13.43 | 4075.00 | 3.573 |
| 1575.00 | 13.14 | 4100.00 | 3.543 |
| 1600.00 | 12.86 | 4125.00 | 3.514 |
| 1625.00 | 12.59 | 4150.00 | 3.485 |
| 1650.00 | 12.33 | 4175.00 | 3.456 |
| 1675.00 | 12.08 | 4200.00 | 3.428 |
| 1700.00 | 11.83 | 4225.00 | 3.400 |
| 1725.00 | 11.60 | 4250.00 | 3.373 |
| 1750.00 | 11.37 | 4275.00 | 3.346 |
| 1775.00 | 11.15 | 4300.00 | 3.319 |
| 1800.00 | 10.94 | 4325.00 | 3.293 |
| 1824.99 | 10.74 | 4350.00 | 3.267 |
| 1850.00 | 10.54 | 4375.00 | 3.242 |
| 1875.00 | 10.34 | 4400.00 | 3.217 |
| 1900.00 | 10.16 | 4425.00 | 3.192 |
| 1924.99 | 9.978 | 4449.99 | 3.167 |
| 1950.00 | 9.803 | 4475.00 | 3.143 |
| 1975.00 | 9.634 | 4500.00 | 3.119 |
| 2000.00 | 9.469 | 4525.00 | 3.096 |
| 2025.00 | 9.309 | 4550.00 | 3.072 |
| 2050.00 | 9.154 | 4575.00 | 3.049 |
| 2075.00 | 9.003 | 4600.00 | 3.032 |
| 2100.00 | 8.857 | 4625.00 | 3.020 |
| 2125.00 | 8.714 | 4650.00 | 3.009 |
| 2150.00 | 8.575 | 4675.00 | 2.997 |
| 2175.00 | 8.441 | 4700.00 | 2.986 |
| 2200.00 | 8.310 | 4725.00 | 2.975 |
| 2224.99 | 8.182 | 4750.00 | 2.964 |
| 2250.00 | 8.058 | 4775.00 | 2.953 |
| 2275.00 | 7.936 | 4800.00 | 2.942 |
| 2300.00 | 7.819 | 4825.00 | 2.931 |
| 2325.00 | 7.704 | 4850.00 | 2.921 |
| 2350.00 | 7.591 | 4875.00 | 2.910 |
| 2375.00 | 7.482 | 4900.00 | 2.900 |
| 2400.00 | 7.376 | 4925.00 | 2.889 |
| 2425.00 | 7.272 | 4950.00 | 2.879 |
| 2450.00 | 7.170 | 4975.00 | 2.869 |

|         |       |         |       |
|---------|-------|---------|-------|
| 2475.00 | 7.071 | 5000.00 | 2.859 |
| 2500.00 | 6.975 |         |       |

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 \*\*\*\*\* AERSCREEN MAXIMUM IMPACT SUMMARY \*\*\*\*\*  
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3-hour, 8-hour, and 24-hour scaled  
 concentrations are equal to the 1-hour concentration as referenced in  
 SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY  
 IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)  
 Report number EPA-454/R-92-019  
[http://www.epa.gov/scram001/guidance\\_permit.htm](http://www.epa.gov/scram001/guidance_permit.htm)  
 under Screening Guidance

| CALCULATION<br>PROCEDURE | MAXIMUM<br>1-HOUR<br>CONC<br>(ug/m3) | SCALED<br>3-HOUR<br>CONC<br>(ug/m3) | SCALED<br>8-HOUR<br>CONC<br>(ug/m3) | SCALED<br>24-HOUR<br>CONC<br>(ug/m3) | SCALED<br>ANNUAL<br>CONC<br>(ug/m3) |
|--------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| FLAT TERRAIN             | 0.2356E+05                           | 0.2356E+05                          | 0.2356E+05                          | 0.2356E+05                           | N/A                                 |

DISTANCE FROM SOURCE            13.00 meters

|                                   |            |            |            |            |     |
|-----------------------------------|------------|------------|------------|------------|-----|
| IMPACT AT THE<br>AMBIENT BOUNDARY | 0.1949E+05 | 0.1949E+05 | 0.1949E+05 | 0.1949E+05 | N/A |
|-----------------------------------|------------|------------|------------|------------|-----|

DISTANCE FROM SOURCE            1.00 meters

## Urban Heat Island Effect Analysis

At the request of Sacramento Metropolitan Air Quality Management District (SMAQMD), this discussion summarizes an analysis conducted of the project's features that would contribute to increases in the urban heat island effect.

**Introduction.** Impervious surfaces, such as those created with traditional urban paving materials proposed to be applied to the project site, have less surface moisture available for evapotranspiration than natural ground cover. This characteristic contributes to higher surface and air temperatures, known as the urban heat island effect. The urban heat island effect describes the higher day and night temperatures experienced in urban and suburban areas in comparison to their surrounding rural areas. This temperature gap results from solar heat trapped and absorbed by the built environment, including roads, pavements, buildings, and roofs, as well as waste heat released as a byproduct of human activity, such as combustion engines and air conditioners.<sup>1</sup> As a result, air temperatures in the project's parking lots, other paved areas, and rooftops may contribute to increased surface and above surface temperatures. Higher ambient temperatures increase formation of ozone, a respiratory system irritant, and during extreme heat and extended heat waves, these higher temperatures can lead to heat stress, heat stroke, and even heat mortality, especially for the elderly, the young, and those with pre-existing health conditions. The urban heat island effect also contributes to increased greenhouse gas (GHG) emissions to compensate for increased heat intensity by increasing use of electricity for air conditioning.<sup>2</sup> Indirect GHG emissions are generated by the fossil fuels consumed to support increased air conditioning demand. The feasibility for the project to implement measures such as a tree canopy, cool roofs, and cool pavements to reduce the urban heat island effect has been analyzed, and is summarized below.

**Tree Canopy.** There are multiple benefits shade trees can provide, including helping to cool cities by reducing temperatures.<sup>3</sup> Planting of trees is feasible for the project and is recommended by SMAQMD, because of the multiple health co-benefits. As shown in Project Description Figure 2-8, *Preliminary Landscape Plan*, hundreds of trees are proposed to be planted as part of the project. While new, immature recently planted trees would have a limited influence on the urban heat island effect, once mature they would help cool the project site.

**Cool Roofs.** A cool roof is one that has been designed to reflect more sunlight and absorb less heat than a standard roof. Cool roofs can be made of a highly reflective type of paint, a sheet covering, or highly reflective tiles or shingles. Standard or dark roofs can reach temperatures of 150 degrees Fahrenheit (°F) or more in the summer sun. A cool roof under the same conditions could be 50 °F cooler and save

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<sup>1</sup> Capital Region Climate Readiness Collaborative (CRCRC), 2020. Summary Report, Capital Region Urban Heat Island Mitigation Project.

<sup>2</sup> Sacramento Metropolitan Air Quality Management District, 2020. Letter RE: Notice of Preparation of an Environmental Impact Report for the Klotz Ranch Apartments Project (P19-070) (SAC201902268), April 15, 2020.

<sup>3</sup> U.S. Environmental Protection Agency. 2008. Reducing Urban Heat Islands: Compendium of Strategies. Draft. Available at: <https://www.epa.gov/heat-islands/heat-island-compendium>. Accessed May 1, 2020.

energy and money by requiring the use of less air conditioning.<sup>4</sup> Installation of cool roofs for the project are feasible and recommended for the apartment building roofs and for the covered carports.

It is noted that there are competing considerations for rooftops associated with the project, including the installation of rooftop solar photovoltaic (PV) panels, which is a GHG emissions reduction strategy associated with Mitigation Measure 4.6-1b. While rooftop solar PV panels can affect near-surface temperatures, they do not increase air temperature at the street level.<sup>5</sup>

**Cool Pavements.** Solar reflective "cool" pavements maintain lower temperatures in the sun than traditional pavements. Pavement reflectance can be enhanced by using reflective aggregate, a reflective or clear binder, or a reflective surface coating.<sup>6</sup> The project would include covered carports, which would reduce the potential for solar radiation to heat the proposed pavement areas and provide shade for parked vehicles. Solar shading can achieve multiple benefits, including reducing the urban heat island effect from parking lot pavements, protecting electric vehicle batteries from higher temperatures while reducing evaporation of volatile organic compounds from the fuel tanks of conventional vehicles. Additionally, carports can keep car interiors cool, saving vehicle energy by lowering air-conditioning needs.<sup>7</sup> Other paved areas of the project site, including the access roads and guest parking areas, would be exposed to solar radiation, and could potentially contribute to the urban heat island effect. It would be feasible, and is recommended, that a portion of the onsite access roads and/or guest parking areas be equipped with cool pavement.

**Conclusion.** The ability for the project to implement measures such as a tree canopy, cool roofs, and cool pavements to reduce the urban heat island effect has been analyzed, and has been determined to be feasible. Tree canopy enhancement, cool roof installation, and cool pavement and carport inclusion in project design are all demonstrated to reduce the impact of the urban heat island effect and would be utilized to the greatest extent possible and is included within both the project design and the mitigation approach for the project.

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<sup>4</sup> U.S. Department of Energy (USDOE), 2020. Cool Roofs. Webpage (<https://www.energy.gov/energysaver/design/energy-efficient-home-design/cool-roofs>) accessed May 1, 2020.

<sup>5</sup> Capital Region Climate Readiness Collaborative (CRCRC), 2020. Summary Report, Capital Region Urban Heat Island Mitigation Project.

<sup>6</sup> Lawrence Berkeley National Laboratory, Heat Island Group, 2020. Cool Pavements. Webpage (<https://heatisland.lbl.gov/coolscience/cool-pavements>) accessed May 1, 2020.

<sup>7</sup> Capital Region Climate Readiness Collaborative (CRCRC), 2020. Summary Report, Capital Region Urban Heat Island Mitigation Project.



# Appendix D

## **Noise Calculations**





### AM Peak Hour - Baseline and Baseline Plus Project

| Roadway Segment                     | Traffic Noise Level, dBA, Ldn <sup>1</sup> |                       |                      |  |
|-------------------------------------|--|-----------------------|----------------------|--|
|                                     | Baseline                                   | Baseline plus Project | Incremental Increase | Significant Increase at Sensitive Land Uses <sup>2</sup> |
| <b>Pocket Road</b>                  |  |                       |                      |  |
| East of Greenhaven Drive            | 68.8                                       | 68.8                  | 0.0                  | No   |
| East of I-5 Northbound Ramp         | 69.8                                       | 69.9                  | 0.1                  | No   |
| East of Klotz Circle/Alma Vista Way | 67.9                                       | 68.1                  | 0.1                  | No   |
| <b>Greenhaven Drive</b>             |  |                       |                      |  |
| North of Pocket Road                | 66.6                                       | 66.6                  | 0.0                  | No   |
| South of Pocket Road                | 56.0                                       | 56.0                  | 0.0                  | No   |
| <b>I-5 Northbound Onramp</b>        |  |                       |                      |  |
| North of Pocket Road                | 65.3                                       | 65.4                  | 0.1                  | No   |

### AM Peak Hour -Cumulative and Project Plus Baseline

| Roadway Segment                     | Traffic Noise Level, dBA, Ldn <sup>1</sup> |                         |                      |  |
|-------------------------------------|--|-------------------------|----------------------|--|
|                                     | Cumulative                                 | Cumulative plus Project | Incremental Increase | Significant Increase at Sensitive Land Uses <sup>2</sup> |
| <b>Pocket Road</b>                  |  |                         |                      |  |
| East of Greenhaven Drive            | 69.2                                       | 69.0                    | -0.2                 | No   |
| East of I-5 Northbound Ramp         | 70.5                                       | 69.9                    | -0.6                 | No   |
| East of Klotz Circle/Alma Vista Way | 69.1                                       | 68.2                    | -0.9                 | No   |
| <b>Greenhaven Drive</b>             |  |                         |                      |  |
| North of Pocket Road                | 67.1                                       | 67.0                    | -0.1                 | No   |
| South of Pocket Road                | 57.1                                       | 56.8                    | -0.4                 | No   |
| <b>I-5 Northbound Onramp</b>        |  |                         |                      |  |
| North of Pocket Road                | 65.9                                       | 65.4                    | -0.5                 | No   |

### PM Peak Hour - Baseline and Baseline Plus Project

| Roadway Segment                     | Traffic Noise Level, dBA, Ldn <sup>1</sup> |                       |                      |  |
|-------------------------------------|--|-----------------------|----------------------|--|
|                                     | Baseline                                   | Baseline plus Project | Incremental Increase | Significant Increase at Sensitive Land Uses <sup>2</sup> |
| <b>Pocket Road</b>                  |  |                       |                      |  |
| East of Greenhaven Drive            | 68.4                                       | 68.4                  | 0.0                  | No   |
| East of I-5 Northbound Ramp         | 69.5                                       | 69.6                  | 0.1                  | No   |
| East of Klotz Circle/Alma Vista Way | 68.7                                       | 68.8                  | 0.1                  | No   |
| <b>Greenhaven Drive</b>             |  |                       |                      |  |
| North of Pocket Road                | 66.6                                       | 66.6                  | 0.0                  | No   |
| South of Pocket Road                | 57.6                                       | 57.6                  | 0.0                  | No   |
| <b>I-5 Northbound Onramp</b>        |  |                       |                      |  |
| North of Pocket Road                | 62.8                                       | 63.0                  | 0.2                  | No   |

### PM Peak Hour -Cumulative and Project Plus Baseline

| Roadway Segment                     | Traffic Noise Level, dBA, Ldn <sup>1</sup> |                         |                      |  |
|-------------------------------------|--|-------------------------|----------------------|--|
|                                     | Cumulative                                 | Cumulative plus Project | Incremental Increase | Significant Increase at Sensitive Land Uses <sup>2</sup> |
| <b>Pocket Road</b>                  |  |                         |                      |  |
| East of Greenhaven Drive            | 68.9                                       | 68.8                    | -0.1                 | No   |
| East of I-5 Northbound Ramp         | 70.2                                       | 69.7                    | -0.5                 | No   |
| East of Klotz Circle/Alma Vista Way | 69.5                                       | 68.9                    | -0.6                 | No   |
| <b>Greenhaven Drive</b>             |  |                         |                      |  |
| North of Pocket Road                | 67.2                                       | 67.1                    | -0.1                 | No   |
| South of Pocket Road                | 58.3                                       | 58.1                    | -0.2                 | No   |
| <b>I-5 Northbound Onramp</b>        |  |                         |                      |  |
| North of Pocket Road                | 64.1                                       | 63.5                    | -0.7                 | No   |

# Roadway Noise Analysis

## Existing AM Peak Hour

| ROAD SEGMENT AM PEAK |                                     | TOTAL<br># VEHICLES | CALCULATED<br>NOISE LEVEL<br>(15 meters) | Receptor<br>Dist. from<br>Roadway | Adjusted<br>Noise<br>Level | Distance<br>from<br>Roadway to<br>65 dBA | Distance<br>from<br>Roadway to<br>65 dBA |
|----------------------|-------------------------------------|---------------------|--|-----------------------------------|----------------------------|--|--|
| Calveno<br>Peak      |                                     |                     |  |                                   |                            |  |  |
|                      | from:                               |                     | roadway center)                          | Center (m.)                       | (dBA)                      | (m.)                                     | (ft)                                     |
| Pocket Road          | east of Greenhaven Drive            | 2,507               | 71.8                                     | 30                                | 68.8                       | 72.3                                     | 237.2                                    |
| Greenhaven Drive     | north of Pocket Road                | 1,421               | 68.1                                     | 21                                | 66.6                       | 30.6                                     | 100.3                                    |
| Greenhaven Drive     | south of Pocket Road                | 241                 | 57.4                                     | 21                                | 56.0                       | 2.6                                      | 8.6                                      |
| Pocket Road          | East of I-5 north boound ramp       | 2,409               | 71.7                                     | 23                                | 69.8                       | 69.5                                     | 228.0                                    |
| I-5 northbound ramp  | north of Pocket Road                | 633                 | 70.9                                     | 55                                | 65.3                       | 58.5                                     | 192.0                                    |
| Pocket Road          | east of Klotz Circle/Alma Vista Way | 1,565               | 69.8                                     | 23                                | 67.9                       | 45.1                                     | 148.1                                    |

Assumptions: AM peak hour traffic data from National Data & Surveying Services

Speed limits obtained from: <https://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Transportation/060118-SpeedZoneMapCitywide.pdf?la=en>.

## Existing + Project AM Peak Hour

| ROAD SEGMENT AM PEAK |                                     | TOTAL<br># VEHICLES | CALCULATED<br>NOISE LEVEL<br>(15 meters from | Receptor<br>Dist. from<br>Roadway | Adjusted<br>Noise<br>Level | Distance<br>from<br>Roadway to<br>65 dBA | Distance<br>from<br>Roadway to<br>65 dBA |
|----------------------|-------------------------------------|---------------------|--|-----------------------------------|----------------------------|--|--|
| Calveno<br>Peak      |                                     |                     |  |                                   |                            |  |  |
|                      | from:                               |                     | roadway center)                              | Center (m.)                       | (dBA)                      | (m.)                                     | (ft)                                     |
| Pocket Road          | east of Greenhaven Drive            | 2,513               | 71.8   | 30                                | 68.8                       | 72.5                                     | 237.8                                    |
| Greenhaven Drive     | north of Pocket Road                | 1,424               | 68.1   | 21                                | 66.6                       | 30.6                                     | 100.5                                    |
| Greenhaven Drive     | south of Pocket Road                | 242                 | 57.5   | 21                                | 56.0                       | 2.6                                      | 8.7                                      |
| Pocket Road          | East of I-5 north boound ramp       | 2,449               | 71.7   | 23                                | 69.9                       | 70.6                                     | 231.8                                    |
| I-5 northbound ramp  | north of Pocket Road                | 653                 | 71.0   | 55                                | 65.4                       | 60.4                                     | 198.1                                    |
| Pocket Road          | east of Klotz Circle/Alma Vista Way | 1,616               | 69.9   | 23                                | 68.1                       | 46.6                                     | 152.9                                    |

Assumptions: AM peak hour traffic data from National Data & Surveying Services

## Cumulative AM Peak Hour

| ROAD SEGMENT AM PEAK |                                     | TOTAL<br># VEHICLES | CALCULATED<br>NOISE LEVEL<br>(15 meters from | Receptor<br>Dist. from<br>Roadway | Adjusted<br>Noise<br>Level | Distance<br>from<br>Roadway to<br>65 dBA | Distance<br>from<br>Roadway to<br>65 dBA |
|----------------------|-------------------------------------|---------------------|--|-----------------------------------|----------------------------|--|--|
| Calveno<br>Peak      |                                     |                     |  |                                   |                            |  |  |
|                      | from:                               |                     | roadway center)                              | Center (m.)                       | (dBA)                      | (m.)                                     | (ft)                                     |
| Pocket Road          | east of Greenhaven Drive            | 2,735               | 72.2   | 30                                | 69.2                       | 78.9                                     | 258.8                                    |
| Greenhaven Drive     | north of Pocket Road                | 1,592               | 68.6   | 21                                | 67.1                       | 34.2                                     | 112.4                                    |
| Greenhaven Drive     | south of Pocket Road                | 315                 | 58.6   | 21                                | 57.1                       | 3.4                                      | 11.3                                     |
| Pocket Road          | East of I-5 north boound ramp       | 2,839               | 72.4   | 23                                | 70.5                       | 81.9                                     | 268.7                                    |
| I-5 northbound ramp  | north of Pocket Road                | 727                 | 71.5   | 55                                | 65.9                       | 67.2                                     | 220.5                                    |
| Pocket Road          | east of Klotz Circle/Alma Vista Way | 2,049               | 71.0   | 23                                | 69.1                       | 59.1                                     | 193.9                                    |

Assumptions: AM peak hour traffic data from National Data & Surveying Services

## Cumulative + Project AM Peak Hour

| ROAD SEGMENT AM PEAK |                                     | TOTAL<br># VEHICLES | CALCULATED<br>NOISE LEVEL<br>(15 meters from | Receptor<br>Dist. from<br>Roadway | Adjusted<br>Noise<br>Level | Distance<br>from<br>Roadway to<br>65 dBA | Distance<br>from<br>Roadway to<br>65 dBA |
|----------------------|-------------------------------------|---------------------|--|-----------------------------------|----------------------------|--|--|
| Calveno<br>Peak      |                                     |                     |  |                                   |                            |  |  |
|                      | from:                               |                     | roadway center)                              | Center (m.)                       | (dBA)                      | (m.)                                     | (ft)                                     |
| Pocket Road          | east of Greenhaven Drive            | 2,635               | 72.0   | 30                                | 69.0                       | 76.0                                     | 249.4                                    |
| Greenhaven Drive     | north of Pocket Road                | 1,554               | 68.5   | 21                                | 67.0                       | 33.4                                     | 109.7                                    |
| Greenhaven Drive     | south of Pocket Road                | 290                 | 58.2   | 21                                | 56.8                       | 3.2                                      | 10.4                                     |
| Pocket Road          | East of I-5 north boound ramp       | 2,449               | 71.7   | 23                                | 69.9                       | 70.6                                     | 231.8                                    |
| I-5 northbound ramp  | north of Pocket Road                | 654                 | 71.1   | 55                                | 65.4                       | 60.5                                     | 198.4                                    |
| Pocket Road          | east of Klotz Circle/Alma Vista Way | 1,678               | 70.1   | 23                                | 68.2                       | 48.4                                     | 158.8                                    |

Assumptions: AM peak hour traffic data from National Data & Surveying Services

## Existing PM Peak Hour

| ROAD SEGMENT PM PEAK |  | TOTAL<br># VEHICLES | CALCULATED<br>NOISE LEVEL<br>(15 meters from | Receptor<br>Dist. from<br>Roadway | Adjusted<br>Noise<br>Level | Distance<br>from<br>Roadway to<br>65 dBA | Distance<br>from<br>Roadway to<br>65 dBA |
|----------------------|--|---------------------|--|-----------------------------------|----------------------------|--|--|
| Calveno<br>Peak      |  |                     |  |                                   |                            |  |  |

# Roadway Noise Analysis

|  | from:                               |       | roadway center) | Center (m.) | (dBA) | (m.) | (ft)  |
|--|-------------------------------------|-------|-----------------|-------------|-------|------|-------|
| Pocket Road  | east of Greenhaven Drive            | 2,288 | 71.4            | 30          | 68.4  | 66.0 | 216.5 |
| Greenhaven Drive   | north of Pocket Road                | 1,408 | 68.1            | 21          | 66.6  | 30.3 | 99.4  |
| Greenhaven Drive   | south of Pocket Road                | 351   | 59.1            | 21          | 57.6  | 3.8  | 12.6  |
| Pocket Road  | East of I-5 northbound ramp         | 2,233 | 71.3            | 23          | 69.5  | 64.4 | 211.3 |
| I-5 northbound ramp  | north of Pocket Road                | 359   | 68.4            | 55          | 62.8  | 33.2 | 108.9 |
| Pocket Road  | east of Klotz Circle/Alma Vista Way | 1,850 | 70.5            | 23          | 68.7  | 53.4 | 175.1 |
| Assumptions: AM peak hour traffic data from National Data & Surveying Services |                                     |       |                 |             |       |      |       |

## Existing + Project PM Peak Hour

|  |                                     | TOTAL<br># VEHICLES | CALCULATED<br>NOISE LEVEL<br>(15 meters from<br>roadway center) | Receptor<br>Dist. from<br>Roadway<br>Center (m.) | Adjusted<br>Noise<br>Level<br>(dBA) | Distance<br>from<br>Roadway to<br>65 dBA<br>(m.) | Distance<br>from<br>Roadway to<br>65 dBA<br>(ft) |
|--|-------------------------------------|---------------------|---|--|-------------------------------------|--|--|
| ROAD SEGMENT PM PEAK   |                                     |                     |   |  |                                     |  |  |
| Calveno Peak   |                                     |                     |   |  |                                     |  |  |
|  | from:                               |                     |   |  |                                     |  |  |
| Pocket Road  | east of Greenhaven Drive            | 2,294               | 71.4  | 30   | 68.4                                | 66.2   | 217.1  |
| Greenhaven Drive   | north of Pocket Road                | 1,411               | 68.1  | 21   | 66.6                                | 30.4   | 99.6   |
| Greenhaven Drive   | south of Pocket Road                | 352                 | 59.1  | 21   | 57.6                                | 3.8  | 12.6   |
| Pocket Road  | East of I-5 north bound ramp        | 2,282               | 71.4  | 23   | 69.6                                | 65.8   | 215.9  |
| I-5 northbound ramp  | north of Pocket Road                | 372                 | 68.6  | 55   | 63.0                                | 34.4   | 112.8  |
| Pocket Road  | east of Klotz Circle/Alma Vista Way | 1,911               | 70.7  | 23   | 68.8                                | 55.1   | 180.8  |
| Assumptions: AM peak hour traffic data from National Data & Surveying Services |                                     |                     |   |  |                                     |  |  |

## Cumulative PM Peak Hour

| Cumulative PM Peak Hour  |                                     |                  | CALCULATED NOISE LEVEL | Receptor           | Adjusted    | Distance               | Distance               |
|--|-------------------------------------|------------------|------------------------|--------------------|-------------|------------------------|------------------------|
| ROAD SEGMENT PM PEAK   |                                     | TOTAL # VEHICLES | (15 meters from        | Dist. from Roadway | Noise Level | from Roadway to 65 dBA | from Roadway to 65 dBA |
| Calveno Peak   |                                     |                  |                        |                    |             |                        |                        |
|  | from:                               |                  | roadway center)        | Center (m.)        | (dBA)       | (m.)                   | (ft)                   |
| Pocket Road  | east of Greenhaven Drive            | 2,570            | 71.9                   | 30                 | 68.9        | 74.1                   | 243.2                  |
| Greenhaven Drive   | north of Pocket Road                | 1,612            | 68.6                   | 21                 | 67.2        | 34.7                   | 113.8                  |
| Greenhaven Drive   | south of Pocket Road                | 411              | 59.8                   | 21                 | 58.3        | 4.5                    | 14.7                   |
| Pocket Road  | East of I-5 north boound ramp       | 2,634            | 72.0                   | 23                 | 70.2        | 76.0                   | 249.3                  |
| I-5 northbound ramp  | north of Pocket Road                | 489              | 69.8                   | 55                 | 64.1        | 45.2                   | 148.3                  |
| Pocket Road  | east of Klotz Circle/Alma Vista Way | 2,269            | 71.4                   | 23                 | 69.5        | 65.4                   | 214.7                  |
| Assumptions: AM peak hour traffic data from National Data & Surveying Services |                                     |                  |                        |                    |             |                        |                        |

## Cumulative + Project PM Peak Hour

|  |                                     | TOTAL      | NOISE LEVEL     | Dist. from  | Noise | from       | from       |
|--|-------------------------------------|------------|-----------------|-------------|-------|------------|------------|
| ROAD SEGMENT PM PEAK   |                                     | # VEHICLES | (15 meters from | Roadway     | Level | Roadway to | Roadway to |
| Calveno Peak   |                                     |            |                 |             |       | 65 dBA     | 65 dBA     |
|  | from:                               |            | roadway center) | Center (m.) | (dBA) | (m.)       | (ft)       |
| Pocket Road  | east of Greenhaven Drive            | 2,489      | 71.8            | 30          | 68.8  | 71.8       | 235.5      |
| Greenhaven Drive   | north of Pocket Road                | 1,581      | 68.6            | 21          | 67.1  | 34.0       | 111.6      |
| Greenhaven Drive   | south of Pocket Road                | 390        | 59.5            | 21          | 58.1  | 4.3        | 14.0       |
| Pocket Road  | East of I-5 north bound ramp        | 2,331      | 71.5            | 23          | 69.7  | 67.2       | 220.6      |
| I-5 northbound ramp  | north of Pocket Road                | 419        | 69.1            | 55          | 63.5  | 38.7       | 127.1      |
| Pocket Road  | east of Klotz Circle/Alma Vista Way | 1,975      | 70.8            | 23          | 68.9  | 57.0       | 186.9      |
| Assumptions: AM peak hour traffic data from National Data & Surveying Services |                                     |            |                 |             |       |            |            |