City of
SACRAMENTO
Community Development

300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Help Line: 916-264-5011
CityofSacramento.org/dsd

MITIGATED NEGATIVE DECLARATION

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

Medley Apartments Project (P18-070) The project site is located in North Natomas portion of the City of Sacramento, California. The ±6.4-acre project site is identified by APNs 225-2210-011 and -012, which is bound by East Commerce Way to the west, Sleep Train Arena main Entrance on the north, Sports Parkway on the east, and existing commercial development on the south. The proposed project includes the construction of a 160-unit, executive-style 1, 2 and 3 bedroom apartment complex with eight three-story buildings each containing 20 apartment units and a single one-story ±3,950 square foot office/clubhouse building. All building roofs would be painted light in color. The project would provide 35,250 square feet of open space, excluding balconies, which exceeds the required open space of 16,000 square feet (100 sf/unit, including balcony).

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

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

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

Environmental Services Manager, City of Sacramento, California, a municipal corporation

By: Scott Johnson

Date: April 25, 2019

DRAFT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

MEDLEY APARTMENTS PROJECT (P18-070)

SACRAMENTO, CALIFORNIA

April 2019

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DRAFT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

MEDLEY APARTMENTS PROJECT (P18-070)

SACRAMENTO, CALIFORNIA

Prepared for:

City of Sacramento
Community Development Department

Prepared by:

LSA
201 Creekside Ridge Court, Suite 250
Roseville, California 95678
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April 2019

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City of
SACRAMENTO

MEDLEY APARTMENTS (P18-070)

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

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

ORGANIZATION OF THE INITIAL STUDY

This Initial Study is organized into the following sections:

SECTION I - BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this Initial Study was completed.

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

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

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

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

SECTION VI - REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

SECTION I - BACKGROUND

Project Name: Medley Apartments (P18-070)

Project Location: 4170 and 4190 East Commerce Way, Sacramento, CA
APNs 225-2210-011 and 225-2210-012

Project Applicant: Blue Mountain Construction Services, Inc.

Project Planner: Garrett Norman, Associate Planner

Environmental Planner: Scott Johnson, Senior Planner

Date Initial Study Completed: April 2019

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 1500 et seq.). The Lead Agency is the City of Sacramento.
The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR and is consistent with the land use designation and the permissible densities and intensities of use for the project site as set forth in the 2035 General Plan. See CEQA Guidelines Section 15176 (b) and (d).

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

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177(d)). Policies included in the 2035 General Plan that reduce significant impacts identified in the Master EIR are identified and discussed. See also the Master EIR for the 2035 General Plan. The mitigation monitoring plan for the 2035 General Plan, which provides references to applicable General Plan policies that reduce the environmental effects of development that may occur consistent with the General Plan, is included in the adopting resolution for the Master EIR. See City Council Resolution No. 2015-0060, beginning on page 60.

This analysis incorporates by reference the general discussion portions of the 2035 General Plan Master EIR (CEQA Guidelines Section 15150(a)). The Master EIR and Resolution No. 2015-0060 are available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, and on the City's web site at:
http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Written comments should be sent at the earliest possible date, but no later than the 20-day review period ending May 24, 2019.

Please send written responses to:

Scott Johnson, Senior Planner
Community Development Department
City of Sacramento
300 Richards Blvd, 3rd Floor
Sacramento, CA 95811
Direct Line: (916) 808-5842
FAX (916) 808-1077
SRJohnson@cityofsacramento.org

SECTION II - PROJECT DESCRIPTION

INTRODUCTION

The proposed project consists of the construction of an apartment complex within the North Natomas community of the City of Sacramento. The apartment complex would be located on approximately 6.4 acres and would be designed in an executive-style to provide housing for nearby employment opportunities.

PROJECT LOCATION

The project site is located in the northern portion of the City of Sacramento. As shown in Attachment 1: Project Vicinity, the ±6.4 acre site is bounded by Sleep Train Arena (private roadway) parking lot and existing apartments to the north, Sports Parkway (private roadway) and Sleep Train Arena to the east, existing commercial buildings to the south, and East Commerce Way and future office development to the west and is set on two legal lots: APN's 225-2210-011 and 225-2210-012. Existing zoning is EC-40-PUD which allows multi-unit dwellings with a Conditional Use Permit. Zoning information of the project site and surrounding area are displayed in Attachment 2: Zoning Map.

PROJECT DESCRIPTION

The proposed project includes the construction of a 160-unit, executive-style 1, 2 and 3 bedroom apartment complex with eight three-story buildings each containing 20 apartment units and a single one-story ±3,950 square foot office/clubhouse building. All building roofs would be painted light in color. The project would provide 35,250 square feet of open space, excluding balconies, which exceeds the required open space of 16,000 square feet (100 sf/unit, including balcony). The proposed project design is shown in Attachment 3: Site Plan.

Apartment Units

The proposed apartment complex would include a total of 160 units with a density of 25.0 dwelling units per acre. The complex would include 56 1-bedroom units (35%), 80 2-bedroom units (50%), and 24 3-bedroom units (15%). The apartment units proposed as part of the project are listed in detail in Table A below.

Table A: Unit Mix Per Building

	A1	A2	A2 Alt	B1	B1 Alt	B1 Alt 2	B1 Alt 3	C1	C1 Alt	# per Building	Total 8 Buildings
Ground Floor	0	1	0	0	0	1	1	1	0	4	32
Second Flood	2	0	1	1	3	0	0	0	1	8	64
Third Floor	2	0	1	1	3	0	0	0	1	8	64
										20	160
Bedroom	1	1	1	2	2	2	2	3	3	17	136
Bath	1	1	1	2	2	2	2	2	3	16	128
Sq. Ft.	735	755	765	1,050	1,090	1,050	1,090	1,290	1,290	9,115	72,920
Balcony	73	83	83	73	73	73	73	90	90	711	5,688
ADA	N	N	N	N	N	N	Y	N	N	1	8

Note: The A1, A2, A2 Alt, B1, B1 Alt, B1 Alt 2, B1 Alt 3, C1, and C1 designations refer to the floor plan layout of the proposed apartment units. ADA = Americans with Disabilities Act
N = No
Y= Yes

LSA

LEGEND

Project Site

ATTACHMENT 1

N

0 500 1000

FEET

SOURCE: ESRI World Imagery (07/2016)

I:\BLU1806\GIS\Reports\ISMND\Attachment1_Project_Vicinity.mxd (10/10/2018)

Sleep Train Apartments Project
Sacramento County, California
LSA Project No. BLU1806

Project Vicinity

LSA

ATTACHMENT 2

Sleep Train Apartments Project
Sacramento County, California
LSA Project No. BLU1806

Zoning Map

Source: DigitalGlobe (08/2017); Sacramento County Assessor Parcel Viewer (2018)

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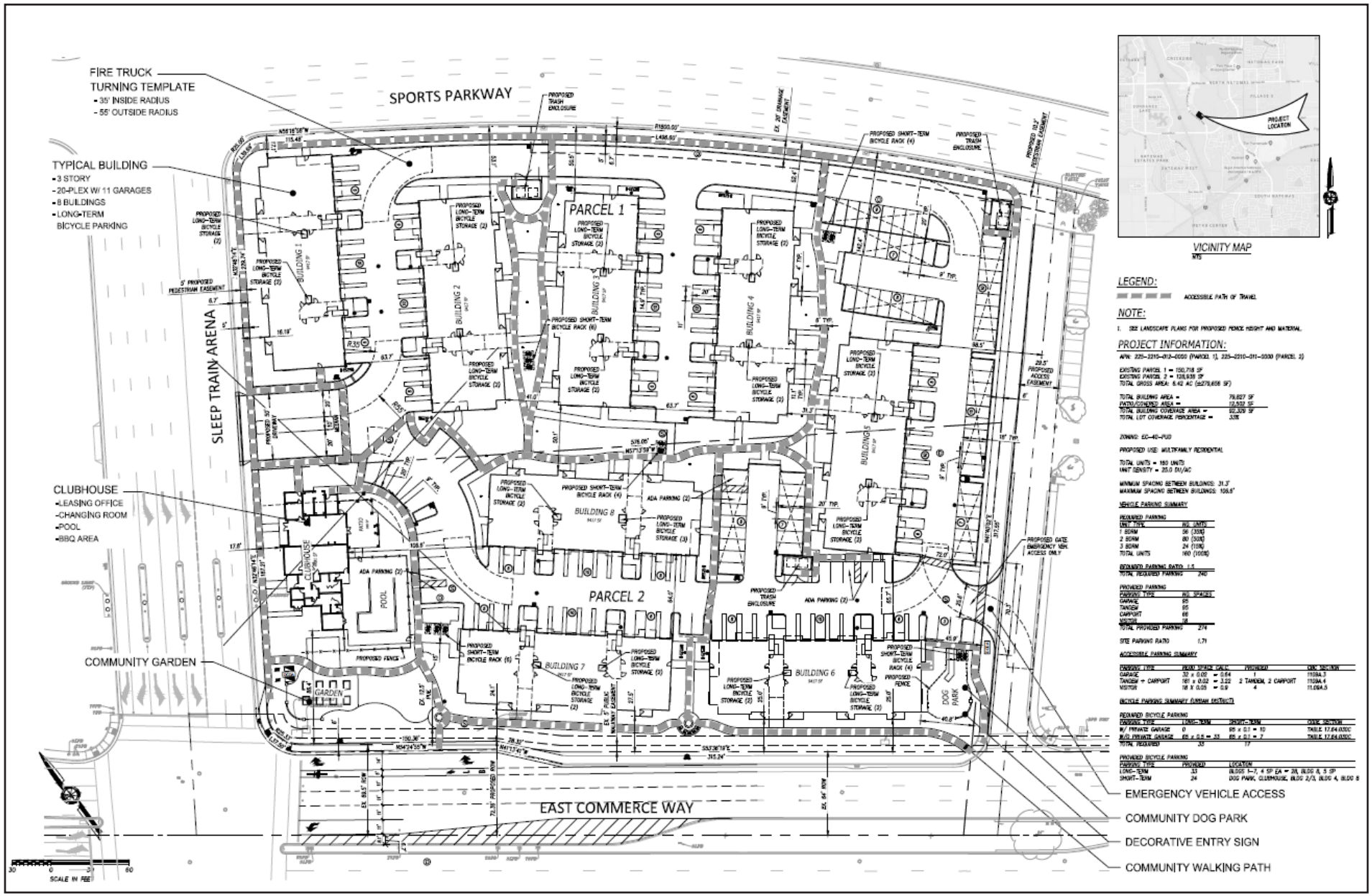

LSA

ATTACHMENT 3

Medley Apartments Project (P18-070)
Sacramento County, California
LSA Project No. BLU1806

Site Plan

Source: Blue Mountain Communities 2019
I:\BLU1806\AI\Site Plan\Attachment 3 Site Plan_Update (4-18-19).ai

Common Area Features

The office/clubhouse would contain a fitness center with a separate Yoga/Pilates room and combination restroom/shower rooms serving both the indoor fitness area and the outdoor pool. The clubhouse would house a gathering room with cyber café space and kitchenette. The management office would include a lobby, private office, and copy room. Both U.S. Postal Service mailboxes and Luxer One package lockers would also be located within the structure. Intended as a dog friendly facility, the clubhouse would include a pet spa, with a dog bathing and drying area. There would also be service rooms for the pool equipment, electrical room, fire sprinklers, and janitorial supplies. Adjacent to the clubhouse would be a swimming pool with a spa, outdoor shower, covered patio, bike racks, community garden, outdoor seating, and open lawn. The facility would be served by 11 adjacent open parking spaces including Americans with Disabilities Act (ADA) compliant and electric vehicle (EV) charging spaces.

The project would have walkable paseos between the buildings with access to the clubhouse as well as to sidewalks along East Commerce Way and Sports Parkway. No fencing would be constructed around the apartment complex. However, lighting and cameras would be installed to increase security. An off-leash dog park would be located in one corner of the facility, and would be fenced to provide for dog safety. Bike parking/racks would be spaced around the project in the paseos to encourage visitors to ride.

Parking

The project would have four types of parking spaces: garage parking, tandem parking, covered assigned parking, and uncovered visitor/un-assigned parking. The project would provide 274 parking stalls: 161 covered parking stalls and 113 uncovered parking stalls. A total of 95 garage parking spots would be included, each with an additional tandem parking space in front of its door. All ground floor units would have a garage assigned to them with direct access from the garage. One garage in each building would be ADA accessible. Every garage would be pre-wired for EV chargers and chargers would be made available for residents who request one. To meet city EV codes one garage would have a charger installed even if none is requested. The EV charging units would have cords allowing EV charging in tandem spaces. The project would provide 66 covered assigned parking spaces and 18 uncovered visitor/un-assigned spaces. There would be an EV charger at one covered space and one uncovered space. One of each of the covered and uncovered spaces would be ADA accessible.

The project would also include 4 long-term bicycle parking spaces at buildings 1–7 and 5 long-term bicycle parking spaces at building 8, totaling 33 long-term bicycle parking spaces. A total of 24 short-term bicycle parking spaces would be provided at the dog park, clubhouse, between buildings 2 and 3, at building 4, and at building 8.

Site Clearing and Construction

It is anticipated that site development would involve clearing and grading of the site, trenching and digging for underground utilities and infrastructure, and ultimately the construction of new roadways, trails/sidewalks, driveways, buildings, and landscaping. Any soil from 1 inch – 2 inch stripping would remain on-site for use as fill in non-structural areas. Some existing asphalt paving (including the base rock) near the intersection of Sleep Train Arena and East Commerce Way would be removed. In addition, an existing aggregate base driveway would be removed along East Commerce Way. Existing striping and markings along East Commerce Way would be removed to allow for the roadway to be re-striped. The existing utility vault, traffic signal, street lights, fire hydrant, and manhole would remain and be protected in place.

Construction could begin as early as 2020 and would require approximately 6 months of site development and 1 year of vertical construction.

LAND USE, POPULATION AND HOUSING, AGRICULTURAL RESOURCES

Introduction

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

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

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

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

Discussion

Land Use

The project site has been designated as Urban Center High (Density: 24-250 / Floor Area Ratio (FAR): 0.5-8.0) in the 2035 General Plan, and is zoned EC-40-PUD (Employment Center – Planning Unit Development).

The City's Urban Center High land use designation includes employment-intensive uses, high-density housing, and various retail uses. The land use designation is meant to provide thriving areas with concentrations of uses similar to downtown and to include major transportation hubs accessible by various motorized and non-motorized transport modes.

The project site is located in an urbanized portion of the community. Parcels adjacent to the project site include condominiums, professional offices, medical and dental offices. The project site is also adjacent to the Sleep Train Arena, a non-operational large event center. Development of the site as proposed would alter the existing landscape, but the project site has been designated for urban development in the 2035 General Plan and the Planning and Development Code, and the proposed development is consistent with these planning designations.

As stated within the Sacramento City Code Title 17 Planning and Development Code Division II Zoning Districts and Land Use Regulations Chapter 17.216 Commercial, Office, and Mixed Use, employment center zoning is intended to provide a flexible zone for employment-generating uses in a pedestrian-friendly setting with ample open space. Residential is considered a non-primary use within the EC-40-PUD zone. As such, a maximum of 25% of the PUD net acreage is allowed to be designated for and devoted to residential uses. An exception within the geographic area bounded by the East Drain, I-5, Del Paso Road, and Arena Boulevard, allows acreage devoted to residential uses to exceed 25% of the

individual EC PUD, subject to a conditional use permit. The proposed project site is located within the specified geographic area, and therefore, per the exception, residential uses may exceed 25% if specific criteria are met.

The proposed project would be consistent with current land use designations and zoning. The project would increase housing within a growing area and would not physically divide an established community. As such, the project would result in no impact involving land use and planning.

Agricultural Resources

The 2035 General Plan Master EIR (Master EIR) discusses the potential impact of development under the 2035 General Plan on agricultural resources. See Master EIR, Chapter 4.1. In addition to evaluating the effect of the General Plan on sites within the City, the Master EIR notes that to the extent the 2035 General Plan accommodates future growth within the City limits, the conversion of farmland outside the City limits is minimized. The Master EIR concludes that the impact of the 2035 General Plan on agricultural resources within the City is less than significant.

The project site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance) (DOC 2016). The site is identified as Other Land and is not zoned for agricultural uses, and no Williamson Act contracts affect the project site (DOC 2015). No existing agricultural or timber-harvest uses are located on, or in the vicinity of the project site. Development of the site would result in no impacts on agricultural resources.

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

ENVIRONMENTAL SETTING

The area surrounding the project site is topographically flat and consists of residential and commercial land uses including professional and medical offices. The site is adjacent to a vacant lot, southwest of East Commerce Way, and a non-operational event center (Sleep Train Arena) northeast of Sports Parkway.

Existing conditions include sidewalks and streetlights along East Commerce Way; an entrance gateway on Sleep Train Arena Main Entrance Road; and trees and landscaping at the adjacent condominiums on the northwest side of Sleep Train Arena Main Entrance Road, the event center parking lot, and the office buildings located southeast of the project site. The project site itself was previously graded currently and consists entirely of California annual grassland. No trees exist within the project site.

No designated state scenic highways or locally designated scenic roadways are within or adjacent to the project site.

STANDARDS OF SIGNIFICANCE

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

- substantially interfere with an important scenic resource or substantially degrade the view of an existing scenic resource; or

- create a new source of substantial light or glare that is substantially greater than typical urban sources and could cause sustained annoyance or hazard for nearby sensitive receptors.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project create a source of glare that would cause a public hazard or annoyance?

No additional significant environmental effect. The project site is located within an urban area and would include the construction of 160 apartment units. The project would include the installation of lighting within common areas, designated parking areas, and exterior lighting on apartment buildings. However, street lighting currently exists at adjacent parcels east of and south of the project area, and landscape lighting within the proposed apartment complex would be directional and shielded to reduce glare. In addition, project lighting distribution and fixtures would be subject to Sacramento Police Department Crime Prevention Through Environmental Design (CPTED) approval to ensure site safety and security. Given that the project is located within an urban area and that landscape lighting would be shielded to minimize glare, the project would result in a less-than-significant impact.

B. Would the project create a new source of light that would be cast onto oncoming traffic or residential uses?

No additional significant environmental effect. As stated above, the project would require the installation of new lighting. However, landscape lighting would be directional and shielded to prevent light from being cast onto oncoming traffic or residential uses. The project would result in a less-than-significant impact.

C. Would the project substantially degrade the existing visual character of the site or its surroundings?

No additional significant environmental effect. The project proposes to construct an executive-style apartment complex with common areas including an office/clubhouse, outdoor pool, paseos, and parks. The project would be located on an existing vacant lot that has been previously graded and currently consists entirely of California annual grassland. The project would include improvements to the aesthetic quality of the area such as landscaped patios, outdoor seating areas, and open lawns. Landscape ground cover, would be two feet tall or less and lower tree canopies of mature trees would be above six feet tall to ensure visibility and security. The City's 2035 General Plan designates the project site as Urban Center High, which includes multi-family residential uses. The project would be consistent with the General Plan land use designation and would not substantially degrade the existing visual character of the site or its surroundings. As such, a less-than-significant impact would occur.

MITIGATION MEASURES

None.

FINDINGS

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

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
2. AIR QUALITY *Would the proposal:* A) Result in construction emissions of NOx above 85 pounds per day?			X
B) Result in operational emissions of NO_x or ROG above 65 pounds per day?			X
C) Violate any air quality standard or have a cumulatively considerable contribution to an existing or projected air quality violation?			X
D) Result in PM_{10} and $PM_{2.5}$ concentrations that exceed SMAQMD requirements?			X
E) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?			X
F) Result in exposure of sensitive receptors to substantial pollutant concentrations?			X
G) Result in TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?			X
H) Conflict with the Climate Action Plan?			X

ENVIRONMENTAL SETTING

Air Quality

The proposed project is located in the City of Sacramento, and is within the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD), which regulates air quality in Sacramento County. The SMAQMD is within the Sacramento Valley Air Basin (SVAB), which includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties, the western portion of Placer County, and the eastern portion of Solano County.

Within the SMAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}, $PM_{2.5}$), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The SMAQMD is under State non-attainment status for ozone and $PM_{2.5}$ standards. The SMAQMD is classified as non-attainment for the federal 8-hour ozone standard and non-attainment for the federal 24-hour $PM_{2.5}$ standard.

The SVAB is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. The terrain in the valley is flat and approximately 25 feet above sea level.

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

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

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

Greenhouse Gases

Greenhouse gases (GHG) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF_6).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally occurring GHGs such as CO_2, CH_4, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2

over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

STANDARDS OF SIGNIFICANCE

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

- construction emissions of NO_x above 85 pounds per day;
- operational emissions of NO_x or ROG above 65 pounds per day;
- violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- any increase in PM_{10} concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year;
- any increase in $PM_{2.5}$ concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 82 pounds per day or 15 tons per year;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- exposure of sensitive receptors to substantial pollutant concentrations.

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

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

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

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

The Master EIR identifies exposure to sources of toxic air contaminants (TAC) as a potential effect. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to

TACs, and impose appropriate conditions on projects to protect public health and safety; as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The Master EIR finds that greenhouse gas emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include: ER 6.1.2, ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 Climate Action Plan (CAP), which demonstrates a compliance mechanism for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emission reduction goals, ER 6.1.9 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City's longer-term GHG emission reductions goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference in this Initial Study (CEQA Guidelines Section 15150).

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project result in construction emissions of NO_x above 85 pounds per day?

No additional significant environmental effect. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Project construction activities would include grading, paving, and building activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SMAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Emission Control Practices, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, volatile organic compounds (VOCs) and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using the California Emissions Estimator Model (CalEEMod) version 2016.3.2, consistent with SMAQMD recommendations. Construction could begin as early as 2020 and would require approximately 6 months of site development and 1 year of vertical construction. Construction-related emissions are presented in Table B. CalEEMod output sheets are included in Appendix A.

Table B: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	103.8	42.5	10.5	6.5
SMAQMD Thresholds	None	85.0	80.0[a]	82.0[b]
Exceed Threshold?	**N/A**	**No**	**No**	**No**

Source: LSA (October 2018).
Notes:
[a] If all feasible BACT/BMPs are applied, threshold is 80 pounds/day and 14.6 tons/year.
[b] If all feasible BACT/BMPs are applied, threshold is 82 pounds/day and 15 tons/year.

As shown in Table B, NO_x emissions associated with construction of the proposed project would not exceed the SMAQMD's thresholds. Therefore, this impact would be considered less than significant.

B. Would the project result in operational emissions of NO_x or ROG above 65 pounds per day?

No additional significant environmental effect. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment), energy sources (e.g., electricity and natural gas) and mobile sources (e.g., vehicle trips) related to the proposed project.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. Area source emissions associated with the project would include emissions from the use of landscaping equipment and the use of consumer products.

Long-term operation emissions associated with the proposed project were calculated using CalEEMod. Trip generation rates for the project were based on the project's trip generation estimates, which indicate that the proposed project would generate approximately 1,169 average daily trips, with 75 trips occurring in the AM peak hour and 90 trips occurring in the PM peak hour.

Model results are shown in Table C below. Appendix A contains model output worksheets.

Table C: Project Operational Emissions in Pounds Per Day

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Area Source Emissions	4.5	0.2	0.1	0.1
Energy Source Emissions	0.0	0.4	0.0	0.0
Mobile Source Emissions	2.5	8.4	5.7	1.6
Total Emissions	7.0	8.9	5.8	1.7
SMAQMD Thresholds	65.0	65.0	80.0[a]	82.0[b]
Exceed Threshold?	No	No	No	No

Source: LSA (October 2018).
Notes:
[a] If all feasible BACT/BMPs are applied, threshold is 80 pounds/day and 14.6 tons/year.
[b] If all feasible BACT/BMPs are applied, threshold is 82 pounds/day and 15 tons/year.

The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project; emissions are released in other areas of the SVAB. The daily emissions associated with project operational trip generation, energy, and area sources are identified in Table C for ROG, NO_x, PM_{10}, and $PM_{2.5}$. The results shown in Table C indicate the project would not exceed the significance criteria for daily ROG or NO_x emissions; therefore, the proposed project would not have a significant effect on regional air quality and mitigation would not be required. This impact would be less than significant.

C. Would the project violate any air quality standard or have a cumulatively considerable contribution to an existing or projected air quality violation?

No additional significant environmental effect. CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. According to the SMAQMD, by its very nature, air pollution is largely a cumulative impact. Ambient air quality standards are violated or approach nonattainment levels due to past development that has formed the urban fabric, and attainment of standards can be jeopardized by increasing emissions-generating activity in the region. The nonattainment status of regional pollutants is a result of past and present development within the SVAB. Thus, this regional impact is a cumulative impact, and projects would contribute to this impact on a cumulative basis. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

Consequently, the SMAQMD's approach to thresholds of significance is relevant to whether a project's individual emissions would result in a cumulatively considerable adverse contribution to the SVAB's existing air quality conditions. If a project's emissions would be less than these levels, the project would not be expected to result in a cumulatively considerable contribution to the significant cumulative impact.

As discussed above, the proposed project's construction emissions are estimated to be below the emissions threshold established for the region. Operational emissions associated with the proposed project would also not exceed SMAQMD established significance thresholds for ROG, NO_x, PM_{10}, or $PM_{2.5}$ emissions. Therefore, the proposed project would not result in a cumulatively considerable contribution to a net increase of any criteria pollutant for which the project region is in non-attainment, and impacts would be less than significant. No mitigation is required.

D. Would the project result in PM_{10} and $PM_{2.5}$ concentrations that exceed SMAQMD requirements?

No additional significant environmental effect. As shown in Table B and Table C above, the threshold of significance for construction and operational PM_{10} emissions is 80.0 pounds per day and 14.6 tons per year with all feasible Best Available Control Technologies (BACT) and Best Management Practices (BMPs) applied. In addition, the threshold of significance for construction and operational $PM_{2.5}$ emissions is 82.0 pounds per day and 15.0 tons per year with all feasible BACT and BMPs applied. Therefore, the proposed project would be required to implement all feasible BACT and BMPs to reduce PM_{10} and $PM_{2.5}$ emissions, consistent with SMAQMD requirements.

The SMAQMD requires the implementation of Basic Construction Emissions Control Practices, which are considered feasible for controlling fugitive dust from a construction site and serve as BMPs. As shown in Table B, PM_{10} and $PM_{2.5}$ emissions associated with construction of the proposed project would not exceed the SMAQMD's thresholds with implementation of the SMAQMD's Basic Construction Emissions Control Practices Therefore, in order to meet the SMAQMD requirements, the below listed Basic Construction Emissions Control Practices would be implemented in order to control fugitive dust from a construction site:

- 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.

- 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.

- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

With implementation of the SMAQMD's Basic Construction Emissions Control Practices, construction PM_{10} and $PM_{2.5}$ emissions would be less than significant.

In addition, as shown in Table C, PM_{10} and $PM_{2.5}$ emissions associated with operation of the proposed project would not exceed the SMAQMD's thresholds if the proposed project would implement the SMAQMD's BMPs. The SMAQMD provides guidance on BMPs to reduce operational PM emissions from land use development projects, which requires that BMPs must be identified and described in a proposed project's environmental document. The guidance also states that BMPs are not mitigation measures and are generally required by existing regulations. The following BMPs are applicable to the proposed project:

- Compliance with SMAQMD rules that control operational PM and NOx emissions. Reference rules regarding wood burning devices, boilers, water heaters, generators and other PM control rules that may apply to equipment to be located at the project. Current rules can be found on the District's website: http://www.airquality.org/Businesses/Rules-Regulations

- Compliance with mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6) that pertain to efficient use of natural gas for space and water heating and other uses at a residential or non-residential land use. The current standards can be found on the California Energy Commission website: http://www.energy.ca.gov/title24/

- Compliance with mandatory measures in the California Green Building Code (Title 24, Part 11). The California Building Standards Commission provides helpful checklists showing the required and voluntary measures for residential and non-residential projects on its website: http://www.bsc.ca.gov/Home/CALGreen.aspx.

- Current mandatory measures related to operational PM include requirements for bicycle parking, parking for fuel-efficient vehicles, electric vehicle charging, and fireplaces for non-residential projects. Residential project measures include requirements for electric vehicle charging and fireplaces.

The proposed project would not include wood burning devices, boilers, or generators. In addition, natural gas for space and water heating would comply with SMAQMD rules and mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6). The proposed project would also provide EV charging spaces. In addition, every garage would be pre-wired for EV chargers and chargers would be made available for residents who request one. The project would also include 4 long-term bicycle parking spaces at Buildings 1–7 and 5 long-term bicycle parking spaces at Building 8, totaling 33 long-term bicycle parking spaces. A total of 24 short-term bicycle parking spaces would be provided at the dog park, clubhouse, between Buildings 2 and 3, at Building 4, and at Building 8. Therefore, the project would comply with all applicable BMPs and SMAQMD's Basic Construction Emissions Control Practices, and impacts would be less-than-significant.

E. Would the project 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)?

No additional significant environmental effect. The SMAQMD has established a screening methodology that provides a conservative indication of whether project-related vehicle trips would result in significant CO emissions. According to the SMAQMD CEQA Guide, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- Traffic generated by the proposed project will not result in deterioration of intersection level of service (LOS) to LOS E or F; and

- The project will not contribute additional traffic to an intersection that already operates at LOS of E or F.

As discussed in Section 12, Transportation and Circulation, implementation of the proposed project would not result in deterioration of intersection LOS to LOS E or F and would not contribute additional traffic to an intersection that already operates at LOS E or F. The project's trip generation would be approximately 1,169 average daily trips, with 75 trips occurring in the AM peak hour and 90 trips occurring in the PM peak hour and would not have a substantial contribution to traffic volumes at intersections in the vicinity of the project site. Therefore, the proposed project would not result in localized CO concentrations that exceed State or federal standards and this impact would be less than significant.

F. Would the project result in exposure of sensitive receptors to substantial pollutant concentrations?

No additional significant environmental effect. Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks. The closest sensitive receptors to the proposed project include the multi-family residences across Sleep Train Arena Main Entrance Road, located approximately 130 feet from the project site.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement the Basic Construction Emission Control Practices. With implementation of the Basic Construction Emission Control Practices, project construction pollutant emissions would be below the SMAQMD significance thresholds. Once the project is constructed, the project would not be a source of substantial pollutant emissions. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction and operation, and potential impacts would be considered less than significant.

G. Would the project result in TAC exposures that would create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?

No additional significant environmental effect. As discussed above, sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers and are considered to be especially sensitive to poor air quality associated with TACs. The most prominent TAC associated with high volumes of traffic on major roadways is diesel particulate matter (PM). The project site is adjacent to East Commerce Way, which is classified in the 2035 General Plan as an arterial, and is otherwise surrounded by minor residential roadways. None of these roadways accommodate daily vehicle trips that exceed the SMAQMD TAC-analysis screening protocol of 100,000 vehicles per day on an urban roadway.

In addition, the project site is located approximately 0.25 mile (1,400 feet) east of Interstate 5. The California Air Resources Board's (CARB) Air Quality and Land Use Handbook recommends that sensitive land uses be sited no closer than 500 feet from a freeway or major roadway. This 500-foot buffer area was developed to protect sensitive receptors from exposure to diesel PM and was based on traffic-related studies that showed a 70 percent drop in PM concentrations at a distance of 500 feet from the roadway. With increasing distance from the PM source, acute and chronic risks, as well as lifetime cancer risk, due to diesel PM exposure are lowered proportionately. The project site is well beyond 500 feet from Interstate 5 and stationary TAC sources. Therefore, impacts related to TACs would not result in any new significant effect.

H. Would the project conflict with the Climate Action Plan?

No additional significant environmental effect. The project would result in the generation of greenhouse gases during construction and operation, as discussed below.

Project Consistency with the Climate Action Plan. CEQA Guidelines Section 15183.5 includes the provision for tiering and streamlining the analysis of GHG emissions in CEQA documents. Under this provision, lead agencies may analyze and mitigate the effects of GHG emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce GHG emissions such as a Climate Action Plan (CAP) developed by a local jurisdiction. Later project-specific CEQA documents may tier and/or incorporate by reference that existing programmatic review if the proposed project is consistent with the applicable CAP that adequately addresses GHG emissions, and that the CAP has been evaluated pursuant to CEQA and has a certified or approved environmental document.

In addition, according to the SMAQMD's CEQA Guide, a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted qualified CAP. Therefore, if a project is consistent with an adopted qualified CAP, it can be presumed that the project will not have significant GHG emission impacts. This approach is consistent with the State CEQA Guidelines, Section 15183.5, and will be used in this analysis.

The City of Sacramento adopted the Sacramento CAP on February 14, 2012, which was incorporated into the 2035 General Plan and adopted on March 3, 2015. The CAP identified how the City and broader community can reduce Sacramento's GHG emissions and included GHG reduction targets, strategies, and specific actions. It also identified strategies and specific actions, which the City can take to adapt to the effects of climate change.

In order to evaluate a proposed project's consistency with the CAP, the City has developed the CAP Consistency Review Checklist. The purpose of the CAP Consistency Review Checklist is to provide a streamlined review process for proposed new development projects that are subject to environmental review pursuant to CEQA. Projects that demonstrate consistency with the CAP and the Sacramento 2035 General Plan are considered less than significant in terms of the contribution of GHG emissions. Projects that do not demonstrate consistency may be required, at the City's discretion, to prepare a more comprehensive project-specific analysis of GHG emissions consistent with CEQA requirements. The project's consistency with the CAP Consistency Checklist Form is shown in Table D below.

Table D: City of Sacramento Climate Action Plan Consistency

Checklist Item	Project Consistency
1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan, as it currently exists?	***Consistent***. The project site is designated as Urban Center High (Density: 24- 250 / FAR: 0.5 - 8.0) in the 2035 General Plan, and is zoned EC-40-PUD (Employment Center – Planning Unit Development). The City's Urban Center High land use designation includes employment-intensive uses, high-density housing, and various retail uses. The land use designation is meant to provide thriving areas with concentrations of uses similar to downtown and to include major transportation hubs accessible by various motorized and non-motorized transport modes. The project site is located in an urbanized portion of the community. Parcels adjacent to the project site include condominiums, professional offices, medical and dental offices. The project site is also adjacent to the Sleep Train Arena, a non-operational large event center. Development of the site as proposed would alter the existing landscape, but the project site has been designated for urban development in the 2035 General Plan and the Planning and Development Code, and the proposed development is consistent with these planning designations. Therefore, the proposed project would be consistent with this measure.
2. Would the project incorporate traffic calming measures? (Examples of traffic calming measures include, but are not limited to: curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers.)	***Consistent***. According to the Consistency Review Checklist, if the proposed project does not include any roadway or facility improvements, traffic calming measures may not apply. For example, certain infill projects may not result in on-street or transportation facility improvements because sufficient infrastructure already exists. The proposed project includes the construction of 160 apartment units and a single one-story ±3,950 square foot office/clubhouse building on a 6.4-acre project site surrounded by existing urban development. As described in Section 12, Transportation and Circulation, the analysis performed by DKS Associates included recommended measures that the Main Entrance Road and East Commerce Way be signalized, permit all movements, operate with protected left-turn movements north-south and east-west, and maintain existing northbound left turn lane, northbound right turn lane, and southbound left turn lane. The proposed project applicant will coordinate the traffic signal with the applicant of the Natomas Crossing Quad B project. Therefore, with implementation of these measures, the proposed project would be consistent with this measure.
3. Would the project incorporate pedestrian	***Consistent***. Sidewalks are currently provided on

Table D: City of Sacramento Climate Action Plan Consistency

Checklist Item	Project Consistency
facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?	both sides of East Commerce Way, between Arena Boulevard and Del Paso Road. No pedestrian facilities are currently provided along Main Entrance Road or Sports Parkway. The proposed project would include shifting the existing sidewalk along East Commerce Way approximately 4 feet to the east to accommodate the right turn lane onto Sleep Train Arena Main Entrance Road and development of sidewalks on the north, east, and south sides of the proposed project. The project would also include pedestrian paths within the apartment complex. Therefore, the proposed project would be consistent with this measure.
4. Would the project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen?[a]	***Consistent***. Existing Class II Bike Lanes are provided along East Commerce Way, Del Paso Road, and Arena Boulevard. As discussed in Section 12, Transportation and Circulation, based on the traffic analysis completed by DKS Associates for Natomas Crossing Quad B, existing bicycle use is low and there is adequate capacity. In addition, the project would provide bicycle parking for long-term and short-term use. Therefore, the proposed project would be consistent with this measure.
5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15 percent of the project's total energy demand on-site? (CAP Actions: 3.4.1 and 3.4.2)	***Consistent***. The proposed project would not include on-site renewable energy systems that would generate at least a minimum of 15 percent of the project's total energy demand on-site. However, the project would meet the energy efficiency standards of the current 2016 Title 24, part 6 of the California Building Code, which would be a minimum of 10 percent more efficient than the 2013 Building Code Standard. Therefore, with this substitution, the project would be consistent.
6. Would the project (if constructed on or after January 1, 2014) comply with minimum CALGreen Tier I water efficiency standards?	***Consistent***. The proposed project would be required to comply with minimum CALGreen Tier I water efficiency standards.

Source: LSA (October 2018).
Notes:
[a] Substitutions: Projects may substitute a quantity of energy efficiency for renewable energy, as long as the substituted GHG reduction does not "double count" GHG reductions already taken by the CAP. In other words, substitutions must reduce GHG emissions from the project beyond what is already accounted for in the CAP (to avoid double-counting).

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

As shown in Table D, the proposed project would be consistent with the CAP measures. Although, the proposed project would not include on-site renewable energy systems that would generate at least a minimum of 15 percent of the project's total energy demand on-site, the project would meet the current 2016 Building Code Standards which would exceed the 2013 Title 24 energy efficiency by a minimum of 10 percent in lieu of installing PV systems.

The proposed project would include implementation of measures from the CAP applicable to reduce GHG emissions. The proposed project would be in compliance with the CAP Consistency Checklist and this impact would be less than significant.

MITIGATION MEASURES

None.

FINDINGS

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

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

ENVIRONMENTAL SETTING

Prior to human development, the natural habitats within the region included perennial grasslands, riparian woodlands, oak woodlands, and a variety of wetlands including vernal pools, seasonal wetlands, freshwater marshes, ponds, streams, and rivers. Over the last 150 years, agriculture, irrigation, flood control, and urbanization have resulted in the loss or alteration of much of the natural habitat within the City limits. Non-native annual grasses have replaced the native perennial grasslands, many of the natural streams have been channelized, much of the riparian and oak woodlands have been cleared, and most of the marshes have been drained and converted to agricultural or urban uses.

Though the majority of the City is developed with residential, commercial, and other urban development, valuable plant and wildlife habitat still exists. These natural habitats are located primarily outside the city boundaries in the northern, southern, and eastern portions of the City, but also occur along river and stream corridors and on a number of undeveloped parcels. Habitats that are present in the City include annual grasslands, riparian woodlands, oak woodlands, riverine, ponds, freshwater marshes, seasonal wetlands, and vernal pools. These habitats and their general locations are discussed briefly below.

A Biological Resources Constraints Evaluation, included in Appendix B, was completed on May 23, 2018, to determine biological resources within the project site (LSA 2018a). LSA Associates, Inc. (LSA) performed a database search of the California Native Plant Society (CNPS 2018) Electronic Inventory; the California Natural Diversity Database (CNDDB 2018), referencing the Knights Landing, Verona, Pleasant Grove, Grays Bend, Taylor Monument, Rio Linda, Davis, Sacramento West, and Sacramento East U.S. Geological Survey 7.5 minute quadrangles; and the United States Fish and Wildlife Service (USFWS) IPaC Resource List (USFWS 2018). These databases contain records of special-status species that have been recorded in the general vicinity and provide an indication of what species may occur within the project site.

LSA conducted a reconnaissance level survey of the project site on May 1, 2018. The survey focused on identifying any potential constraints to biological resources including sensitive plant communities, potential habitat for special-status wildlife or plant species, and wildlife movement corridors, and potential jurisdictional waters.

The project site consists entirely of California annual grassland, totaling 6.42 acres (Attachment 4: Plant Communities). This community consists primarily of non-native species, of which wild oats *(Avena fatua*) and milk thistle (*Silybum marianum*) dominate. Other common species include ripgut brome (*Bromus diandrus*), hairy vetch (*Vicia villosa*), short podded mustard (*Hirschfeldia incana*), field bindweed (*Convolvulus arvensis*), annual yellow sweetclover (*Melilotus indicus*), and Italian rye (*Festuca perennis*). No special-status plant species were observed on the project site during this survey effort. Due to the disturbed condition of the project site and the dominance of non-native species within the annual grassland habitat, no special-status plant species are expected to occur.

Wildlife species observed in the vicinity of the project site include red-tailed hawk (*Buteo jamaicensis*), northern mockingbird (*Mimus polyglottos*), red-winged blackbird (*Agelaius phoeniceus*), rock pigeon (*Columba livia*), black-tailed jackrabbit (*Lepus californicus*), American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius*), and Brewer's blackbird (*Euphagus cyanocephalus*). No bird nests or nesting behaviors were observed during the survey. No special-status wildlife species were observed on the project site during this survey effort.

Numerous CNDDB records for burrowing owl *(Athene cunicularia*) occur within 1 mile of the project site and this species has been confirmed present at another development approximately 0.25 mile northwest. However, the likelihood of burrowing owl occurring on the project site is limited, due in part to urban development surrounding the project site on all sides. Furthermore, no fossorial burrows are on the site. The grassland habitat over much of the project site is not maintained, consisting of dense, thatch-like vegetation which precludes fossorial mammals such as California ground squirrel (*Ammospermophilus beecheyi*) from utilizing the site. Therefore, the project site does not provide suitable habitat for burrowing owl which is dependent on fossorial mammal burrows for nesting and short vegetation for foraging.

No trees and shrubs suitable for nesting birds occur on the project site. However, the project site does provide marginally suitable foraging (annual grassland) habitat for Swainson's hawk (*Buteo swainsoni*) which is a State Threatened species and white-tailed kite (*Elanus leucurus*) which is a State Fully Protected species. Swainson's hawk is known to occur in the vicinity based on several CNDDB records, the closest record, where suitable nesting habitat still exists, is located approximately 2 miles west of the project site adjacent to Fisherman's Lake. White-tailed kite is known to occur in the vicinity based on numerous CNDDB records, the closest of which is located approximately 2.4 miles northeast of the project site. While foraging habitat is present on the project site, the area is predominantly surrounded by commercial and residential development and, considering the relatively small acreage of the site, dense vegetation, and lack of fossorial mammals for a prey base, these species are not expected to occur within the project site.

No aquatic features occur on the project site.

The Natomas Basin Habitat Conservation Plan (NBHCP) is intended to promote biological conservation in conjunction with economic and urban development. No special status species covered under the NBHCP are expected to occur on the project site or in the immediate vicinity. Therefore, no protective buffers for nesting birds or other mitigation measures required for coverage under the NBHCP would be necessary for development of the project site.

LSA

LEGEND

Project Site

Plant Communities / Land Uses

California Annual Grassland

N

0 75 150

FEET

ATTACHMENT 4

Medley Apartments Project (P18-070)
Sacramento County, California
LSA Project No. BLU1806

Plant Communities / Land Uses

SOURCE: Basemap - ESRI World Imagery (07/2016); Mapping - LSA (5/2018)

I:\BLU1806\GIS\Reports\ISMND\Attachment_4_Plant_comm.mxd (4/29/2019)

STANDARDS OF SIGNIFICANCE

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

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

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

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

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

The Master EIR discussed biological resources in Chapter 4.3. The Master EIR concludes that policies in the General Plan, combined with compliance with the California Endangered Species Act, Natomas Basin HCP (when applicable) and CEQA would minimize the impacts on special-status species to a less-than-significant level (see Impact 4.3-1), and that the General Plan policies, along with similar compliance with

local, state and federal regulation would reduce impacts to a less-than-significant level for habitat for special-status invertebrates, birds, amphibians and reptiles, mammals and fish (Impacts 4.3-3-6).

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

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

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project create a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected?

   Effect can be mitigated to less than significant. The use of hazardous materials such as oil, fuel, and solvents would occur during construction of the project. In addition, building materials such as asphalt and concrete would be required. No known animal populations are located within the project area. In addition, the project area consists of California annual grassland and primarily contains non-native species. Once operational, the project would not include the use, production or disposal of any hazardous materials. The handling, storage, and use of fuel associated with project construction would be required to be compliant with federal, State, and local standards and regulations. Any adverse effects involving hazardous materials would be mitigated through a Spill Prevention and Countermeasure Plan, as described under Mitigation Measure HAZ-1, listed under Hazards Mitigation Measures. With the implementation of Mitigation Measure HAZ-1, impacts involving materials that would pose a hazard to plant or animal populations would be less than significant.

B. Would the project 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?

   No additional significant environmental effect. The project site is located on a previously graded vacant lot comprised of California annual grassland. The project site does not include suitable habitat for threatened or endangered plant or animal species. The project would not result in a substantial degradation of the quality of the environment. No impact would occur.

C. Would the project affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?

No additional significant environmental effect. A Biological Resources Constraints Evaluation was performed and is described above. No species of special concern or natural resource organizations, such as regulatory waters and wetlands, were found or are anticipated to be found within the project area. No special status species covered under the NBHCP are expected to occur in the project vicinity. No impact would occur.

MITIGATION MEASURES

See Mitigation Measure HAZ-1 listed under Hazards Mitigation Measures.

FINDINGS

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

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
4. CULTURAL RESOURCES Would the project: A) Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in § 15064.5?		X	
B) Directly or indirectly destroy a unique paleontological resource?		X	
C) Disturb any human remains?		X	

ENVIRONMENTAL SETTING

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the city. Human burials outside of formal cemeteries often occur in prehistoric contexts. Areas of high sensitivity for archaeological resources, as identified in the 2035 General Plan Background Report (City of Sacramento 2014a), are located within close proximity to the Sacramento and American rivers and other watercourses.

The 2035 General Plan land use diagram designates a wide swath of land along the American River as Parks, which limits development and impacts on sensitive prehistoric resources. High sensitivity areas may be found in other areas related to the ancient flows of the rivers, with differing meanders than found today. Recent discoveries during infill construction in downtown Sacramento have shown that the downtown area is highly sensitive for both historic- and prehistoric-period archaeological resources. Native American burials and artifacts were found in 2005 during construction of the New City Hall and historic period 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.

LSA conducted background research and a field investigation to identify cultural resources within and in the vicinity of the Study Area and prepared a Memorandum regarding the Cultural Resources Constraints Assessment for the project (LSA 2018b). The background research consisted of a cultural resource records search at the North Central Information Center (NCIC), a review of the Native American Heritage Commission's (NAHC) Sacred Lands File, and a literature and map review. The results of these tasks are described and summarized below.

Records Search

The records search was conducted on September 13, 2018, at the NCIC of the California Historical Resources Information System, Sacramento State University. The NCIC, an affiliate of the State of California Office of Historic Preservation, is the official State repository of cultural resource records and reports for Sacramento County. The records search parameters consisted of a review of cultural resources within the Study Area and a review of archaeological sites within a 0.25-mile radius of the Study Area. Previous cultural resource studies on file at the NCIC within the search area were also reviewed.

As part of the records search, LSA reviewed the following local and State inventories for cultural resources in the Study Area:

- California Inventory of Historic Resources (California Office of Historic Preservation 1976);
- Five Views: An Ethnic Historic Site Survey for California (California Office of Historic Preservation 1988);
- California Points of Historical Interest (California Office of Historic Preservation 1992);
- California Historical Landmarks (California Office of Historic Preservation 1996); and
- Directory of Properties in the Historic Property Data File (California Office of Historic Preservation 2012).

The records search of the NCIC database (IC File Number SAC-18-157) identified a total of six investigations previously conducted in the 0.25-mile search radius of the project site. Three of these investigations include the project site. There were no resources identified within the project site. A historic-period water conveyance concrete drainpipe was identified within 0.25 mile of the project.

Field Investigation

LSA conducted a field survey of the project site on September 21, 2018. The purpose of the survey was to identify cultural resources (e.g., stone tools, lithic debitage, and ground stone), historic artifacts (e.g., metal, glass, and ceramics), or soil discoloration that might indicate the presence of an archaeological deposit.

The project site was recently disked up to 2 feet at the time of the survey, which provided 100 percent visibility of the ground surface. Vegetation consisted of dry, dead grasses and star thistle. Terrain was highly undulated due to previous disking and rodent burrows. Soil was very dry, clumpy, yet somewhat friable 10 YR 4/3 brown silty loam. A large, graded push pile was identified in the southeast portion of the project site and was approximately 8 feet tall at the highest point. Borrows were checked for evidence of subsurface archaeological deposits. Modern debris scattered the ground surface and included fast food debris, packing materials, metal fence posts, and concrete chunks (brick size to wall size). Various underground utilities were observed on the two parcels including sewer and drainage manholes and electric/fiber optic boxes. The pedestrian survey was documented in photographs and notes.

No cultural resources were observed during field survey.

STANDARDS OF SIGNIFICANCE

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

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

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

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project cause a substantial adverse change in the significance of a historical or archaeological resource as defined in § 15064.5?

   Effect can be mitigated to less than significant. LSA conducted background research and a field survey to identify potential cultural resources constraints in the project site. This assessment did not identify any such constraints; however, the potential for encountering previously unidentified buried cultural resources in the project site cannot be discounted. Implementation of Mitigation Measure TCR-1a and TCR-1b, listed under Tribal Cultural Resources Mitigation Measures, would reduce impacts related to historical or archaeological resources to less than significant.

B. Would the project directly or indirectly destroy a unique paleontological resource?

   Effect can be mitigated to less than significant. No paleontological resources or unique geologic features are known to exist within the project site. However, should paleontological resources be discovered during project construction, implementation of Mitigation Measure CULT-1 would reduce potential impacts to paleontological resources to less than significant.

C. Would the project disturb any human remains?

   Effect can be mitigated to less than significant. Upon completion of background research and a field survey, LSA concluded there was no indication of the presence of cultural resources or human remains. However, Native American skeletal remains could potentially be identified in the project site during construction. Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the county coroner has determined whether or not the remains are subject to the coroner's authority. Implementation of Mitigation Measure TCR-1c, listed under Tribal Cultural Resources Mitigation Measures, would reduce impacts related to human remains to less than significant.

MITIGATION MEASURES

Mitigation Measure CULT-1: If paleontological resources are encountered during project subsurface construction and no monitor is present, 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.

See Mitigation Measure TCR-1a, TCR-1b and TCR-1c listed under Tribal Cultural Resources Mitigation Measures.

FINDINGS

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

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
5. ENERGY Would the project: A) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation			X
B) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X

ENVIRONMENTAL SETTING

The Sacramento Municipal Utility District (SMUD) provides electricity to city residents. A total of 1,745 megawatts of power is generated by SMUD, in addition to 1,192 megawatts of power that are purchased to meet demand. Power is generated through hydroelectric, thermal (natural gas), wind and solar. Although SMUD's current resources are sufficient to supply short-term electricity demand, the District will need to develop new resources as well as increased energy efficiency to meet long-term needs.

Pacific Gas & Electric Company (PG&E) provides city residents with natural gas service. Natural gas is supplied from resources within the State as well as from Canada. Continuous improvements to gas lines throughout the Sacramento region provide sufficient service to residents. As stated in the Master EIR, PG&E has not identified any major service problems within the City.

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

STANDARDS OF SIGNIFICANCE

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

- The project would result in the wasteful and inefficient use of nonrenewable resources during construction of the project; or
- The project would result in the wasteful and inefficient use of nonrenewable resources during the long-term operation of the project.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluates the potential effects of development under the 2035 General Plan on energy resources. See Section 6.3 (page 6-3).

General Plan policies identified as reducing such effects call for retrofitting of existing structures with green building technologies (Policy LU 2.6.7), sustainable development patterns (Policy LU 2.6.1), sustainable building practices to design and construct buildings that consume less energy (Policy LU 2.6.4) and encouragement of energy efficiency improvements and appliances (Policy U 6.1.11 and U 6.1.15).

The Master EIR concludes that implementation of the 2035 General Plan would not result in the inefficient, wasteful, or unnecessary consumption of electricity and would have no additional significant environmental effect on energy resources.

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?

   No additional significant environmental effect. The proposed project would comply with Building Energy Efficiency Standards included in Title 24 of the California Code of Regulations, which requires new residential and nonresidential development to incorporate energy efficiency standards into project designs. In addition, the proposed project would implement General Plan policies. The proposed project would construct high-density residences to use land efficiently (Policy LU 2.6.1), include bicycle parking spaces to encourage non-motorized transport (Policy LU 2.6.1), and include Energy STAR appliances and HVAC systems (Policy U 6.1.15). Therefore, the proposed project would not result in any potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation. Project impacts related to energy would be less than significant.

B. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

   No additional significant environmental effect. The proposed project would implement General Plan policies and energy regulation including Title 24 requirements, such as high-density land use and energy efficient appliances. Thus, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and would be less than significant.

MITIGATION MEASURES

None.

FINDINGS

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

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

ENVIRONMENTAL SETTING

The project site is located in the City of Sacramento within the Great Valley of California, a flat alluvial plain approximately 50 miles wide and 400 miles long in the central portion of California. The project site is located in the northern part, known as the Sacramento Valley, and is drained by the Sacramento River. The Great Valley is surrounded by the Sierra Nevada to the east, the Tehachapi Mountains to the south, Coastal Range to the west, and Cascade Range to the north (City of Sacramento 2014a).

The project area is relatively flat. However, the city of Sacramento has a gradual slope rising from elevations as low as sea level in the southwestern portion of the city up to approximately 75 feet above sea level in the northeastern portion (City of Sacramento 2014a).

Soils

According to the Natural Resources Conservation Service (NRCS), soil types within the project area include Durixeralfs, 0 to 1 percent slopes and Jacktone clay, drained, 0 to 2 percent slopes (See Attachment 5: Soil Survey Map). Durixeralfs are classified as well drained, have a depth of more than 80 inches to the water table, very high runoff, no frequency of flooding or ponding, and are assigned to hydrologic soil group D. Jacktone clay soil types are classified as somewhat poorly drained, have a depth of about 0 inches to the water table, high runoff, rare frequency of flooding, no frequency of ponding, and are assigned to hydrologic soil group D. Hydrologic soil group D is defined as soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission (NRCS 2017; NRCS).

Expansive soils shrink and harden when dried and expand and soften when wet. Foundation systems built on expansive soils must be capable of tolerating or resisting soil expansion. According to the NRCS Web Soil Survey, soils within the project site are classified as high shrink-swell potential.

Subsidence is the gradual settling or sinking of an area with little or no horizontal motion caused by changes taking place underground. It is a natural process but can also occur or be accelerated by human activity. Subsidence has been known to occur with the Sacramento area (City of Sacramento 2014a).

LSA

Attachment 5

Project Area

161 Jacktone clay, drained, 0 to 2 percent slopes

137 Durixeralfs, 0 to 1 percent slopes

Sleep Train Apartments Project
Sacramento County, California
LSA Project No. BLU1806

Soil Survey Map

Source: NRCS 2018
I:\BLU1806\AI\Site Plan\SoilSurveyMap.ai

Seismicity

According to the Probabilistic Seismic Hazard Assessment Maps prepared by the California Geological Survey (CGS), Sacramento is in an area of relatively low severity, characterized by peak ground accelerations between 10 and 20 percent of the acceleration of gravity. This is primarily due to the lack of known major faults and low historical seismicity in the region. Groundshaking from peak ground accelerations between 10 and 20 percent of the acceleration of gravity would result in a maximum earthquake intensity of VII or VIII on the Modified Mercalli Intensity (MMI) Scale. MMI VII and VIII are described as "damage to building varies; depends on quality of construction" and "walls, monuments, chimneys fall; panel walls thrown out of frames", respectively (City of Sacramento 2014a).

No known faults are within the project vicinity or greater Sacramento region. Faults located closest to the city are the Foothills fault system to the east, the Midland Fault to the west, and the Dunnigan Hills Fault to the northwest (City of Sacramento 2014a).

The Alquist-Priolo Fault Zoning Act provides policies and criteria to assist cities, counties, and State agencies in restricting development on active faults. The Alquist-Priolo Act requires the State geologist to delineate regulatory zones that encompass all potentially and recently active traces of named faults and other such faults, or fault segments that are deemed sufficiently active and well defined as to constitute a potential hazard to structures from surface faulting or fault creep. The project site is not located within an Alquist-Priolo Fault Zone. According to the City of Sacramento 2035 General Plan Background Report, active Alquist-Priolo Fault Zones are located over 50 miles away from Sacramento and include the San Andreas, Concord, and Hayward faults.

According to the Master EIR, seismic hazards present in the Sacramento region include minor ground shaking and liquefaction. The potential of effects from ground shaking are low, and therefore, the risk of seismic-induced ground failure is minimal. The North Natomas community contains soils subject to liquefaction. In addition, high water table levels may increase susceptibility to liquefaction.

Fault rupture, tsunamis, seiches and landslides are not anticipated within the project vicinity due to the area's flat topography and relatively large distance from known faults and large bodies of water.

STANDARDS OF SIGNIFICANCE

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project allow a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards?

   No additional significant environmental effect. The project site presents risk for ground shaking, liquefaction, and expansive soils. Hazards involving seismic activity, fault rupture,

tsunamis, seiches and landslides are anticipated to be low. The City of Sacramento 2035 General Plan Environmental Constraints policy EC 1.1.2 requires geotechnical investigations to determine the potential for ground rupture, ground shaking, and liquefaction due to seismic events, as well as expansive soils and subsidence problems. A geotechnical investigation would be competed as part of the building permit process to ensure that the structures meet applicable Building codes, which have been developed to address geological and seismic hazards. With implementation of the measures recommended in the geotechnical investigation, impacts would be less than significant.

MITIGATION MEASURES

None.

FINDINGS

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

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

ENVIRONMENTAL AND REGULATORY SETTING

Federal regulations and regulations adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) apply to the identification and treatment of hazardous materials during demolition and construction activities. Failure to comply with these regulations respecting asbestos may result in a Notice of Violation being issued by the AQMD and civil penalties under state and/or federal law, in addition to possible action by U.S. EPA under federal law.

Federal law covers a number of different activities involving asbestos, including demolition and renovation of structures (40 CFR § 61.145).

Existing Conditions

The proposed project site is an existing vacant lot located in the community of North Natomas in Sacramento. The project would include the construction of an apartment complex and would require clearing and grading of the site, trenching and digging for underground utilities and infrastructure, and the construction of eight three-story buildings, one single-story building, new internal roadways, driveways, trails/sidewalks, and landscaping.

No hazardous waste sites such as cleanup sites or underground storage tanks listed in the EnviroStor database or Water Board GeoTracker database are located within 1,000 feet of the project site.

Asbestos is a common name for a group of naturally occurring fibrous silicate minerals that are made up of thin but strong durable fibers. These fibers generally vary in size and physical shape. Because of its physical properties, asbestos has been used extensively in construction and is often found during demolition and remodeling projects. The proposed project would not require the demolition or remodeling of any existing structure. In addition, naturally occurring asbestos can be found in serpentine or ultramafic rock deposits. Construction activities that cause such rocks and minerals to be broken release asbestos and result in exposure. According to the Department of Conservation Division of Mines and Geology, no serpentine or ultramafic rock deposits are located within the City of Sacramento (DOC 2000). In addition, the Master EIR does not indicate any risk of exposure. Therefore, the potential risk of exposure to naturally occurring asbestos within the project area is low.

STANDARDS OF SIGNIFICANCE

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

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?

No additional significant environmental effect. A database search found no listing of hazardous materials within the project area. The potential for elevated lead concentrations from aerially deposited lead is low. Construction workers would be required to follow all local and state regulations as well as all safety regulations set by California Occupational Safety and Health Administration (Cal/OSHA). Compliance with all applicable state and local regulations would result in a less-than-significant impact.

B. Would the project expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?

Effect can be mitigated to less than significant. The project would not require the demolition of an existing structure, and therefore, is not anticipated to expose people to asbestos-containing materials. The project would include the use of hazardous materials such as oils, lubricants, fuels, as well as building materials such as concrete and asphalt. Use of hazardous materials would be subject to state and local law. In addition, implementation of Mitigation Measure HAZ-1 would require the preparation of a Spill Prevention and Countermeasure Plan (SPCP) to reduce the risk of exposure to hazardous materials. The project would result in less-than-significant impacts with incorporation of Mitigation Measure HAZ-1.

C. Would the project expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?

No additional significant environmental effect. A search of the Water Board GeoTracker database was completed and did not identify any hazardous waste clean-up sites or underground storage tanks within the project vicinity. The project would not expose people to existing contaminated groundwater. A less-than-significant impact would occur.

MITIGATION MEASURES

Mitigation Measure HAZ-1: Prior to the commencement of construction activities, the contractor shall prepare a SPCP. The SPCP must be submitted to the City for review and approval and shall include information on the nature of all hazardous materials that would be used on-site. The SPCP shall also include information regarding proper handling of hazardous materials and clean-up procedures in the event of an accidental release. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCP.

FINDINGS

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

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

ENVIRONMENTAL SETTING

The project site is located in the northern portion of Sacramento in the Central Valley. The region experiences an average annual rainfall of 17.54 inches that occurs primarily between November and April. Primary surface water sources include the Sacramento River, American River, and the Sacramento-San Joaquin Delta. The project site is located within the Sacramento Valley Groundwater Basin and experiences groundwater elevation of about 10 to 20 feet below mean sea level. Within the city, groundwater recharge occurs at active river and stream channels, inflow of groundwater from the surrounding region, and deep percolation of surface water and precipitation (City of Sacramento 2014a). Sacramento groundwater quality is generally classified as within secondary drinking water standards for municipal use and includes levels of iron, manganese, arsenic, chromium, and nitrates (City of Sacramento 2014a).

The Stormwater Quality Improvement Plan (SQIP) outlines the priorities, key elements, strategies, and evaluation methods of the City's Stormwater Management Program. The Program is based on the National Pollutant Discharge Elimination System (NPDES) municipal stormwater discharge permit. The comprehensive Program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. The Program also includes an extensive public education effort, a target pollutant reduction strategy and a monitoring program.

Sacramento City Code Section 13.08.145 addresses mitigation of drainage impacts and design and procedures for water, sanitary sewer, storm drainage, and water quality facilities. The code requires that when a property contributes drainage to the storm drain system or combined sewer system, all storm water and surface runoff drainage impacts resulting from the improvement or development must be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system and that there is no increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property.

The Federal Emergency Management Agency (FEMA) has identified the project site as within the Special Flood Hazard Area (See Attachment 6: Flood Hazard Zone). Specifically the site is classified as Zone A99, without base flood elevation and is considered within the 100-year flood hazard zone. Zone A99 is defined as areas subject to inundation by the 1-percent-annual-chance flood event, but which will ultimately be protected upon completion of an under-construction Federal flood protection system. These are areas of special flood hazard where enough progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating

purposes. Zone A99 may only be used when the flood protection system has reached specified statutory progress toward completion. No Base Flood Elevations (BFEs) or depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply (City of Sacramento 2014a).

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- **OTHER AREAS**
  - NO SCREEN — Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/10/2018 at 11:34:15 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

LSA

Attachment 6

Sleep Train Apartments Project
Sacramento County, California
LSA Project No. BLU1806

Flood Hazard Zone

Source: FEMA 2018
I:\BLU1806\AI\Site Plan\FloodHazardZone.ai

STANDARDS OF SIGNIFICANCE

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

- substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the Specific Plan or

- substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project?

No additional significant environmental effect. Construction of the project would require excavation, grading, and paving as well as temporary use, storage, and transport of pollutants and hazardous materials such as gasoline, diesel fuel, oil, solvents, and trash. Any soil removed during construction would be stored and controlled to reduce soil erosion and sedimentation of downstream waterways. Pollutants and hazardous materials would be subject to state and local regulations.

The project would comply with the City's grading, erosion and sediment control ordinance (15.88) and stormwater management and discharge control ordinance (13.16). The project would also include site design, source controls, storm water treatment runoff reduction measures, best management practices, Low Impact Development (LID), and hydromodification strategies consistent with the City's NPDES permit.

The State Water Resources Control Board requires dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit 99-08-DWQ). Effective July 1, 2010, all dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The project would comply with the conditions of the State's Construction General Permit.

Compliance with state and local regulations would reduce the potential for materials to enter drainages and degrade downstream water quality. Specifically, the proposed project would

comply with the City of Sacramento's Grading, Erosion and Sediment Control Ordinance to reduce erosion and urban runoff pollution during construction.

Once operational, the project would include drainage features such as LID, consistent with the Stormwater Quality Design Manual for the Sacramento Region (July 2018), to allow for on-site treatment and drainage. In addition, the project would include connection to the City's Combined Sewer System (CSS) which transports runoff to the Sacramento Regional County Sanitation District's (SRCSD's) Sacramento Regional Wastewater Treatment Plant for treatment prior to discharge into the Sacramento River.

The project would not substantially degrade water quality or violate any water quality objectives set by the State Water Resources Control Board. The project would result in a less-than-significant impact.

B. Would the project substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood?

No additional significant environmental effect. The project site is located within a special flood hazard area and is classified as Zone A99 within the 100-year flood zone. However, construction of flood protection features is underway and has reduced flood hazard risk within the area. Given that the project is located within Zone A99, the project would be subject to Section 60.3 of the National Flood Insurance Program (NFIP) regulations, which includes design requirements for anchoring, use of materials resistant to flood damage, and designs to minimize water from entering and accumulating within utility and service components. The proposed project would provide storm drain lines throughout the project site along buildings and roadways, as well as a proposed storm drain along East Commerce Way. In addition, 28% of the proposed project site would consist of pervious surfaces such as landscaping that would allow for runoff filtration. Design features and compliance with local, state, and federal regulations would reduce risk of injury and damage in the event of a 100-year flood and would result in a less-than-significant impact.

MITIGATION MEASURES

None.

FINDINGS

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

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

ENVIRONMENTAL SETTING

Characteristics of Sound

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

Many ways are available to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Existing Noise Environment

Certain land uses are considered more sensitive to noise than others. Examples of these land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is surrounded by a mix of uses within an urban area of the City, including condominiums, professional offices, medical and dental offices. The project site is also adjacent to the Sleep Train Arena, a non-operational large event center. The closest sensitive receptors to the proposed project include the multi-family residences across Sleep Train Arena Main Entrance Road, located approximately 130 feet from the project site.

To assess existing noise levels, LSA conducted noise monitoring to establish the existing ambient noise environment at the project site. Four short-term (15-minute) and one long-term (24-hour) noise measurements were conducted at the project site from October 11, 2018 to October 12, 2018. Noise measurement data collected during the noise monitoring area is summarized in Table E. As shown in Table E, the short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 56.7 dBA to 58.8 dBA L_{eq}. The long-term measurement resulted in a daily noise level of 57.2 dBA L_{dn}. The primary noise sources were reported as construction activity (grading) at the parcel directly southwest across E. Commerce Way, traffic noise from E. Commerce Way, and airplane noise. The meteorological data conditions at the time of the noise monitoring are shown in Table F. Noise measurement sheets are provided in Appendix C.

Table E: Ambient Noise Monitoring Results, dBA

Location Number	Location Description	Start Time	L_{eq}/L_{dn} [a]	L_{max} [b]	L_{min} [c]	Primary Noise Sources
ST-1	Southern boundary of parcel – near commercial offices.	10:49 a.m.	58.8	73.7	47.2	Construction activity (grading) at parcel directly southwest across E. Commerce Way; traffic noise from E. Commerce Way; and airplane noise.
ST-2	Northeast side of parcel along Sports Parkway. Meter was placed approximately at center of northeast parcel boundary.	9:24 a.m.	57.2	78.1	45.2	Construction activity (grading) at parcel directly southwest across E. Commerce Way; traffic noise along E. Commerce Way; minimal traffic on Sports Parkway; and airplane noise.
ST-3	Meter was located 100 feet northeast from center of parcel boundary along E. Commerce Way.	10:25 a.m.	58.1	68.6	49.5	Construction activity (grading) at parcel directly southwest across E. Commerce Way; traffic noise from E. Commerce Way; and airplane noise.
ST-4	Meter was located on north side of parcel, north side of Main Entrance Way, on west side of condominium driveway, close to condominium fence line.	9:55 a.m.	56.7	71.3	48.8	Construction activity (grading) at parcel directly southwest across E. Commerce Way; traffic noise from E. Commerce Way; minimal traffic on Main Entrance Way; and airplane noise.
LT-1	Meter was located on northeast side of parcel along Sports Parkway, approximately in the center of northeast parcel boundary.	9:24 a.m.	56.6/ 57.2	68.7	44.8	Construction activity (grading) at parcel directly southwest across E. Commerce Way; traffic noise along E. Commerce Way; minimal traffic on Sports Parkway; and airplane noise.

Source: LSA (October 2018).
[a] L_{eq} represents the average of the sound energy occurring over the measurement time period for the short-term noise measurements. L_{dn} is the day/night noise level which is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
[b] L_{max} is the highest sound level measured during the measurement time period.
[c] L_{min} is the lowest sound level measured during the measurement time period.

Table F: Meteorological Conditions During Ambient Noise Monitoring

Location Number	Average Wind Speed (mph)	Maximum Wind Speed (mph)	Temperature (˚F)	Humidity (%)
ST-1	1.0	3.4	69.4	48
ST-2	1.6	3.9	67.0	73
ST-3	1.6	4.4	70.9	47
ST-4	0.8	2.3	65.6	59

Source: LSA (October 2018).

Noise Regulatory Framework

The City of Sacramento addresses noise in the Environmental Constraints Element of the General Plan and in the Municipal Code. The Environmental Constraints Element of the General Plan provides the City's goals and policies related to noise, including the exterior noise compatibility standards for various land uses and exterior incremental noise impact standards for noise-sensitive uses, as shown in Table G and H, respectively.

Table G: Exterior Noise Compatibility Standards for Various Land Uses

Land Use Type	Highest Level of Noise Exposure that is Regarded as "Normally Acceptable"[a] (L_{dn}[b] or CNEL[c])
Residential – Low Density Single Family, Duplex, Mobile Homes	60 dBA[d,e]
Residential – Multi-family[g]	65 dBA
Urban Residential Infill[h] and Mixed-Use Projects[i, j]	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

Source: City of Sacramento (March 2015).
Notes:
[a] As defined in the 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_{dn} 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.

Table H: Exterior Incremental Noise Impact Standards for Noise-Sensitive Uses (dBA)

Residences And Buildings Where People Normally Sleep[a]		Institutional Land Uses With Primarily Daytime and Evening Uses[b]	
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

Source: City of Sacramento (March 2015).
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.

The City of Sacramento also addresses noise in Chapter 8.68, Noise Control, of the Municipal Code. Chapter 8.68 limits construction activities to between the hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday and between the hours of 9:00 a.m. and 6:00 p.m. on Sundays; provided that the operation of an internal combustion engine shall not be exempt pursuant to this subsection, if such engine is not equipped with suitable exhaust and intake silencers which are in good working order.

STANDARDS OF SIGNIFICANCE

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

- result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- result in residential interior noise levels of 45 dBA Ldn or greater caused by noise level increases due to the project;
- result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases?

No additional significant environmental effect. The proposed project would generate long-term noise impacts from both traffic and stationary sources, as discussed below.

Traffic Noise Impacts. Motor vehicles with their distinctive noise characteristics are the dominant noise source in the project vicinity. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Implementation of the proposed project would result in new daily trips on local roadways in the project site vicinity. A characteristic of sound is that a doubling of a noise source is required in order to result in a perceptible (3 dBA or greater) increase in the resulting noise level.

As identified in the Section 12, Transportation and Circulation, the proposed project would generate approximately 1,169 average daily trips, with approximately 75 trips occurring in the AM peak hour and approximately 90 trips occurring in the PM peak hour. The adjacent E. Commerce Way carries approximately 8,890 average daily trips. Project trips would represent a small increase in noise level, approximately 0.5 dBA L_{dn} based on the following equation:

$$Change\ in\ (dBA) = 10 * \log_{10}\left(\frac{Current\ Volume}{\text{Future Volume}}\right)$$

Project daily trips would not result in a perceptible noise increase along any roadway segment in the project vicinity, and impacts, would be less than significant.

Stationary Noise Impacts. Implementation of the proposed project would generate various on-site stationary noise sources, including heating, ventilation, and air conditioning (HVAC) equipment and parking lot activities. As identified above, the nearest off-site sensitive receptors in the vicinity of the project include the multi-family residences across Sleep Train Arena Main Entrance Road, located approximately 130 feet from the project site boundary.

HVAC Equipment. HVAC equipment could be a primary noise source associated with residential uses. HVAC equipment is often mounted on rooftops, located on the ground, or located within mechanical rooms. The noise sources could take the form of fans, pumps, air compressors, chillers, or cooling towers. HVAC operations would be required to meet all noise standards.

Precise details of HVAC equipment, including future location and sizing, are unknown at this time; therefore, for purposes of this analysis, 75 dBA at 3 feet was assumed to represent HVAC-related noise (Trane 2002). The closest off-site noise-sensitive receptors would be approximately 150 feet from the nearest proposed residential building, Building 1. Based on a reduction in noise of 6 dBA per doubling of distance, the nearest off-site residences would be exposed to a noise level of 41 dBA L_{max} generated by HVAC equipment. The noise associated with the HVAC equipment would be lower than ambient noise at the off-site residences and therefore would not exceed the City's incremental noise impact standards. Therefore, noise impacts associated with HVAC equipment would be less than significant. No mitigation is required.

Parking Lot Noise. Parking lot noise on the site and on nearby streets (including engine sounds, car doors slamming, car alarms, loud music, and people conversing) would occur as a result of the proposed project. Typical parking lot activities, such as people conversing or doors slamming, generates approximately 60 dBA to 70 dBA L_{max} at 50 feet. The closest off-site noise-sensitive receptors would be located approximately 200 feet from the proposed parking spaces near Building 1. Adjusted for distance, the nearest off-site residences would be exposed to a noise level of 48 dBA to 58 dBA L_{max} generated by parking lot activities. When averaged over a 24-hour period, parking lot activities would not cause an increase in noise levels of more than 3 dBA.

As noted above, the long-term measurement resulted in a daily noise level of 57.2 dBA L_{dn} at the project site. The nearest off-site sensitive receptors include the multi-family residences across Sleep Train Arena Main Entrance Road, located approximately 130 feet from the project site. This analysis assumes that these off-site sensitive receptors are also exposed to a daily noise level of 57.2 dBA L_{dn} as these sensitive receptors are exposed to similar traffic conditions as the project site. Therefore, according to the City's incremental noise impact standards, a noise increase of 3 dBA would be considered significant. Parking lot activities associated with the proposed project would not substantially increase noise levels over existing conditions and impacts would be less than significant. No mitigation is required.

B. Would the project result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project?

No additional significant environmental effect. As discussed above, implementation of the proposed project would not result in substantial increase in traffic noise levels on local roadways in the project vicinity or operational noise at sensitive receptor locations. Therefore, project-related noise increases would not result in interior noise levels of 45 dBA L_{dn} or greater at the nearest off-site sensitive receptors. This impact would be considered less than significant.

C. Would the project result in construction noise levels that exceed the standards in the City of Sacramento General Plan or Noise Ordinance?

No additional significant environmental effect. Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during grading and site preparation activities. Table I lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the proposed project is completed.

Table I: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[a]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[a] Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
L_{max} = maximum instantaneous sound level

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the project site. As shown in Table I, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table I lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels range up to 88 dBA L_{max} at 50 feet during the noisiest construction phase, assuming a crane, forklift, tractor, welder, and backhoe would be operating simultaneously. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

The closest sensitive receptors to the proposed project include the multi-family residences across Sleep Train Arena Main Entrance Road, located approximately 130 feet from the project site. Based on a reduction in noise of 6 dBA per doubling of distance, there would be a decrease of approximately 8 dBA from the active construction area to the nearest residences. Therefore, the closest off-site sensitive receptors may be subject to short-term construction noise reaching 80 dBA L_{max} when construction is occurring at the project site boundary. Based on this maximum noise level, construction of the proposed project would result in hourly noise levels of 75 dBA L_{eq}.

Construction noise levels would be above existing noise at the off-site sensitive receptors. However, construction noise would be intermittent and sporadic as construction occurs over the 6.4-acre site. Noise levels would attenuate at sensitive receptors as construction activity moves further into the site. In addition, construction noise is exempt from the standards identified in Chapter 8.68 Noise Control of the Municipal Code when activities occur 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 Sundays; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to subsection 8.68.080(D) of the Sacramento Municipal Code if such engine is not equipped with suitable exhaust and intake silencers which are in good working order.

As discussed above, construction noise would result in a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the proposed project. However, as stated above such increases would be exempt from the City's noise ordinance standards, and therefore, construction of the proposed project would not expose persons to or generate noise levels in excess of standards established in the local General Plan or noise ordinance. The proposed project would comply with standards established in the local General Plan and noise ordinance related to construction noise levels, and therefore, impacts would be considered less than significant.

D. Would the project permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction?

No additional significant environmental effect. When assessing annoyance from groundborne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB". Human perception of vibration starts at levels as low as 67 VdB and sometimes lower. Annoyance due to vibration in residential settings starts at approximately 70 VdB. In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). Common sources of groundborne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment.

Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and will assess the potential for building damage using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage. The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Table J shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table J, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of groundborne vibration when measured at 25

feet, based on the Transit Noise and Vibration Impact Assessment. At this level, groundborne vibration would result in potential annoyance to residents and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$LvdB\ (D) = LvdB\ (25\ ft) - 30\ Log\ (D/25)$$

$$PPVequip = PPVref \times (25/D)1.5$$

Table J: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 feet	
	PPV (in/sec)	L^V (VdB)[a]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2006).
[a] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
µin/sec = micro-inches per second
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. The closest residential structures are located 130 feet from the construction boundary. Based on distance attenuation, the closest residences would experience vibration levels of up to 66 VdB (0.008 in/sec PPV). This vibration level from construction equipment at the closest residential structures would not exceed the City's threshold of 0.5 in/sec PPV or the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. This level is also below the FTA's "barely perceptible" human response criteria of 0.04 in/sec PPV for transient sources of vibration events. Therefore, groundborne vibration impacts from construction activities associated with the proposed project would be considered less than significant.

E. Would the project permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations?

No additional significant environmental effect. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may

be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This threshold is an order of magnitude below the damage threshold for normal buildings.

As noted above, typical sources of groundborne vibration include trains, construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices is only a potential issue when it occurs within 25 feet of sensitive uses. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of old buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The project site is not located near railroad tracks and therefore would not expose sensitive receptors to vibration peak particle velocities greater than 0.5 inches per second due to rail operations. In addition, the project site is located approximately 0.25 miles (1,400 feet) east of Interstate 5. At this distance, the proposed project would also not expose sensitive receptors to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic. In addition, the streets surrounding the project site are paved, smooth, and unlikely to cause significant groundborne vibration. The rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. Given that no such train or vehicular vibration impacts would occur, then no vibration impact analysis of trains or on-road vehicles is necessary. Additionally, once constructed, the proposed project would not contain uses that would generate groundborne vibration. Therefore, this impact would be less than significant.

F. Would the project permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic?

No additional significant environmental effect. As discussed in Section 4, Cultural Resources, background research and a field survey did not identify potential cultural resources constraints at the project site. In addition, as discussed above, for typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. The closest residential structures are located 130 feet from the construction boundary. Based on distance attenuation, the closest residences would experience vibration levels of up to 66 VdB (0.008 in/sec PPV). This vibration level would not exceed the City or FTA thresholds and groundborne vibration impacts from construction activities associated with the proposed project would be considered less than significant.

MITIGATION MEASURES

None.

FINDINGS

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

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

ENVIRONMENTAL SETTING

The project is located within the community of North Natomas in the City of Sacramento. Surrounding development includes residential and commercial land uses and is zoned as EC-40-PUD, Entertainment Center – Planning Unit Development. The public services detailed below provide service to the project site.

Fire Protection

The City's Sacramento Fire Department (SFD) provides fire protection services to the project site. SFD services include responding to and mitigating fires, medical emergencies, hazardous materials, and technical and water rescue. The Department shares its headquarters with the Sacramento Police Department at the Public Safety Center located at 5770 Freeport Boulevard. The following fire stations are located near the project site.

Fire station #43 is located approximately 1.6 miles from the project site at 4201 El Centro Road and consists of one Engine Company and one Truck Company each staffed with one Captain, one Engineer, and two Firefighters; and one Medic staffed with two Firefighters/Paramedics.

Fire station #18 is located approximately 2.6 miles from the project site at 746 North Market Boulevard and consists of one Engine Company staffed with one Captain, one Engineer, and two Firefighters.

Fire station #30 is located approximately 3 miles from the project site at 1901 Club Center Drive and consists of one Engine Company and one Truck Company each staffed with one Captain, one Engineer, and two Firefighters; and one Medic staffed with two Firefighters/Paramedics (City of Sacramento 2014a; City of Sacramento Fire Department 2016).

Police Protection

The Sacramento Police Department (SPD) provides law enforcement services to the project site. SPD headquarters are located at the Public Safety Center, Chief John P. Kearns Administration Facility at 5770 Freeport Boulevard. The City's North Area Substation, William J. Kinney Police Facility is closest to the project site and is located approximately 7 miles for the site at 3550 Marysville Boulevard (City of Sacramento 2014a). According to the SPD's 2016 annual report, the SPD has 697 sworn police officers and 269 civilian positions.

Schools

The Natomas Unified School District (NUSD) provides educational services to the project site. In other areas, the City of Sacramento also receives educational services from the Sacramento City Unified School District (SCUSD), Twin Rivers Unified School District, Robla School District, San Juan Unified School District, and Elk Grove Unified School District. NUSD consists of two high schools, one middle

school, and eight elementary schools within the Natomas area. The elementary school located nearest to the project site is H. Allen Hight Elementary School located at 3200 North Park Drive, approximately 1.5 miles away from the project site; the closest middle school is Natomas Middle School and is also located at 3200 North Park Drive approximately 1.5 miles away; and the closest high school is Inderkum High School located at 2500 New Market Drive, approximately 1.2 miles away from the project site. In addition, the Natomas Pacific Pathways Prep (NP3) Charter Elementary is located at 4400 East Commerce Way, approximately 0.5 mile from the project site (City of Sacramento 2014a).

Parks

According to the City of Sacramento, the City's Youth, Parks and Community Enrichment (Parks) Department maintains 226 parks, recreation, parkway and open space sites, 88 miles of road bikeways and trails, 21 lakes, ponds, or beaches, and over 27 aquatic facilities, totaling more than 3,200 acres of parkland. The community of North Natomas maintains 44 parks totaling 624 acres. The Parks Master Plan Park Acreage Service Level Goal is to provide 5.0 acres of neighborhood and community parks and other recreational facilities/sites per 1,000 population. Section 11 Recreation includes further discussion regarding park and open space amenities near the project site.

STANDARDS OF SIGNIFICANCE

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluated the potential effects of the 2035 General Plan on various public services. These include police, fire protection, schools, libraries, and emergency services (Chapter 4.10).
The General Plan provides that adequate staffing levels for police and fire are important for the long-term health, safety, and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master EIR concludes that effects of development that could occur under the General Plan would be less than significant.
General Plan policies that call for the City to consider impacts of new development on schools (see, for example, Policy ERC 1.1.2 setting forth locational criteria, and Policy ERC 1.1.4 that encourages joint-use development of facilities) reduce impacts on schools to a less-than-significant level. (Impacts 4.10-3, 4) Impacts on library facilities were considered less than significant (Impact 4.10-5).

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project result in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan?

   No additional significant environmental effect. The proposed project is consistent with 2035 General Plan land use designations and current zoning. The project would provide additional housing to the area and would result in an increase in population. However, any expected growth has been anticipated in the 2035 General Plan. The 2035 General Plan identifies policies, as listed above, to reduce impacts on government services. In addition, as required by the California Fire Code, interior roadways within the project site would be constructed and maintained to allow for fire access, fire hydrants and fire control systems would be provided, and a water flow test would be performed. The project would include common areas such as a swimming pool, community garden, and dog park, which would reduce the effects on public parks. The project proponent would pay any required in-lieu park fees, as specified in Sacramento City Code Chapter 17.512, and would form a parks maintenance district or would annex the project to an existing parks maintenance district. The project would not require the need for public facilities or

governmental service beyond what has been anticipated in the 2035 General Plan. The project would result in a less-than-significant impact.

MITIGATION MEASURES

None.

FINDINGS

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

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

ENVIRONMENTAL SETTING

The City of Sacramento Youth, Parks and Community Enrichment (Parks) Department maintains 226 parks, recreation, parkway and open space sites, 88 miles of road bikeways and trails, 21 lakes, ponds, or beaches, and over 27 aquatic facilities, totaling more than 3,200 acres of parkland. The community of North Natomas includes 44 parks totaling 624 acres (City of Sacramento 2014a). The following includes a discussion of recreation areas such as parks and trails within the project vicinity.

Existing Class II Bike Lanes are present along East Commerce Way, as well as major arterial roadways within the project vicinity such as Del Paso Road, Arena Boulevard and Truxel Boulevard. The closest existing Class I Bike Path, to the project site, is located approximately 0.8 mile from the project site along the East Drainage Canal, just east of Truxel Road. According to the City's 2016 Bicycle Master Plan, an off-street bike facility is planned north of the project site along West Entrance Road, the northern portion of Sports Parkway, and East Entrance Road (City of Sacramento 2016).

The proposed project would be located approximately 1 mile away from the North Natomas Regional Park. The 47.30-acre park provides baseball/softball facilities, bikeways, bridges, a man-made lake, picnic area, play area, dog park, and outdoor amphitheater. In addition, Quail Park (3401 Colchester Avenue), Witter Ranch Park (3795 Saintsbury Drive), Linden Park (4001 Innovator Drive), and Sundance Park (4742 Windsong Street) are located within 0.75 mile of the project site and provide recreation amenities such as picnic areas, volleyball courts, open lawn areas, soccer fields, and baseball fields.

STANDARDS OF SIGNIFICANCE

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

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?

   No additional significant environmental effect. Construction of the proposed apartment complex would result in an increase in population and could result in increased use and demand of area parks and recreational facilities. The project would comply with the City's 2035 General Plan Policy ERC 2.2.5 and would therefore minimize any adverse effects on recreation. The project would result in less-than-significant impacts.

B. Would the project create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?

   No additional significant environmental effect. The proposed project is consistent with 2035 General Plan land use designations and current zoning. Therefore, the project would not create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan. No impact would occur.

MITIGATION MEASURES

None.

FINDINGS

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

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

ENVIRONMENTAL SETTING

A traffic analysis was previously completed for the proposed office building complex, Natomas Crossing Quad B, located adjacent to the project site on the west side of East Commerce Way. The traffic analysis was completed in April 2018, by DKS Associates during the environmental review process for the Natomas Crossing Quad B project. The traffic analysis evaluated intersections that would also be applicable to the proposed project; therefore, because of the close proximity of the intersections evaluated in the DKS study and the recent nature of the document (April 2018), the analysis in this initial study relies on the traffic study conducted for the Natomas Crossing Quad B project.

Roadway System

The below description of existing roadways within the project vicinity is based on the traffic analysis completed by DKS Associates for Natomas Crossing Quad B.

East Commerce Way runs north to south, parallel to Interstate 5 (I-5), and is classified as an arterial roadway. It borders the project site on the west. Within the project vicinity, between Del Paso Road and Arena Boulevard, the roadway provides six traffic lanes, turn lanes, and a center median. It currently extends from Elkhorn Boulevard in the north to Natomas Crossing Drive in the south and is planned to extend further south to San Juan Road (DKS Associates 2018).

Arena Boulevard is an east-west arterial roadway that lies south of the project site, extending from El Centro Road to Gateway Park Boulevard. Beyond El Centro Road to the west, the roadway continues as Natomas Central Drive. Beyond Gateway Park Boulevard to the east, it extends as North Market Boulevard. The roadway provides four to eight travel lanes with turn lanes and a center median. The arterial has an interchange with I-5, west of the project site (DKS Associates 2018).

Del Paso Road is an east-west arterial roadway that lies north of the project site, extending from Power Line Road, west of the city limits, to Northgate Boulevard at Steelhead Creek where the roadway continues as Main Avenue. Del Paso Road provides six travel lanes between I-5 and Blackrock Drive. In addition, the roadway has an interchange with I-5, west of the project site (DKS Associates 2018).

I-5 is located west of the project site and runs north to south. The interstate provides primary access to the project and connects to Downtown Sacramento via Interstate 80 to the south as well as Sacramento International Airport north of the project site. The interstate also provides access to State Route 70 / 99 north of the project site. Primary access to the project site is provided through interchanges with Del Paso Road and Arena Boulevard (DKS Associates 2018).

Sports Parkway is a one-way five-lane roadway located immediately northeast of the project site. The roadway provides access to Sleep Train Arena and forms a semi-circle from West Entrance Road to East Entrance Road.

Sleep Train Arena Main Entrance Road connects East Commerce Way to Sports Parkway and is located immediately northwest of the project site. The eight-lane roadway previously provided primary access to the Arena and would provide primary access to the project site. The project includes a driveway into the project site along Sleep Train Arena Main Entrance Road.

The DKS traffic analysis for Natomas Crossing Quad B evaluated the following primary intersections relevant to the proposed project:

- Del Paso Road and East Commerce Way
- Sleep Train Arena Main Entrance Road and East Commerce Way
- Arena Boulevard and East Commerce Way

The DKS traffic analysis also considered additional intersections such as West Entrance Road and East Commerce Way, the Bella Rose Condominium Driveway and East Commerce Way, and the KSP Arena Corporate Center Driveway and East Commerce Way. An extension of West Entrance Road, called Snowy Egret Drive, is planned west of East Commerce Way and would border the Natomas Crossing Quad B project site. In addition, driveway access to the Natomas Crossing Quad B project site is planned at the Bella Rose Condominium Driveway and East Commerce Way intersection and the KSP Arena Corporate Center Driveway and East Commerce Way intersection. None of these intersections provide access to the proposed project site and are only planned to serve the future Natomas Crossing Quad B project site. Therefore, the proposed project is not anticipated to result in an impact to these intersections and are not discussed further in this analysis.

The DKS Associates traffic analysis was conducted to determine level of service (LOS), a qualitative description of traffic flow based on such factors as speed, travel time, delay, freedom to maneuver, and safety. Six levels are defined from LOS A, as free-flow operating conditions, to LOS F, or overcapacity operating conditions. LOS E represents "at-capacity" operations. When traffic volumes exceed intersection capacity, stop-and-go conditions result, and operations are designated as LOS F. The City's LOS standard for intersections in the study area is LOS D.

Operational analysis, a methodology outlined in the Transportation Research Board's Special Report 209, Highway Capacity Manual 2010, was used by DKS Associates to conduct intersection analyses. Intersection turning movement counts were conducted during the a.m. weekday peak period (7:00 a.m. to 9:00 a.m.) and the p.m. weekday peak period (4:00 p.m. to 6:00 p.m.) at the Del Paso Road and East Commerce Way intersection on September 27, 2017, at the Main Entrance Road and East Commerce Way intersection on March 6, 2018 and the Arena Boulevard and East Commerce Way intersection on March 9, 2017 (DKS Associates 2018). Existing intersection operating conditions are outlined in Table K below.

Table K: Existing Intersection Operating Conditions

Intersection	A.M Peak Hour		P.M. Peak Hour	
	Delay (Seconds)	LOS	Delay (Seconds)	LOS
Del Paso Road and East Commerce Way (signalized)	48.5	D	44.4	D
Main Entrance Road and East Commerce Way (signalized)	5.7	A	4.3	A
Arena Boulevard and East Commerce Way (signalized)	26.0	C	23.0	C

Source: DKS Associates, 2018

Transit Service

Public transit service in the project area is provided by Sacramento Regional Transit which includes 212 compressed natural gas-powered buses, 27 shuttle vans, and 97 light rail vehicles. Bus Route 11, 13, 170, and 171 service the project vicinity and the closest bus stations are located at Truxel Road and Arena Boulevard (Bus Route 11) and Duckhorn Drive and Arena Boulevard (Bus Route 171), each approximately 1 mile from the project site. Bus routes connect to Downtown Sacramento and Light Rail services (SacRT 2018).

Bicycle Service

Existing Class II Bike Lanes are provided along East Commerce Way, Del Paso Road, and Arena Boulevard. Table L below details bike counts recorded in the peak hour turning movement count prepared by National Data and Surveying Services for the DKS Associates traffic analysis.

Table L: Existing Peak Hour Bike and Pedestrian Counts

Intersection	A.M Peak Hour		P.M. Peak Hour	
	Bike	Ped	Bike	Ped
Del Paso Road and East Commerce Way (signalized)	8	30	5	24
Main Entrance Road and East Commerce Way (signalized)	2	0	2	2

Source: DKS Associates, 2018

Pedestrian Service

Along East Commerce Way, between Arena Boulevard and Del Paso Road, sidewalks are provided on both sides of the roadway with marked crosswalks at each intersection. No pedestrian facilities are available along Main Entrance Road or Sports Parkway. Pedestrian counts included in the peak hour turning movement count prepared by National Data and Surveying Services for the DKS Associates traffic analysis are listed in Table L. Bike and pedestrian counts for the Arena Boulevard and East Commerce Way intersection were not included in the traffic analysis.

Freeway Facilities

The proposed project is located in close proximity to the I-5 Del Paso Road ramps and I-5 Arena Blvd ramps. Table M shows the level of service for Del Paso Road and Arena Blvd for 2018. Based on the 2018 LOS for the Del Paso Road and Arena Blvd, the ramps have acceptable level of service. Table M also shows the level of service for the intersections at East Commerce Way & Del Paso Road as well as East Commerce Way & Arena Blvd. Based upon the City's level of service policy, LOS D is allowed at these intersections.

Table M: Freeway Ramp Level of Service 2018

Location	Intersection	AM Peak Hour	PM Peak Hour
		2018	2018
I-5/ Del Paso Road	I-5 NB off-ramp	B	B
	I-5 SB off-ramp	A	A
I-5/ Arena Blvd	I-5 NB off-ramp	A	A
	I-5 SB off-ramp	A	A

STANDARDS OF SIGNIFICANCE

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

Roadway Segments

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

Intersections

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

Freeway Facilities

Caltrans considers the following to be significant impacts:

- off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;
- project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- the expected ramp queue is greater than the storage capacity.

Transit

- adversely affect public transit operations; or
- fail to adequately provide for access to public transit.

Bicycle Facilities

- adversely affect bicycle travel, bicycle paths; or
- fail to adequately provide for access by bicycle.

Pedestrian Circulation

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

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

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project degrade peak period roadway segments Level of Service (LOS) from A, B, C or D (without the project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more?

No additional significant environmental effect. The Master EIR analyzes traffic impacts to roadway segments within the project area including segments of Del Paso Road, East Commerce Way, and Arena Boulevard. The Master EIR concludes that all roadways within the project area would continue to operate at the acceptable standard (LOS A-D) at full buildout of the proposed 2035 General Plan. As the proposed project is consistent with the 2035 General Plan land use designations, the proposed project impacts to roadway segments LOS would not exceed expectations of the 2035 General Plan, and therefore, project impacts are anticipated to be less than significant.

Trip Generation

Table N shows the trip generation of the existing zoning (EC-40 per Arena Corporate PUD) based on trip rates published in *Trip Generation, 10th Edition* (Institute of Transportation Engineers, 2017). According to the Arena Corporate PUD, land zoned for EC-40 is allowed a maximum of 10 percent for retail. The existing land zoned for EC-40 is expected to generate approximately 1981 new daily vehicle trips with 244 trips during the AM peak hour and 165 trips during the PM peak hour.

Table N: Existing Zoning Trip Generation

Land Use	Quantity	ITE Land Use Code	Trips						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Office Building, General	232 employees	710	958	73	15	88	17	69	86
Shopping Center	7,400 sq.ft.	820	1024	96	59	155	38	41	79
Total Trips			**1981**	**170**	**74**	**244**	**55**	**110**	**165**

Table O shows the trip generation of the proposed project based on trip rates published in *Trip Generation, 10th Edition* (Institute of Transportation Engineers, 2017). Without accounting for alternative mode trips (walking, biking, and transit), the proposed project is expected to generate approximately 1169 new daily vehicle trips with 75 trips during the AM peak hour and 90 trips during the PM peak hour.

Table O: Project Trip Generation

Land Use	Quantity	ITE Land Use Code	Trips						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	160 units	220	1169	17	57	75	57	33	90

The proposed project would not result in daily vehicle trips or A.M. or P.M. peak hour trips in exceedance of those consistent with the existing zoning and the Master EIR; therefore, the project impacts are anticipated to be less than significant.

B. Would the project degrade peak period intersection level of service from A, B, C or D (without project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more?

No additional significant environmental effect. The analysis performed by DKS Associates finds that all project area intersections are anticipated to operate at LOS D and would not result in below standard LOS operation (DKS Associates 2018).

Table P: Existing Plus Natomas Crossing Quad B Project Intersection Operating Conditions

Intersection	A.M Peak Hour		P.M. Peak Hour	
	Delay (Seconds)	LOS	Delay (Seconds)	LOS
Del Paso Road and East Commerce Way (signalized)	55.0	D	46.3	D
Main Entrance Road and East Commerce Way (signalized)	41.2	D	38.8	D
Arena Boulevard and East Commerce Way (signalized)	42.6	D	38.5	D

Source: DKS Associates 2018

In addition, the analysis performed by DKS Associates includes recommended measures that the Main Entrance Road and East Commerce Way intersection be signalized, permit all movements, operate with protected left-turn movements north-south and east-west, and maintain existing northbound left turn lane, northbound right turn lane, and southbound left turn lane. The proposed project applicant would coordinate the traffic signal with the applicant of the Natomas Crossing Quad B project.

The Natomas Crossing Draft EIR (Raney Planning & Management, Inc. 2009) includes analysis of the future plus project conditions based on the anticipated commercial use at the proposed project site and the continued operation of the Sleep Train Arena. The East Commerce Way/Sleep Train Arena Main Entrance intersection would result in an increased delay in the P.M. peak hour, while the East Commerce Way/Arena Boulevard intersection would result in an increased delay in the A.M. peak hour.

Based on the traffic analyses conducted for the Natomas Crossing Quad B project and the ultimate Natomas Crossing project, the proposed project would not result in a LOS below the LOS D standard (DKS Associates 2018). A less-than-significant impact involving project intersection level of service would occur.

C. Would the project result in off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway; project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service; project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or the expected ramp queue is greater than the storage capacity?

No additional significant environmental effect. Traffic operations in the project area under buildout of the General Plan are previously analyzed in the Master EIR. As shown in Exhibit 4.12-3, of the Master EIR, the circulation network in proximity to the project site is anticipated to operate acceptably under buildout of the General Plan, with the exception of portions of I-5. The project is consistent with the 2035 General Plan, therefore, the cumulative traffic impacts to freeway operations associated with planned development on the project site are not anticipated to exceed 2035 General Plan conditions. The proposed project would result in a less-than-significant impact.

D. Would the project adversely affect public transit operations or fail to adequately provide for access to public transit?

No additional significant environmental effect. The project would include the construction of 160 apartment units, and therefore, would increase population within the area. Increased population may result in increased public transit use. However, the proposed project would be

consistent with current zoning and General Plan land use designations, and as such, would be within the planned capacity for public transit use. A less-than-significant impact would occur.

E. Would the project adversely affect bicycle travel, bicycle paths or fail to adequately provide for access by bicycle?

No additional significant environmental effect. The project would not require the removal of any existing bicycle facilities. Bike lanes are provided along arterial roadways within the project facility. Based on the traffic analysis completed by DKS Associates for Natomas Crossing Quad B, existing bicycle use is low and there is adequate capacity. In addition, the project would provide bicycle parking for long-term and short-term use. The project would result in less-than-significant impacts to bicycle facilities.

F. Would the project adversely affect pedestrian travel, pedestrian paths or fail to adequately provide for access by pedestrians?

No additional significant environmental effect. The project would not require the permanent removal of any existing pedestrian facilities and would provide for pedestrian access to the project. The sidewalk located along East Commerce Way would be reconstructed approximately 4 feet east of its current location to accommodate the right turn lane onto Sleep Train Arena Main Entrance Road, and sidewalks would be developed on the north, east, and south sides of the proposed project. The project would also include pedestrian paths within the apartment complex and would result in less-than-significant impacts to pedestrian facilities.

MITIGATION MEASURES

None.

FINDINGS

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

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
13. TRIBAL CULTURAL RESOURCES Would the project: A) Cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code 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: i. 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		X	
ii. 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.		X	

ENVIRONMENTAL SETTING

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

The proposed project area is situated within the lands traditionally occupied by the Valley Nisenan, or Southern Maidu. The language of the Nisenan includes several dialects and is classified within the Maiduan family of the Penutian linguistic stock (Kroeber 1925). Valley Nisenan territory was divided into politically autonomous “triblet” areas, each including several large villages (Moratto 1984). Two important villages were located near the project area, on the south bank of the American River, Momol, to the west of the project area, and Yalisumni, to the east (Wilson and Towne 1978:388).

Nisenan houses were domed structures covered with earth and tule or grass that measured 10–15 feet in diameter. Brush shelters were used in the summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule or brush and had a central smoke hole at the top and an east-facing entrance. Another common village structure was a granary, which was used for storing acorns (Wilson and Towne 1978).

Valley Nisenan people followed a seasonal round of food gathering, as did most California Indians. Food staples included acorns, buckeyes, pine nuts, hazelnuts, various roots, seeds, mushrooms, greens, berries, and herbs. Game was roasted, baked, or dried and included mule deer, elk, antelope, black bear, beaver, squirrels, rabbits, and other small animals and insects. Salmon, whitefish, sturgeon, and suckers, as well as freshwater shellfish, were all caught and eaten (Wilson and Towne 1978).

Euro-American contact with the Nisenan began with infrequent excursions by Spanish explorers and Hudson's Bay Company trappers traveling through the Sacramento-San Joaquin Valley in the early 1800s (Wilson and Towne 1978). With the coming of Russian trappers, Spanish missionaries, and Euro-American settlers, traditional lifeways were threatened by competition for land and resources, and by the introduction of new diseases. The malaria epidemic of 1833 decimated the Valley Nisenan population, killing an estimated 75 percent of the population. The influx of Euro-Americans during the Gold Rush-era further reduced the population due to forced relocations and violent retribution from the miners for real or imagined affronts.

Despite these major and devastating historical setbacks, today many Native Americans in the proposed project area are maintaining traditional cultural practices. Sometimes supported by thriving business enterprises, Tribal groups maintain governments, historic preservation programs, education programs, cultural events, and numerous other programs that sustain a vibrant culture.

Native American Consultation

Under PRC section 21080.3.1 and 21082.3, the City must consult with tribes traditionally and culturally affiliated with the project area that have requested formal notification and responded with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

The City of Sacramento sent requests for consultation under AB 52 to the traditionally and culturally affiliated California Native American tribes that had previously requested, in writing, to receive such notice. As of the preparation of this initial study, one tribe responded [Public Resources Code (PRC) Section 21080.3.1) and provided some suggested mitigation measures. The City then coordinated with the tribe on the mitigation measures to address potential impacts from inadvertent discoveries of Tribal Cultural Resources (TCRs). The tribe did request to have the environmental documents circulated for public review. No consultation under AB 52 was requested during the notice period as described in PRC Section 21080.3.1.

Sacred Lands File Search

The NAHC maintains the Sacred Lands File and is the official State repository of Native American sacred site location records in California. LSA requested a review of the NAHC's Sacred Lands File on September 12, 2018. In a letter dated September 26, 2018, provided via email, the NAHC responded that the search was negative for sacred lands. NAHC also provided a list of 10 local Native American representatives that would potentially be interested in consulting on the project consistent with the requirements of Assembly Bill 52 (AB 52) and Senate Bill 18 (California Public Resources Code § 21080.3.1; California Government Code § 65352.3). As required by AB 52, the City shall initiate consultation with local Native American representatives within 15 days of receipt of the project application.

REGULATORY SETTING

Federal

No Federal plans, policies, or regulations related to Tribal Cultural Resources are directly applicable to the proposed project; however, Section 106 of the National Historic Preservation Act does require consultation with Native Americans to identify and consider certain types of cultural resources. Cultural resources of Native American origin identified as a result of the identification efforts conducted under Section 106 may also qualify as tribal cultural resources under CEQA.

State

California Environmental Quality Act — Statute and Guidelines. CEQA requires that public agencies that finance or approve public or private projects must assess the effects of the project on tribal cultural resources. Tribal cultural resources are defined in PRC 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 that is (1) listed or determined eligible for listing on the California Register of Historical Resources (CRHR) or a local register, or (2) that are 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 the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

California Public Resources Code Section 5024. PRC Section 5024.1 establishes the CRHR, which is the authoritative guide for identifying the State's historical resources to indicate what properties are to be protected, if feasible, from substantial adverse change. For a resource to be eligible for the CRHR, it must be more than 50 years old, retain its historic integrity, and satisfy one or more of the following 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.

4. Has yielded, or may be likely to yield, information important in prehistory or history.

STANDARDS OF SIGNIFICANCE

For the purposes of this Initial Study, a tribal cultural resource is considered to be a significant resource if the resource is: 1) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources; or 2) the resource has been 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. For purposes of this Initial Study, impacts on tribal cultural resources may be considered significant if construction and/or implementation of the proposed project would result in the following:

- cause a substantial change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluates the potential effects of development under the 2035 General Plan on prehistoric and historic resources (see Master EIR Chapter 4.4 and Appendix C – Background Report, B.

Cultural Resources Appendix), but does not specifically address tribal cultural resources because that resource type had not yet been defined in CEQA at the time the Master EIR was adopted. The Master EIR identifies significant and unavoidable effects on historic resources and archaeological resources, some of which could be tribal cultural resources as defined by Public Resources Code 21074. Ground-disturbing activities resulting from implementation of development under the 2035 General Plan could affect the integrity of an archaeological site (which may be a tribal cultural resource), thereby causing a substantial change in the significance of the resource. General Plan policies identified as reducing such effects on cultural resources that may also be tribal cultural resources include identification of resources on project sites (Policy HCR 2.1.1); implementation of applicable laws and regulations (Policy HCR 2.1.2); consultation with appropriate organizations and individuals including the Native American Heritage Commission and implementation of their consultation guidelines (Policy HCR 2.1.3); enforcement programs to promote the maintenance, rehabilitation, preservation, and interpretation of the City's historic resources (Policy HCR 2.1.4); listing of qualified historic resources under appropriate national, State, and local registers (Policy HCR 2.1.5); consideration of historic and cultural resources in planning studies (Policy HCR 2.1.6); enforcement of compliance with local, State, and federal historic and cultural preservation requirements (Policy HCR 2.1.8); and early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10).

Of particular relevance to this project are policies that ensure compliance with protocol that protect or mitigate impacts to archaeological resources (Policy HCR 2.1.16) and that encourage preservation and minimization of impacts on cultural resources (Policy HCR 2.1.17).

Mitigation Measures from 2035 General Plan Master EIR that apply to the Project

None. As noted above, the Master EIR does not specifically address tribal cultural resources but does address archaeological resources and other cultural resources and notes that because the presence of significant archaeological resources is typically unknown until the resource is uncovered, which often occurs during ground disturbing activities, adverse effects may occur prior to discovery of the archaeological resources. Therefore, although laws and regulations combined with General Plan policy would substantially reduce impacts to these resources once they are discovered, the initial impacts that might occur prior to discovery would be considered potentially significant and that protection of all important archaeological resources from damage or destruction cannot be assured.

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project Cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code 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:

   i. 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

   ii. 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.

   Effect can be mitigated to less than significant. No tribal cultural resources have been identified at the project site. As discussed above, the City of Sacramento sent requests for consultation, as required by AB 52, and received a response from one tribe. The City coordinated with the tribe on the mitigation measures to address potential impacts from inadvertent discoveries of Tribal Cultural Resources (TCRs). With implementation of Mitigation Measure TCR-1a through TCR-1c, impacts related to tribal cultural resources would be less than significant.

MITIGATION MEASURES

Mitigation Measure TCR-1a: 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 Native American representatives 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 TCR-1b: 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 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. Avoidance and design alternatives may include realignment within the project site to avoid cultural resources or tribal cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or tribal cultural resources or modification or realignment to avoid highly significant features within a cultural resource or tribal cultural resource.

- 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 tribes will be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes.

- 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- (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), 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 CRHR, 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. 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.

Mitigation Measure TCR-1c: 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 the following performance standards shall be met 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 and a professional archaeologist 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 archaeologist and 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.

FINDINGS

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

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

ENVIRONMENTAL SETTING

Water Supply

The City of Sacramento would provide water service for the project. The City provides domestic water service from a combination of surface water and groundwater sources including the American River, Sacramento River, and groundwater wells. Water from the American River and Sacramento River is diverted by two water treatment plants: the Sacramento River Water Treatment Plant (WTP), located at the southern end of Bercut Drive approximately 4.2 miles south of the project site, and the E.A. Fairbairn Water Treatment Plant (EAFWTP), located at the northeast corner of State University Drive South and College Town Drive, approximately 13 miles southeast of the project site. Water diverted from the Sacramento and American rivers is treated, stored in storage reservoirs, and pumped to customers via a conveyance network.

The City of Sacramento complies with the California Water Code, which requires urban water suppliers to prepare and adopt Urban Water Management Plans (UWMPs) every five years. The most recent UWMP was adopted in 2016, and includes an analysis of water demand sufficiency under normal, single dry year, and multiple dry year scenarios. Water supply and demand projections include future planned development until 2035.

The City is subject to "purveyor specific agreement limitations" that occur in dry years or low flow periods, identified as Conference Year conditions, or Hodge Flow conditions. A Conference Year exists when the California Department of Water Resources (DWR) projects an annual unimpaired flow into Folsom Reservoir of 550,000 acre-feet per year (AFA) or less, or the projected March through November unimpaired flow into Folsom Reservoir is less than 400,000 AFA. During Conference Years, diversions at the EAFWTP are limited to 155 cubic feet per second (cfs) and 50,000 AFA. Hodge Flow Criteria is determined by flow levels established by Judge Richard Hodge in a lawsuit regarding impacts to the Lower American River fishery. When Hodge Flow Criteria is not met, City diversions at the EAFWTP may not be greater than 120 cfs January through May, 155 cfs June through August, 120 cfs in September, and 100 cfs October through December. However, Hodge Flow conditions only result in peak day limitations and do not directly limit the City's annual diversion amount, unlike the Conference Year limitations (City of Sacramento 2015).

Under "purveyor specific agreement limitations" that occur during Conference Years, the City's maximum diversion and treatment capacity from surface water (American River and Sacramento River) is 229,400 AFA. Water supply capacity from groundwater sources is 22,300 AFA resulting in a total water supply of 251,500 AFA under Conference Year conditions. The 2035 General Plan Master EIR concludes that

water supply demand of 249,984 AFA would occur in 2030 and a demand of 260,984 would occur in 2035. Therefore, a capacity deficit would occur between 2030 and 2035.

The proposed project would include placement of water lines throughout the project site that would connect to the City water main at the main entrance road of the Sleep Train Arena, which is the westernmost property boundary. The project would comply with California Green Building Standards Code (Title 24, Part 11) and would include water efficiency and conservation design features.

Wastewater

The Sacramento Area Sewer District (SASD) services the community of North Natomas. Trunk facilities, consisting of several hydraulically independent systems collect wastewater. Each trunk discharges into the Sacramento Regional County Sanitation District (SRCSD) interceptor system and wastewater is then transported to the Sacramento Regional Wastewater Treatment Plant. The Sacramento Area Sewer District's Sewer System Capacity Plan 2010 Update indicates that the District's capacity is sufficient within the city limits (City of Sacramento 2014a).

The SRCSD provides wastewater treatment services at the Sacramento Regional Wastewater Treatment Plant, located south of the city limits. The treatment plant is permitted to treat an average dry weather flow of 181 million gallons per day and a daily peak wet weather flow of 392 million gallons per day. The majority of the treated wastewater is discharged into the Sacramento River. Improvements to the Upper Northwest and Lower Northwest Interceptors completed in 2010 and 2007, respectively, have allowed for increased capacity for future growth (City of Sacramento 2014a).

The proposed project would include construction of sanitary sewer lines that would be routed throughout the site and connected to all proposed buildings. The proposed sanitary sewer lines would direct wastewater to the existing sanitary sewer infrastructure located within the proposed project area along East Commerce Way. A direct connection to the SRCSD Natomas Interceptor, located within East Commerce Way, would not be included in the project. In addition, the project proponent would be required to pay any appropriate SRCSD sewer impact fees or connection fees.

Stormwater and Drainage

A separated drainage system, divided into 120 drainage basins, serves the City of Sacramento. The City also operates 105 storm drainage pumping stations throughout the City. Drainage flows to local rivers and creeks or is pumped through drainage channels that eventually drain into the Sacramento and American Rivers (City of Sacramento 2014a).

The proposed project would include construction of stormwater drainage lines that would be routed throughout the site and would connect to the existing storm drain located on the west side of East Commerce Way.

Solid Waste

Solid waste collection services are provided to the project site by the City of Sacramento which transports waste to the Sacramento County North Area Recovery Station. The majority of the city's waste is eventually hauled to the Sacramento County Kiefer Landfill, a 1,084-acre facility. Pursuant to its Solid Waste Facility Permit (SWFP No. 34-AA-0001), the landfill is permitted to accept up to 10,815 tons per day and averages 6,300 tons per day. However, Section 17, Condition 26 and Table 2 of Kiefer's SWFP limits the 2013 peak to 5,928 tons per day with an average of 3,487 tons per day. According to the Draft Master EIR for the City's 2035 General Plan, the city's current waste disposal is much lower than the permitted peak and daily average amounts. The landfill is expected to be able to serve the area until 2065 (City of Sacramento 2014a). Solid waste collected at residential uses in the project area is currently disposed of at the Kiefer Landfill.

STANDARDS OF SIGNIFICANCE

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

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

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

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2035 General Plan. Policies in the General Plan would reduce the impact generally to a less-than-significant level (see Impact 4.11-1), but the Master EIR concludes that the potential increase in demand for potable water in excess of the City's existing diversion and treatment capacity, which could require construction of new water supply facilities, would result in a significant and unavoidable impact (Impact 4.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a less-than-significant impact (Impact 4.11-4). Impacts on solid waste facilities were less than significant (Impact 4.11-5). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the California Code of Regulations for residential and non-residential buildings would reduce effects for energy to a less-than-significant level.

ANSWERS TO CHECKLIST QUESTIONS

A. Would the project result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?

No additional significant environmental effect. The proposed project site is undeveloped and is not currently served with utilities or service systems; however, the project site is located adjacent to existing development. All urban utilities and services are available to the proposed development.

Water Supply

The City of Sacramento is responsible for providing and maintaining water for the project site. The Urban Water Management Plan analyzes the water supply, water demand, and water shortage contingency planning for the City's service area, which would include the proposed project site. According to the City's 2010 Urban Water Management Plan, under all drought conditions, the City possesses sufficient water supply entitlements to meet the demands of the City's customers up to the year 2030.

The proposed project would include the preparation of a water study for review and approval by the City's Department of Utilities. All water service lines throughout the site would be metered and would be subject to the review and approval of the City's Department of Utilities. In addition the project would include water efficiency and conservation features in compliance with the California Green Building Standards Code. The proposed project is consistent with land use and zoning designations and would not generate an increase in demand from what has already been anticipated in the Master EIR. Compliance with water efficiency and conservation standards and

coordination with the City's Department of Utilities would reduce water demand and related impacts.

Wastewater

The SASD is responsible for sewer collection in the project area. Buildout capacity of the entire SASD service area within the next ten years was anticipated in the Sewer System Management Plan (SSMP) through the year 2020. SASD's pipelines eventually flow to the SRCSD, where wastewater is treated. The SRCSD would be able to provide sufficient wastewater services and conveyance to serve full buildout of the City, including the project area, per the 2035 Master EIR. Therefore, adequate capacity exists to serve the project site's demands.

Stormwater and Drainage

A drainage study would be prepared for the proposed project in compliance with the City's current Design and Procedures Manual. Engineering and project design would ensure all City standards are met and would be subject to review and approval by the City's Department of Utilities.

Solid Waste

Solid waste from surrounding developments is currently being transferred to Kiefer Landfill for disposal. The 2035 General Plan Master EIR concluded that adequate capacity at local landfills exists for full buildout of the General Plan. The proposed project is consistent with what is anticipated for the site, and the associated increase in solid waste disposal needs are considered in the 2035 General Plan Master EIR analysis. The proposed project would not generate an increase in solid waste from what has been anticipated in the Master EIR. As such, adequate capacity would be available to serve the proposed project's solid waste disposal needs.

Conclusion

Because adequate capacity exists to serve the project's demands in addition to existing commitments, and construction of new utilities or expansion of existing facilities would not be required, the proposed project would result in a less-than-significant impact. Considering that the proposed project would not result in a project-specific impact related to utilities and service systems, the proposed project would result in no additional environmental effects beyond the effects analyzed in the Master EIR.

B. Would the project require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts?

No additional significant environmental effect. As discussed above, utility needs of the proposed project are within existing and planned capacity of the City. The project would not require the construction or expansion of existing utilities. A less-than-significant impact would occur.

MITIGATION MEASURES

None.

FINDINGS

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

Issues:	Effect remains significant with all identified mitigation	Effect can be mitigated to less than significant	No additional significant environmental effect
15. MANDATORY FINDINGS OF SIGNIFICANCE			
A.) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
B.) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X
C.) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

ANSWERS TO CHECKLIST QUESTIONS

A. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

No additional significant environmental effect. Implementation of the proposed project is not anticipated to adversely impact sensitive natural communities or special-status animals, but the proposed project would have the potential to impact previously undiscovered cultural resources and/or human remains. The proposed project would implement and comply with applicable City of Sacramento 2035 General Plan policies, as discussed throughout this IS. With implementation of the mitigation measures identified in this IS, compliance with City of Sacramento 2035 General Plan policies, and application of standard BMPs during construction, development of the proposed project would not result in any of the following: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory.

Therefore, the proposed project's impact would be less than significant and no additional significant environmental effects would occur with implementation of the proposed project.

B. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

No additional significant environmental effect. The proposed project includes the development of a 6.4-acre site with a 160-unit apartment complex. The proposed project is consistent with the 2035 General Plan land use designation and, thus, the proposed project is anticipated by the City per the 2035 General Plan. As such, the proposed project is included in the cumulative analysis of City buildout in the Master EIR. Applicable policies from the 2035 General Plan would be implemented as part of the proposed project, as well as the project-specific mitigation measures identified in this IS, to reduce the proposed project's contribution to potentially cumulative impacts. The potential impacts of the proposed project would be individually limited and would not be cumulatively considerable. As demonstrated in this IS, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level with implementation of project-specific mitigation measures and compliance with applicable 2035 General Plan policies. When viewed in conjunction with other closely related past, present or reasonably foreseeable future projects, development of the proposed project would not contribute to cumulative impacts in the City of Sacramento and no additional significant environmental effects would occur with implementation of the proposed project.

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

No additional significant environmental effect. Implementation of the proposed project could result in temporary impacts related to biological resources, cultural resources, and hazards during the construction period. The proposed project would be required to implement the project-specific mitigation measures identified within this IS, as well as applicable policies of the 2035 General Plan, to reduce any potential direct or indirect impacts that could occur to human beings or various resources and, as demonstrated in this IS, with implementation of the identified mitigation measures, all impacts would be reduced to less-than-significant levels. Therefore, the proposed project's impact would be less than significant and no additional significant environmental effects would occur with implementation of the proposed project.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

X = Requires Mitigation

SECTION V - DETERMINATION

On the basis of the initial study:

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

Scott Johnson
Signature

April 25, 2019
Date

Scott Johnson
Printed Name

SECTION VI - REFERENCES CITED

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APPENDIX A: AIR QUALITY MODEL

Sleep Train Apartments Project

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	3.95	1000sqft	0.08	3,950.00	0
Enclosed Parking Structure	95.00	Space	0.50	38,000.00	0
Parking Lot	179.00	Space	1.00	71,600.00	0
City Park	0.81	Acre	0.81	35,283.60	0
Recreational Swimming Pool	1.20	1000sqft	0.03	1,200.00	0
Apartments Mid Rise	160.00	Dwelling Unit	4.00	160,000.00	427

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Annual

Project Characteristics -

Vehicle Trips - Based on trip generation rates for the proposed project.

Land Use - The proposed project includes a 160-unit apartment complex, a 3,950 square foot office/clubhouse building, 35,250 square feet of open space, excluding balcony, and a pool. The project would also include 95 garage parking spaces, 66 carport parking spaces, and 113 uncovered parking lot spaces. Total lot size is 6.42 acres.

Construction Phase - Construction could begin as early as 2020 and would require approximately 6 months of site development and one year of vertical construction.

Grading - Approximately 578.63 cubic yards of soil export

Construction Off-road Equipment Mitigation - Basic Construction Emission Control Practices

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	220.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	10.00	35.00
tblGrading	AcresOfGrading	17.50	10.00
tblGrading	MaterialExported	0.00	578.63
tblLandUse	LotAcreage	0.09	0.08
tblLandUse	LotAcreage	0.86	0.50
tblLandUse	LotAcreage	1.61	1.00
tblLandUse	LotAcreage	4.21	4.00
tblVehicleTrips	ST_TR	6.39	7.31
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	5.86	7.31
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	7.31
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	33.82	0.00

2.0 Emissions Summary

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	0.4018	3.6700	2.8411	5.8000e-003	0.5531	0.1785	0.7315	0.2663	0.1663	0.4326	0.0000	515.3012	515.3012	0.1013	0.0000	517.8339
2021	1.1400	0.8760	0.9112	1.9300e-003	0.0550	0.0401	0.0951	0.0148	0.0376	0.0524	0.0000	171.6673	171.6673	0.0280	0.0000	172.3674
Maximum	**1.1400**	**3.6700**	**2.8411**	**5.8000e-003**	**0.5531**	**0.1785**	**0.7315**	**0.2663**	**0.1663**	**0.4326**	**0.0000**	**515.3012**	**515.3012**	**0.1013**	**0.0000**	**517.8339**

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	0.4018	3.6700	2.8411	5.8000e-003	0.3088	0.1785	0.4872	0.1362	0.1663	0.3025	0.0000	515.3008	515.3008	0.1013	0.0000	517.8335
2021	1.1400	0.8760	0.9112	1.9300e-003	0.0508	0.0401	0.0909	0.0138	0.0376	0.0514	0.0000	171.6671	171.6671	0.0280	0.0000	172.3673
Maximum	**1.1400**	**3.6700**	**2.8411**	**5.8000e-003**	**0.3088**	**0.1785**	**0.4872**	**0.1362**	**0.1663**	**0.3025**	**0.0000**	**515.3008**	**515.3008**	**0.1013**	**0.0000**	**517.8335**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.86**	**0.00**	**30.06**	**46.64**	**0.00**	**27.04**	**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	1-6-2020	4-5-2020	1.3471	1.3471
2	4-6-2020	7-5-2020	0.9575	0.9575
3	7-6-2020	10-5-2020	0.8956	0.8956
4	10-6-2020	1-5-2021	0.8954	0.8954
5	1-6-2021	4-5-2021	0.7880	0.7880
6	4-6-2021	7-5-2021	1.1829	1.1829
		Highest	1.3471	1.3471

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8016	0.0191	1.6572	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.7022	2.7022	2.6300e-003	0.0000	2.7680
Energy	8.6900e-003	0.0744	0.0327	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	348.0204	348.0204	0.0145	4.2400e-003	349.6469
Mobile	0.3688	1.5900	4.3707	0.0133	1.1195	0.0119	1.1314	0.3002	0.0112	0.3114	0.0000	1,218.5303	1,218.5303	0.0598	0.0000	1,220.0260
Waste						0.0000	0.0000		0.0000	0.0000	17.0878	0.0000	17.0878	1.0099	0.0000	42.3343
Water						0.0000	0.0000		0.0000	0.0000	3.9618	22.4468	26.4086	0.0147	8.8400e-003	29.4124
Total	**1.1792**	**1.6836**	**6.0606**	**0.0138**	**1.1195**	**0.0271**	**1.1466**	**0.3002**	**0.0263**	**0.3265**	**21.0495**	**1,591.6998**	**1,612.7493**	**1.1016**	**0.0131**	**1,644.1876**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8016	0.0191	1.6572	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.7022	2.7022	2.6300e-003	0.0000	2.7680
Energy	8.6900e-003	0.0744	0.0327	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	348.0204	348.0204	0.0145	4.2400e-003	349.6469
Mobile	0.3534	1.4808	3.9796	0.0118	0.9874	0.0107	0.9981	0.2648	0.0100	0.2748	0.0000	1,083.2058	1,083.2058	0.0543	0.0000	1,084.5620
Waste						0.0000	0.0000		0.0000	0.0000	17.0878	0.0000	17.0878	1.0099	0.0000	42.3343
Water						0.0000	0.0000		0.0000	0.0000	3.9618	22.4468	26.4086	0.0147	8.8400e-003	29.4124
Total	**1.1637**	**1.5743**	**5.6695**	**0.0124**	**0.9874**	**0.0258**	**1.0132**	**0.2648**	**0.0252**	**0.2899**	**21.0495**	**1,456.3753**	**1,477.4248**	**1.0960**	**0.0131**	**1,508.7236**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.31**	**6.49**	**6.45**	**10.64**	**11.80**	**4.51**	**11.63**	**11.80**	**4.37**	**11.20**	**0.00**	**8.50**	**8.39**	**0.51**	**0.00**	**8.24**

3.0 Construction Detail

Construction Phase

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/6/2020	2/21/2020	5	35	
2	Site Preparation	Site Preparation	2/22/2020	4/10/2020	5	35	
3	Grading	Grading	4/11/2020	5/29/2020	5	35	
4	Building Construction	Building Construction	5/30/2020	4/2/2021	5	220	
5	Paving	Paving	4/3/2021	4/30/2021	5	20	
6	Architectural Coating	Architectural Coating	5/1/2021	5/28/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.5

Residential Indoor: 324,000; Residential Outdoor: 108,000; Non-Residential Indoor: 5,925; Non-Residential Outdoor: 1,975; Striped Parking Area: 6,576 (Architectural Coating – sqft)

OffRoad Equipment

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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
Demolition	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	57.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	178.00	42.00	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	36.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0580	0.5810	0.3807	6.8000e-004		0.0290	0.0290		0.0270	0.0270	0.0000	59.4976	59.4976	0.0168	0.0000	59.9175
Total	**0.0580**	**0.5810**	**0.3807**	**6.8000e-004**		**0.0290**	**0.0290**		**0.0270**	**0.0270**	**0.0000**	**59.4976**	**59.4976**	**0.0168**	**0.0000**	**59.9175**

3.2 Demolition - 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	9.8000e-004	6.6000e-004	7.2700e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.3000e-004	0.0000	1.7082	1.7082	5.0000e-005	0.0000	1.7094
Total	**9.8000e-004**	**6.6000e-004**	**7.2700e-003**	**2.0000e-005**	**1.9300e-003**	**1.0000e-005**	**1.9400e-003**	**5.1000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.7082**	**1.7082**	**5.0000e-005**	**0.0000**	**1.7094**

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	0.0580	0.5810	0.3807	6.8000e-004		0.0290	0.0290		0.0270	0.0270	0.0000	59.4975	59.4975	0.0168	0.0000	59.9174
Total	**0.0580**	**0.5810**	**0.3807**	**6.8000e-004**		**0.0290**	**0.0290**		**0.0270**	**0.0270**	**0.0000**	**59.4975**	**59.4975**	**0.0168**	**0.0000**	**59.9174**

3.2 Demolition - 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	9.8000e-004	6.6000e-004	7.2700e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.7082	1.7082	5.0000e-005	0.0000	1.7094
Total	**9.8000e-004**	**6.6000e-004**	**7.2700e-003**	**2.0000e-005**	**1.7800e-003**	**1.0000e-005**	**1.7900e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.7082**	**1.7082**	**5.0000e-005**	**0.0000**	**1.7094**

3.3 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					0.3162	0.0000	0.3162	0.1738	0.0000	0.1738	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0713	0.7423	0.3765	6.7000e-004		0.0385	0.0385		0.0354	0.0354	0.0000	58.5037	58.5037	0.0189	0.0000	58.9767
Total	**0.0713**	**0.7423**	**0.3765**	**6.7000e-004**	**0.3162**	**0.0385**	**0.3546**	**0.1738**	**0.0354**	**0.2092**	**0.0000**	**58.5037**	**58.5037**	**0.0189**	**0.0000**	**58.9767**

3.3 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	1.1700e-003	8.0000e-004	8.7200e-003	2.0000e-005	2.3100e-003	2.0000e-005	2.3300e-003	6.2000e-004	2.0000e-005	6.3000e-004	0.0000	2.0498	2.0498	6.0000e-005	0.0000	2.0513
Total	**1.1700e-003**	**8.0000e-004**	**8.7200e-003**	**2.0000e-005**	**2.3100e-003**	**2.0000e-005**	**2.3300e-003**	**6.2000e-004**	**2.0000e-005**	**6.3000e-004**	**0.0000**	**2.0498**	**2.0498**	**6.0000e-005**	**0.0000**	**2.0513**

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					0.1423	0.0000	0.1423	0.0782	0.0000	0.0782	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0713	0.7423	0.3765	6.7000e-004		0.0385	0.0385		0.0354	0.0354	0.0000	58.5036	58.5036	0.0189	0.0000	58.9767
Total	**0.0713**	**0.7423**	**0.3765**	**6.7000e-004**	**0.1423**	**0.0385**	**0.1807**	**0.0782**	**0.0354**	**0.1136**	**0.0000**	**58.5036**	**58.5036**	**0.0189**	**0.0000**	**58.9767**

3.3 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	1.1700e-003	8.0000e-004	8.7200e-003	2.0000e-005	2.1300e-003	2.0000e-005	2.1500e-003	5.7000e-004	2.0000e-005	5.9000e-004	0.0000	2.0498	2.0498	6.0000e-005	0.0000	2.0513
Total	**1.1700e-003**	**8.0000e-004**	**8.7200e-003**	**2.0000e-005**	**2.1300e-003**	**2.0000e-005**	**2.1500e-003**	**5.7000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.0498**	**2.0498**	**6.0000e-005**	**0.0000**	**2.0513**

3.4 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					0.1107	0.0000	0.1107	0.0585	0.0000	0.0585	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0425	0.4618	0.2809	5.2000e-004		0.0223	0.0223		0.0205	0.0205	0.0000	45.6028	45.6028	0.0148	0.0000	45.9715
Total	**0.0425**	**0.4618**	**0.2809**	**5.2000e-004**	**0.1107**	**0.0223**	**0.1330**	**0.0585**	**0.0205**	**0.0790**	**0.0000**	**45.6028**	**45.6028**	**0.0148**	**0.0000**	**45.9715**

3.4 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	2.2000e-004	8.1900e-003	1.8500e-003	2.0000e-005	4.8000e-004	3.0000e-005	5.1000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	2.1806	2.1806	1.3000e-004	0.0000	2.1838
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	9.8000e-004	6.6000e-004	7.2700e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.3000e-004	0.0000	1.7082	1.7082	5.0000e-005	0.0000	1.7094
Total	**1.2000e-003**	**8.8500e-003**	**9.1200e-003**	**4.0000e-005**	**2.4100e-003**	**4.0000e-005**	**2.4500e-003**	**6.4000e-004**	**4.0000e-005**	**6.9000e-004**	**0.0000**	**3.8888**	**3.8888**	**1.8000e-004**	**0.0000**	**3.8932**

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					0.0498	0.0000	0.0498	0.0263	0.0000	0.0263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0425	0.4618	0.2809	5.2000e-004		0.0223	0.0223		0.0205	0.0205	0.0000	45.6028	45.6028	0.0148	0.0000	45.9715
Total	**0.0425**	**0.4618**	**0.2809**	**5.2000e-004**	**0.0498**	**0.0223**	**0.0721**	**0.0263**	**0.0205**	**0.0468**	**0.0000**	**45.6028**	**45.6028**	**0.0148**	**0.0000**	**45.9715**

3.4 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	2.2000e-004	8.1900e-003	1.8500e-003	2.0000e-005	4.5000e-004	3.0000e-005	4.8000e-004	1.2000e-004	3.0000e-005	1.5000e-004	0.0000	2.1806	2.1806	1.3000e-004	0.0000	2.1838
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	9.8000e-004	6.6000e-004	7.2700e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.7082	1.7082	5.0000e-005	0.0000	1.7094
Total	**1.2000e-003**	**8.8500e-003**	**9.1200e-003**	**4.0000e-005**	**2.2300e-003**	**4.0000e-005**	**2.2700e-003**	**6.0000e-004**	**4.0000e-005**	**6.4000e-004**	**0.0000**	**3.8888**	**3.8888**	**1.8000e-004**	**0.0000**	**3.8932**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1632	1.4773	1.2973	2.0700e-003		0.0860	0.0860		0.0809	0.0809	0.0000	178.3397	178.3397	0.0435	0.0000	179.4274
Total	**0.1632**	**1.4773**	**1.2973**	**2.0700e-003**		**0.0860**	**0.0860**		**0.0809**	**0.0809**	**0.0000**	**178.3397**	**178.3397**	**0.0435**	**0.0000**	**179.4274**

3.5 Building Construction - 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	0.0124	0.3627	0.1012	8.0000e-004	0.0189	1.8800e-003	0.0208	5.4700e-003	1.8000e-003	7.2600e-003	0.0000	76.5208	76.5208	4.5300e-003	0.0000	76.6340
Worker	0.0510	0.0346	0.3794	9.9000e-004	0.1007	7.2000e-004	0.1014	0.0268	6.7000e-004	0.0274	0.0000	89.1899	89.1899	2.5200e-003	0.0000	89.2529
Total	**0.0634**	**0.3973**	**0.4806**	**1.7900e-003**	**0.1196**	**2.6000e-003**	**0.1222**	**0.0322**	**2.4700e-003**	**0.0347**	**0.0000**	**165.7106**	**165.7106**	**7.0500e-003**	**0.0000**	**165.8870**

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	0.1632	1.4773	1.2973	2.0700e-003		0.0860	0.0860		0.0809	0.0809	0.0000	178.3395	178.3395	0.0435	0.0000	179.4272
Total	**0.1632**	**1.4773**	**1.2973**	**2.0700e-003**		**0.0860**	**0.0860**		**0.0809**	**0.0809**	**0.0000**	**178.3395**	**178.3395**	**0.0435**	**0.0000**	**179.4272**

3.5 Building Construction - 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	0.0124	0.3627	0.1012	8.0000e-004	0.0177	1.8800e-003	0.0196	5.1700e-003	1.8000e-003	6.9700e-003	0.0000	76.5208	76.5208	4.5300e-003	0.0000	76.6340
Worker	0.0510	0.0346	0.3794	9.9000e-004	0.0928	7.2000e-004	0.0936	0.0249	6.7000e-004	0.0255	0.0000	89.1899	89.1899	2.5200e-003	0.0000	89.2529
Total	**0.0634**	**0.3973**	**0.4806**	**1.7900e-003**	**0.1105**	**2.6000e-003**	**0.1132**	**0.0300**	**2.4700e-003**	**0.0325**	**0.0000**	**165.7106**	**165.7106**	**7.0500e-003**	**0.0000**	**165.8870**

3.5 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	0.0627	0.5753	0.5470	8.9000e-004		0.0316	0.0316		0.0297	0.0297	0.0000	76.4403	76.4403	0.0184	0.0000	76.9013
Total	**0.0627**	**0.5753**	**0.5470**	**8.9000e-004**		**0.0316**	**0.0316**		**0.0297**	**0.0297**	**0.0000**	**76.4403**	**76.4403**	**0.0184**	**0.0000**	**76.9013**

3.5 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	4.3600e-003	0.1418	0.0379	3.4000e-004	8.1000e-003	3.9000e-004	8.5000e-003	2.3400e-003	3.7000e-004	2.7200e-003	0.0000	32.5217	32.5217	1.8600e-003	0.0000	32.5682
Worker	0.0203	0.0133	0.1487	4.1000e-004	0.0431	3.0000e-004	0.0434	0.0115	2.8000e-004	0.0118	0.0000	36.9227	36.9227	9.7000e-004	0.0000	36.9470
Total	**0.0247**	**0.1551**	**0.1866**	**7.5000e-004**	**0.0512**	**6.9000e-004**	**0.0519**	**0.0138**	**6.5000e-004**	**0.0145**	**0.0000**	**69.4445**	**69.4445**	**2.8300e-003**	**0.0000**	**69.5152**

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	0.0627	0.5753	0.5470	8.9000e-004		0.0316	0.0316		0.0297	0.0297	0.0000	76.4402	76.4402	0.0184	0.0000	76.9013
Total	**0.0627**	**0.5753**	**0.5470**	**8.9000e-004**		**0.0316**	**0.0316**		**0.0297**	**0.0297**	**0.0000**	**76.4402**	**76.4402**	**0.0184**	**0.0000**	**76.9013**

3.5 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	4.3600e-003	0.1418	0.0379	3.4000e-004	7.5900e-003	3.9000e-004	7.9800e-003	2.2200e-003	3.7000e-004	2.5900e-003	0.0000	32.5217	32.5217	1.8600e-003	0.0000	32.5682
Worker	0.0203	0.0133	0.1487	4.1000e-004	0.0398	3.0000e-004	0.0401	0.0107	2.8000e-004	0.0109	0.0000	36.9227	36.9227	9.7000e-004	0.0000	36.9470
Total	**0.0247**	**0.1551**	**0.1866**	**7.5000e-004**	**0.0474**	**6.9000e-004**	**0.0481**	**0.0129**	**6.5000e-004**	**0.0135**	**0.0000**	**69.4445**	**69.4445**	**2.8300e-003**	**0.0000**	**69.5152**

3.6 Paving - 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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0139**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	5.2000e-004	3.4000e-004	3.8000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9429	0.9429	2.0000e-005	0.0000	0.9435
Total	**5.2000e-004**	**3.4000e-004**	**3.8000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9429**	**0.9429**	**2.0000e-005**	**0.0000**	**0.9435**

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0139**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	5.2000e-004	3.4000e-004	3.8000e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9429	0.9429	2.0000e-005	0.0000	0.9435
Total	**5.2000e-004**	**3.4000e-004**	**3.8000e-003**	**1.0000e-005**	**1.0200e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.9429**	**0.9429**	**2.0000e-005**	**0.0000**	**0.9435**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**1.0369**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.2500e-003	8.1000e-004	9.1100e-003	3.0000e-005	2.6400e-003	2.0000e-005	2.6600e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.2629	2.2629	6.0000e-005	0.0000	2.2644
Total	**1.2500e-003**	**8.1000e-004**	**9.1100e-003**	**3.0000e-005**	**2.6400e-003**	**2.0000e-005**	**2.6600e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.2629**	**2.2629**	**6.0000e-005**	**0.0000**	**2.2644**

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	1.0347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**1.0369**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.2500e-003	8.1000e-004	9.1100e-003	3.0000e-005	2.4400e-003	2.0000e-005	2.4600e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2629	2.2629	6.0000e-005	0.0000	2.2644
Total	**1.2500e-003**	**8.1000e-004**	**9.1100e-003**	**3.0000e-005**	**2.4400e-003**	**2.0000e-005**	**2.4600e-003**	**6.5000e-004**	**2.0000e-005**	**6.7000e-004**	**0.0000**	**2.2629**	**2.2629**	**6.0000e-005**	**0.0000**	**2.2644**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	0.3534	1.4808	3.9796	0.0118	0.9874	0.0107	0.9981	0.2648	0.0100	0.2748	0.0000	1,083.2058	1,083.2058	0.0543	0.0000	1,084.5620
Unmitigated	0.3688	1.5900	4.3707	0.0133	1.1195	0.0119	1.1314	0.3002	0.0112	0.3114	0.0000	1,218.5303	1,218.5303	0.0598	0.0000	1,220.0260

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,169.60	1,169.60	1169.60	3,001,321	2,647,165
City Park	0.00	0.00	0.00		
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,169.60	1,169.60	1,169.60	3,001,321	2,647,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
General Office Building	10.00	5.00	6.50	33.00	48.00	19.00	77	19	4
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	10.00	5.00	6.50	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
City Park	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Enclosed Parking Structure	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
General Office Building	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Parking Lot	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Recreational Swimming Pool	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sleep Train Apartments Project - 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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	262.0278	262.0278	0.0129	2.6600e-003	263.1433
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	262.0278	262.0278	0.0129	2.6600e-003	263.1433
NaturalGas Mitigated	8.6900e-003	0.0744	0.0327	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9926	85.9926	1.6500e-003	1.5800e-003	86.5036
NaturalGas Unmitigated	8.6900e-003	0.0744	0.0327	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.9926	85.9926	1.6500e-003	1.5800e-003	86.5036

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	1.5597e+006	8.4100e-003	0.0719	0.0306	4.6000e-004		5.8100e-003	5.8100e-003		5.8100e-003	5.8100e-003	0.0000	83.2313	83.2313	1.6000e-003	1.5300e-003	83.7259
City Park	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
Enclosed Parking Structure	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
General Office Building	51745	2.8000e-004	2.5400e-003	2.1300e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7613	2.7613	5.0000e-005	5.0000e-005	2.7777
Parking Lot	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
Recreational Swimming Pool	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
Total		**8.6900e-003**	**0.0744**	**0.0327**	**4.8000e-004**		**6.0000e-003**	**6.0000e-003**		**6.0000e-003**	**6.0000e-003**	**0.0000**	**85.9926**	**85.9926**	**1.6500e-003**	**1.5800e-003**	**86.5036**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.5597e+006	8.4100e-003	0.0719	0.0306	4.6000e-004		5.8100e-003	5.8100e-003		5.8100e-003	5.8100e-003	0.0000	83.2313	83.2313	1.6000e-003	1.5300e-003	83.7259
City Park	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
Enclosed Parking Structure	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
General Office Building	51745	2.8000e-004	2.5400e-003	2.1300e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7613	2.7613	5.0000e-005	5.0000e-005	2.7777
Parking Lot	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
Recreational Swimming Pool	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
Total		**8.6900e-003**	**0.0744**	**0.0327**	**4.8000e-004**		**6.0000e-003**	**6.0000e-003**		**6.0000e-003**	**6.0000e-003**	**0.0000**	**85.9926**	**85.9926**	**1.6500e-003**	**1.5800e-003**	**86.5036**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	681034	182.3536	8.9600e-003	1.8500e-003	183.1299
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	215460	57.6916	2.8300e-003	5.9000e-004	57.9372
General Office Building	57038	15.2725	7.5000e-004	1.6000e-004	15.3375
Parking Lot	25060	6.7101	3.3000e-004	7.0000e-005	6.7386
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**262.0278**	**0.0129**	**2.6700e-003**	**263.1433**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	681034	182.3536	8.9600e-003	1.8500e-003	183.1299
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	215460	57.6916	2.8300e-003	5.9000e-004	57.9372
General Office Building	57038	15.2725	7.5000e-004	1.6000e-004	15.3375
Parking Lot	25060	6.7101	3.3000e-004	7.0000e-005	6.7386
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**262.0278**	**0.0129**	**2.6700e-003**	**263.1433**

6.0 Area Detail

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	0.8016	0.0191	1.6572	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.7022	2.7022	2.6300e-003	0.0000	2.7680
Unmitigated	0.8016	0.0191	1.6572	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.7022	2.7022	2.6300e-003	0.0000	2.7680

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	0.1035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6477					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	0.0504	0.0191	1.6572	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.7022	2.7022	2.6300e-003	0.0000	2.7680
Total	**0.8016**	**0.0191**	**1.6572**	**9.0000e-005**		**9.1300e-003**	**9.1300e-003**		**9.1300e-003**	**9.1300e-003**	**0.0000**	**2.7022**	**2.7022**	**2.6300e-003**	**0.0000**	**2.7680**

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	0.1035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6477					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	0.0504	0.0191	1.6572	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.7022	2.7022	2.6300e-003	0.0000	2.7680
Total	**0.8016**	**0.0191**	**1.6572**	**9.0000e-005**		**9.1300e-003**	**9.1300e-003**		**9.1300e-003**	**9.1300e-003**	**0.0000**	**2.7022**	**2.7022**	**2.6300e-003**	**0.0000**	**2.7680**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.4086	0.0147	8.8400e-003	29.4124
Unmitigated	26.4086	0.0147	8.8400e-003	29.4124

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	10.4246 / 6.57206	23.7553	0.0137	8.2200e-003	26.5483
City Park	0 / 0.9651	0.9045	4.0000e-005	1.0000e-005	0.9083
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.702048 / 0.430288	1.5883	9.2000e-004	5.5000e-004	1.7763
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0709718 / 0.0434988	0.1606	9.0000e-005	6.0000e-005	0.1796
Total		**26.4086**	**0.0147**	**8.8400e-003**	**29.4124**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	10.4246 / 6.57206	23.7553	0.0137	8.2200e-003	26.5483
City Park	0 / 0.9651	0.9045	4.0000e-005	1.0000e-005	0.9083
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.702048 / 0.430288	1.5883	9.2000e-004	5.5000e-004	1.7763
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0709718 / 0.0434988	0.1606	9.0000e-005	6.0000e-005	0.1796
Total		**26.4086**	**0.0147**	**8.8400e-003**	**29.4124**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.0878	1.0099	0.0000	42.3343
Unmitigated	17.0878	1.0099	0.0000	42.3343

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	73.6	14.9401	0.8829	0.0000	37.0136
City Park	0.07	0.0142	8.4000e-004	0.0000	0.0352
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	3.67	0.7450	0.0440	0.0000	1.8457
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	6.84	1.3885	0.0821	0.0000	3.4399
Total		**17.0878**	**1.0099**	**0.0000**	**42.3343**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	73.6	14.9401	0.8829	0.0000	37.0136
City Park	0.07	0.0142	8.4000e-004	0.0000	0.0352
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	3.67	0.7450	0.0440	0.0000	1.8457
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	6.84	1.3885	0.0821	0.0000	3.4399
Total		**17.0878**	**1.0099**	**0.0000**	**42.3343**

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

11.0 Vegetation

Sleep Train Apartments Project

Sacramento Metropolitan AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	3.95	1000sqft	0.08	3,950.00	0
Enclosed Parking Structure	95.00	Space	0.50	38,000.00	0
Parking Lot	179.00	Space	1.00	71,600.00	0
City Park	0.81	Acre	0.81	35,283.60	0
Recreational Swimming Pool	1.20	1000sqft	0.03	1,200.00	0
Apartments Mid Rise	160.00	Dwelling Unit	4.00	160,000.00	427

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Summer

Project Characteristics -

Vehicle Trips - Based on trip generation rates for the proposed project.

Land Use - The proposed project includes a 160-unit apartment complex, a 3,950 square foot office/clubhouse building, 35,250 square feet of open space, excluding balcony, and a pool. The project would also include 95 garage parking spaces, 66 carport parking spaces, and 113 uncovered parking lot spaces. Total lot size is 6.42 acres.

Construction Phase - Construction could begin as early as 2020 and would require approximately 6 months of site development and one year of vertical construction.

Grading - Approximately 578.63 cubic yards of soil export

Construction Off-road Equipment Mitigation - Basic Construction Emission Control Practices

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	220.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	10.00	35.00
tblGrading	AcresOfGrading	17.50	10.00
tblGrading	MaterialExported	0.00	578.63
tblLandUse	LotAcreage	0.09	0.08
tblLandUse	LotAcreage	0.86	0.50
tblLandUse	LotAcreage	1.61	1.00
tblLandUse	LotAcreage	4.21	4.00
tblVehicleTrips	ST_TR	6.39	7.31
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	5.86	7.31
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	7.31
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	33.82	0.00

2.0 Emissions Summary

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	4.1541	42.4585	23.8997	0.0516	18.2032	2.1984	20.4016	9.9670	2.0225	11.9895	0.0000	5,072.8689	5,072.8689	1.1959	0.0000	5,091.0207
2021	103.8340	22.0158	22.9773	0.0510	1.6068	0.9793	2.5861	0.4319	0.9208	1.3527	0.0000	5,015.9038	5,015.9038	0.7169	0.0000	5,033.7123
Maximum	**103.8340**	**42.4585**	**23.8997**	**0.0516**	**18.2032**	**2.1984**	**20.4016**	**9.9670**	**2.0225**	**11.9895**	**0.0000**	**5,072.8689**	**5,072.8689**	**1.1959**	**0.0000**	**5,091.0207**

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	4.1541	42.4585	23.8997	0.0516	8.2560	2.1984	10.4544	4.5025	2.0225	6.5250	0.0000	5,072.8689	5,072.8689	1.1959	0.0000	5,091.0207
2021	103.8340	22.0158	22.9773	0.0510	1.4846	0.9793	2.4640	0.4019	0.9208	1.3227	0.0000	5,015.9038	5,015.9038	0.7169	0.0000	5,033.7123
Maximum	**103.8340**	**42.4585**	**23.8997**	**0.0516**	**8.2560**	**2.1984**	**10.4544**	**4.5025**	**2.0225**	**6.5250**	**0.0000**	**5,072.8689**	**5,072.8689**	**1.1959**	**0.0000**	**5,091.0207**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.83**	**0.00**	**43.80**	**52.84**	**0.00**	**41.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095
Energy	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874
Mobile	2.5506	8.3715	26.9976	0.0789	6.3677	0.0652	6.4329	1.7026	0.0611	1.7636		7,985.6771	7,985.6771	0.3731		7,995.0042
Total	**7.1179**	**8.9322**	**40.4344**	**0.0822**	**6.3677**	**0.1711**	**6.5389**	**1.7026**	**0.1670**	**1.8696**	**0.0000**	**8,528.9075**	**8,528.9075**	**0.4063**	**9.5200e-003**	**8,541.9011**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095
Energy	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874
Mobile	2.4613	7.8163	24.3832	0.0701	5.6163	0.0585	5.6748	1.5017	0.0548	1.5564		7,096.4526	7,096.4526	0.3371		7,104.8811
Total	**7.0286**	**8.3770**	**37.8200**	**0.0734**	**5.6163**	**0.1644**	**5.7807**	**1.5017**	**0.1607**	**1.6623**	**0.0000**	**7,639.6831**	**7,639.6831**	**0.3703**	**9.5200e-003**	**7,651.7780**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.25**	**6.22**	**6.47**	**10.69**	**11.80**	**3.94**	**11.59**	**11.80**	**3.78**	**11.08**	**0.00**	**10.43**	**10.43**	**8.85**	**0.00**	**10.42**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/6/2020	2/21/2020	5	35	
2	Site Preparation	Site Preparation	2/22/2020	4/10/2020	5	35	
3	Grading	Grading	4/11/2020	5/29/2020	5	35	
4	Building Construction	Building Construction	5/30/2020	4/2/2021	5	220	
5	Paving	Paving	4/3/2021	4/30/2021	5	20	
6	Architectural Coating	Architectural Coating	5/1/2021	5/28/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.5

Residential Indoor: 324,000; Residential Outdoor: 108,000; Non-Residential Indoor: 5,925; Non-Residential Outdoor: 1,975; Striped Parking Area: 6,576 (Architectural Coating – sqft)

OffRoad Equipment

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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
Demolition	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	57.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	178.00	42.00	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	36.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.0647	0.0343	0.4898	1.2000e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0647**	**0.0343**	**0.4898**	**1.2000e-003**	**0.1141**	**7.9000e-004**	**0.1149**	**0.0303**	**7.3000e-004**	**0.0310**		**119.0269**	**119.0269**	**3.4100e-003**		**119.1122**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.0647	0.0343	0.4898	1.2000e-003	0.1052	7.9000e-004	0.1060	0.0281	7.3000e-004	0.0288		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0647**	**0.0343**	**0.4898**	**1.2000e-003**	**0.1052**	**7.9000e-004**	**0.1060**	**0.0281**	**7.3000e-004**	**0.0288**		**119.0269**	**119.0269**	**3.4100e-003**		**119.1122**

3.3 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
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 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	0.0776	0.0412	0.5877	1.4400e-003	0.1369	9.5000e-004	0.1379	0.0363	8.8000e-004	0.0372		142.8323	142.8323	4.0900e-003		142.9346
Total	**0.0776**	**0.0412**	**0.5877**	**1.4400e-003**	**0.1369**	**9.5000e-004**	**0.1379**	**0.0363**	**8.8000e-004**	**0.0372**		**142.8323**	**142.8323**	**4.0900e-003**		**142.9346**

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	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 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	0.0776	0.0412	0.5877	1.4400e-003	0.1262	9.5000e-004	0.1272	0.0337	8.8000e-004	0.0346		142.8323	142.8323	4.0900e-003		142.9346
Total	**0.0776**	**0.0412**	**0.5877**	**1.4400e-003**	**0.1262**	**9.5000e-004**	**0.1272**	**0.0337**	**8.8000e-004**	**0.0346**		**142.8323**	**142.8323**	**4.0900e-003**		**142.9346**

3.4 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					6.3251	0.0000	6.3251	3.3429	0.0000	3.3429			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.3251**	**1.2734**	**7.5985**	**3.3429**	**1.1716**	**4.5145**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 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	0.0124	0.4519	0.1032	1.2900e-003	0.0283	1.6500e-003	0.0300	7.7500e-003	1.5800e-003	9.3300e-003		138.2465	138.2465	7.8400e-003		138.4424
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	0.0647	0.0343	0.4898	1.2000e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0771**	**0.4862**	**0.5929**	**2.4900e-003**	**0.1424**	**2.4400e-003**	**0.1449**	**0.0380**	**2.3100e-003**	**0.0403**		**257.2734**	**257.2734**	**0.0113**		**257.5546**

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					2.8463	0.0000	2.8463	1.5043	0.0000	1.5043			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.8463**	**1.2734**	**4.1197**	**1.5043**	**1.1716**	**2.6759**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 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	0.0124	0.4519	0.1032	1.2900e-003	0.0264	1.6500e-003	0.0281	7.2800e-003	1.5800e-003	8.8600e-003		138.2465	138.2465	7.8400e-003		138.4424
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	0.0647	0.0343	0.4898	1.2000e-003	0.1052	7.9000e-004	0.1060	0.0281	7.3000e-004	0.0288		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0771**	**0.4862**	**0.5929**	**2.4900e-003**	**0.1316**	**2.4400e-003**	**0.1340**	**0.0354**	**2.3100e-003**	**0.0377**		**257.2734**	**257.2734**	**0.0113**		**257.5546**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 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	0.1584	4.6118	1.2395	0.0105	0.2528	0.0240	0.2768	0.0727	0.0230	0.0957		1,107.3528	1,107.3528	0.0628		1,108.9215
Worker	0.7676	0.4073	5.8117	0.0142	1.3540	9.4100e-003	1.3635	0.3592	8.6800e-003	0.3679		1,412.4531	1,412.4531	0.0405		1,413.4647
Total	**0.9259**	**5.0191**	**7.0512**	**0.0247**	**1.6068**	**0.0335**	**1.6403**	**0.4319**	**0.0317**	**0.4636**		**2,519.8059**	**2,519.8059**	**0.1032**		**2,522.3862**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 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	0.1584	4.6118	1.2395	0.0105	0.2365	0.0240	0.2606	0.0688	0.0230	0.0918		1,107.3528	1,107.3528	0.0628		1,108.9215
Worker	0.7676	0.4073	5.8117	0.0142	1.2481	9.4100e-003	1.2576	0.3332	8.6800e-003	0.3419		1,412.4531	1,412.4531	0.0405		1,413.4647
Total	**0.9259**	**5.0191**	**7.0512**	**0.0247**	**1.4847**	**0.0335**	**1.5181**	**0.4019**	**0.0317**	**0.4336**		**2,519.8059**	**2,519.8059**	**0.1032**		**2,522.3862**

3.5 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
Total	**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**

3.5 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	0.1298	4.2185	1.0772	0.0104	0.2527	0.0116	0.2643	0.0727	0.0111	0.0838		1,098.2072	1,098.2072	0.0600		1,099.7077
Worker	0.7134	0.3652	5.3249	0.0137	1.3540	9.1400e-003	1.3632	0.3592	8.4200e-003	0.3676		1,364.3327	1,364.3327	0.0363		1,365.2403
Total	**0.8432**	**4.5837**	**6.4021**	**0.0241**	**1.6068**	**0.0207**	**1.6275**	**0.4319**	**0.0195**	**0.4514**		**2,462.5399**	**2,462.5399**	**0.0963**		**2,464.9480**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 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	0.1298	4.2185	1.0772	0.0104	0.2365	0.0116	0.2481	0.0687	0.0111	0.0798		1,098.2072	1,098.2072	0.0600		1,099.7077
Worker	0.7134	0.3652	5.3249	0.0137	1.2481	9.1400e-003	1.2573	0.3332	8.4200e-003	0.3416		1,364.3327	1,364.3327	0.0363		1,365.2403
Total	**0.8432**	**4.5837**	**6.4021**	**0.0241**	**1.4846**	**0.0207**	**1.5053**	**0.4019**	**0.0195**	**0.4214**		**2,462.5399**	**2,462.5399**	**0.0963**		**2,464.9480**

3.6 Paving - 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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3866**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 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	0.0000	0.0000	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	0.0601	0.0308	0.4487	1.1500e-003	0.1141	7.7000e-004	0.1149	0.0303	7.1000e-004	0.0310		114.9719	114.9719	3.0600e-003		115.0483
Total	**0.0601**	**0.0308**	**0.4487**	**1.1500e-003**	**0.1141**	**7.7000e-004**	**0.1149**	**0.0303**	**7.1000e-004**	**0.0310**		**114.9719**	**114.9719**	**3.0600e-003**		**115.0483**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3866**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 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	0.0000	0.0000	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	0.0601	0.0308	0.4487	1.1500e-003	0.1052	7.7000e-004	0.1060	0.0281	7.1000e-004	0.0288		114.9719	114.9719	3.0600e-003		115.0483
Total	**0.0601**	**0.0308**	**0.4487**	**1.1500e-003**	**0.1052**	**7.7000e-004**	**0.1060**	**0.0281**	**7.1000e-004**	**0.0288**		**114.9719**	**114.9719**	**3.0600e-003**		**115.0483**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	103.4708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**103.6897**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 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	0.0000	0.0000	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	0.1443	0.0739	1.0770	2.7700e-003	0.2739	1.8500e-003	0.2757	0.0726	1.7000e-003	0.0744		275.9325	275.9325	7.3400e-003		276.1160
Total	**0.1443**	**0.0739**	**1.0770**	**2.7700e-003**	**0.2739**	**1.8500e-003**	**0.2757**	**0.0726**	**1.7000e-003**	**0.0744**		**275.9325**	**275.9325**	**7.3400e-003**		**276.1160**

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	103.4708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**103.6897**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 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	0.0000	0.0000	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	0.1443	0.0739	1.0770	2.7700e-003	0.2524	1.8500e-003	0.2543	0.0674	1.7000e-003	0.0691		275.9325	275.9325	7.3400e-003		276.1160
Total	**0.1443**	**0.0739**	**1.0770**	**2.7700e-003**	**0.2524**	**1.8500e-003**	**0.2543**	**0.0674**	**1.7000e-003**	**0.0691**		**275.9325**	**275.9325**	**7.3400e-003**		**276.1160**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4613	7.8163	24.3832	0.0701	5.6163	0.0585	5.6748	1.5017	0.0548	1.5564		7,096.4526	7,096.4526	0.3371		7,104.8811
Unmitigated	2.5506	8.3715	26.9976	0.0789	6.3677	0.0652	6.4329	1.7026	0.0611	1.7636		7,985.6771	7,985.6771	0.3731		7,995.0042

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,169.60	1,169.60	1169.60	3,001,321	2,647,165
City Park	0.00	0.00	0.00		
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,169.60	1,169.60	1,169.60	3,001,321	2,647,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
General Office Building	10.00	5.00	6.50	33.00	48.00	19.00	77	19	4
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	10.00	5.00	6.50	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
City Park	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Enclosed Parking Structure	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
General Office Building	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Parking Lot	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Recreational Swimming Pool	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive 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	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874
NaturalGas Unmitigated	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874

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	4273.14	0.0461	0.3938	0.1676	2.5100e-003		0.0318	0.0318		0.0318	0.0318		502.7223	502.7223	9.6400e-003	9.2200e-003	505.7098
City Park	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
Enclosed Parking Structure	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
General Office Building	141.767	1.5300e-003	0.0139	0.0117	8.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003		16.6785	16.6785	3.2000e-004	3.1000e-004	16.7776
Parking Lot	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
Recreational Swimming Pool	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
Total		**0.0476**	**0.4077**	**0.1792**	**2.5900e-003**		**0.0329**	**0.0329**		**0.0329**	**0.0329**		**519.4008**	**519.4008**	**9.9600e-003**	**9.5300e-003**	**522.4874**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4.27314	0.0461	0.3938	0.1676	2.5100e-003		0.0318	0.0318		0.0318	0.0318		502.7223	502.7223	9.6400e-003	9.2200e-003	505.7098
City Park	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
Enclosed Parking Structure	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
General Office Building	0.141767	1.5300e-003	0.0139	0.0117	8.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003		16.6785	16.6785	3.2000e-004	3.1000e-004	16.7776
Parking Lot	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
Recreational Swimming Pool	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
Total		**0.0476**	**0.4077**	**0.1792**	**2.5900e-003**		**0.0329**	**0.0329**		**0.0329**	**0.0329**		**519.4008**	**519.4008**	**9.9600e-003**	**9.5300e-003**	**522.4874**

6.0 Area Detail

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	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095
Unmitigated	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095

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	0.5670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5492					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	0.4035	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.8296	23.8296	0.0232		24.4095
Total	**4.5196**	**0.1530**	**13.2576**	**7.0000e-004**		**0.0730**	**0.0730**		**0.0730**	**0.0730**	**0.0000**	**23.8296**	**23.8296**	**0.0232**	**0.0000**	**24.4095**

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	0.5670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5492					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	0.4035	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.8296	23.8296	0.0232		24.4095
Total	**4.5196**	**0.1530**	**13.2576**	**7.0000e-004**		**0.0730**	**0.0730**		**0.0730**	**0.0730**	**0.0000**	**23.8296**	**23.8296**	**0.0232**	**0.0000**	**24.4095**

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

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

Sleep Train Apartments Project

Sacramento Metropolitan AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	3.95	1000sqft	0.08	3,950.00	0
Enclosed Parking Structure	95.00	Space	0.50	38,000.00	0
Parking Lot	179.00	Space	1.00	71,600.00	0
City Park	0.81	Acre	0.81	35,283.60	0
Recreational Swimming Pool	1.20	1000sqft	0.03	1,200.00	0
Apartments Mid Rise	160.00	Dwelling Unit	4.00	160,000.00	427

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Vehicle Trips - Based on trip generation rates for the proposed project.

Land Use - The proposed project includes a 160-unit apartment complex, a 3,950 square foot office/clubhouse building, 35,250 square feet of open space, excluding balcony, and a pool. The project would also include 95 garage parking spaces, 66 carport parking spaces, and 113 uncovered parking lot spaces. Total lot size is 6.42 acres.

Construction Phase - Construction could begin as early as 2020 and would require approximately 6 months of site development and one year of vertical construction.

Grading - Approximately 578.63 cubic yards of soil export

Construction Off-road Equipment Mitigation - Basic Construction Emission Control Practices

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	220.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	10.00	35.00
tblGrading	AcresOfGrading	17.50	10.00
tblGrading	MaterialExported	0.00	578.63
tblLandUse	LotAcreage	0.09	0.08
tblLandUse	LotAcreage	0.86	0.50
tblLandUse	LotAcreage	1.61	1.00
tblLandUse	LotAcreage	4.21	4.00
tblVehicleTrips	ST_TR	6.39	7.31
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	5.86	7.31
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	7.31
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	33.82	0.00

2.0 Emissions Summary

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	4.1479	42.4682	23.2506	0.0496	18.2032	2.1984	20.4016	9.9670	2.0225	11.9895	0.0000	4,872.5563	4,872.5563	1.1955	0.0000	4,890.7170
2021	103.8226	22.1710	22.3664	0.0491	1.6068	0.9801	2.5868	0.4319	0.9215	1.3534	0.0000	4,821.5549	4,821.5549	0.7166	0.0000	4,839.3786
Maximum	**103.8226**	**42.4682**	**23.2506**	**0.0496**	**18.2032**	**2.1984**	**20.4016**	**9.9670**	**2.0225**	**11.9895**	**0.0000**	**4,872.5563**	**4,872.5563**	**1.1955**	**0.0000**	**4,890.7170**

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	4.1479	42.4682	23.2506	0.0496	8.2560	2.1984	10.4544	4.5025	2.0225	6.5250	0.0000	4,872.5563	4,872.5563	1.1955	0.0000	4,890.7170
2021	103.8226	22.1710	22.3664	0.0491	1.4846	0.9801	2.4647	0.4019	0.9215	1.3234	0.0000	4,821.5549	4,821.5549	0.7166	0.0000	4,839.3786
Maximum	**103.8226**	**42.4682**	**23.2506**	**0.0496**	**8.2560**	**2.1984**	**10.4544**	**4.5025**	**2.0225**	**6.5250**	**0.0000**	**4,872.5563**	**4,872.5563**	**1.1955**	**0.0000**	**4,890.7170**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.83**	**0.00**	**43.80**	**52.84**	**0.00**	**41.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095
Energy	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874
Mobile	1.9233	8.9977	24.9110	0.0712	6.3677	0.0661	6.4338	1.7026	0.0619	1.7645		7,212.3701	7,212.3701	0.3687		7,221.5879
Total	**6.4905**	**9.5584**	**38.3478**	**0.0745**	**6.3677**	**0.1720**	**6.5398**	**1.7026**	**0.1679**	**1.8704**	**0.0000**	**7,755.6005**	**7,755.6005**	**0.4019**	**9.5200e-003**	**7,768.4848**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095
Energy	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874
Mobile	1.8381	8.3662	22.8160	0.0633	5.6163	0.0594	5.6757	1.5017	0.0556	1.5573		6,410.1771	6,410.1771	0.3353		6,418.5592
Total	**6.4054**	**8.9269**	**36.2529**	**0.0666**	**5.6163**	**0.1653**	**5.7816**	**1.5017**	**0.1615**	**1.6632**	**0.0000**	**6,953.4075**	**6,953.4075**	**0.3684**	**9.5200e-003**	**6,965.4561**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.31**	**6.61**	**5.46**	**10.63**	**11.80**	**3.92**	**11.59**	**11.80**	**3.77**	**11.08**	**0.00**	**10.34**	**10.34**	**8.32**	**0.00**	**10.34**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/6/2020	2/21/2020	5	35	
2	Site Preparation	Site Preparation	2/22/2020	4/10/2020	5	35	
3	Grading	Grading	4/11/2020	5/29/2020	5	35	
4	Building Construction	Building Construction	5/30/2020	4/2/2021	5	220	
5	Paving	Paving	4/3/2021	4/30/2021	5	20	
6	Architectural Coating	Architectural Coating	5/1/2021	5/28/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.5

Residential Indoor: 324,000; Residential Outdoor: 108,000; Non-Residential Indoor: 5,925; Non-Residential Outdoor: 1,975; Striped Parking Area: 6,576 (Architectural Coating – sqft)

OffRoad Equipment

Sleep Train Apartments Project - Sacramento Metropolitan AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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
Demolition	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	57.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	178.00	42.00	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	36.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.0595	0.0424	0.4194	1.0500e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		104.5333	104.5333	3.0100e-003		104.6084
Total	**0.0595**	**0.0424**	**0.4194**	**1.0500e-003**	**0.1141**	**7.9000e-004**	**0.1149**	**0.0303**	**7.3000e-004**	**0.0310**		**104.5333**	**104.5333**	**3.0100e-003**		**104.6084**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.0595	0.0424	0.4194	1.0500e-003	0.1052	7.9000e-004	0.1060	0.0281	7.3000e-004	0.0288		104.5333	104.5333	3.0100e-003		104.6084
Total	**0.0595**	**0.0424**	**0.4194**	**1.0500e-003**	**0.1052**	**7.9000e-004**	**0.1060**	**0.0281**	**7.3000e-004**	**0.0288**		**104.5333**	**104.5333**	**3.0100e-003**		**104.6084**

3.3 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
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 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
Total	**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**

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	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 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	0.1262	9.5000e-004	0.1272	0.0337	8.8000e-004	0.0346		125.4399	125.4399	3.6100e-003		125.5301
Total	**0.0714**	**0.0509**	**0.5032**	**1.2600e-003**	**0.1262**	**9.5000e-004**	**0.1272**	**0.0337**	**8.8000e-004**	**0.0346**		**125.4399**	**125.4399**	**3.6100e-003**		**125.5301**

3.4 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					6.3251	0.0000	6.3251	3.3429	0.0000	3.3429			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.3251**	**1.2734**	**7.5985**	**3.3429**	**1.1716**	**4.5145**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 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	0.0128	0.4703	0.1104	1.2700e-003	0.0283	1.7100e-003	0.0300	7.7500e-003	1.6300e-003	9.3900e-003		136.1231	136.1231	8.2000e-003		136.3281
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	0.0595	0.0424	0.4194	1.0500e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		104.5333	104.5333	3.0100e-003		104.6084
Total	**0.0723**	**0.5127**	**0.5297**	**2.3200e-003**	**0.1424**	**2.5000e-003**	**0.1449**	**0.0380**	**2.3600e-003**	**0.0404**		**240.6564**	**240.6564**	**0.0112**		**240.9365**

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					2.8463	0.0000	2.8463	1.5043	0.0000	1.5043			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.8463**	**1.2734**	**4.1197**	**1.5043**	**1.1716**	**2.6759**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 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	0.0128	0.4703	0.1104	1.2700e-003	0.0264	1.7100e-003	0.0281	7.2800e-003	1.6300e-003	8.9100e-003		136.1231	136.1231	8.2000e-003		136.3281
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	0.0595	0.0424	0.4194	1.0500e-003	0.1052	7.9000e-004	0.1060	0.0281	7.3000e-004	0.0288		104.5333	104.5333	3.0100e-003		104.6084
Total	**0.0723**	**0.5127**	**0.5297**	**2.3200e-003**	**0.1316**	**2.5000e-003**	**0.1341**	**0.0354**	**2.3600e-003**	**0.0377**		**240.6564**	**240.6564**	**0.0112**		**240.9365**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 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	0.1668	4.7060	1.4258	0.0102	0.2528	0.0249	0.2776	0.0727	0.0238	0.0965		1,079.0317	1,079.0317	0.0679		1,080.7293
Worker	0.7063	0.5033	4.9763	0.0125	1.3540	9.4100e-003	1.3635	0.3592	8.6800e-003	0.3679		1,240.4616	1,240.4616	0.0357		1,241.3532
Total	**0.8731**	**5.2092**	**6.4021**	**0.0227**	**1.6068**	**0.0343**	**1.6411**	**0.4319**	**0.0325**	**0.4644**		**2,319.4932**	**2,319.4932**	**0.1036**		**2,322.0825**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 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	0.1668	4.7060	1.4258	0.0102	0.2365	0.0249	0.2614	0.0688	0.0238	0.0925		1,079.0317	1,079.0317	0.0679		1,080.7293
Worker	0.7063	0.5033	4.9763	0.0125	1.2481	9.4100e-003	1.2576	0.3332	8.6800e-003	0.3419		1,240.4616	1,240.4616	0.0357		1,241.3532
Total	**0.8731**	**5.2092**	**6.4021**	**0.0227**	**1.4847**	**0.0343**	**1.5189**	**0.4019**	**0.0325**	**0.4344**		**2,319.4932**	**2,319.4932**	**0.1036**		**2,322.0825**

3.5 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
Total	**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**

3.5 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	0.1375	4.2879	1.2493	0.0101	0.2527	0.0123	0.2650	0.0727	0.0118	0.0845		1,069.9587	1,069.9587	0.0650		1,071.5837
Worker	0.6570	0.4510	4.5419	0.0120	1.3540	9.1400e-003	1.3632	0.3592	8.4200e-003	0.3676		1,198.2324	1,198.2324	0.0319		1,199.0307
Total	**0.7945**	**4.7389**	**5.7912**	**0.0221**	**1.6068**	**0.0214**	**1.6282**	**0.4319**	**0.0202**	**0.4521**		**2,268.1910**	**2,268.1910**	**0.0969**		**2,270.6143**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 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	0.1375	4.2879	1.2493	0.0101	0.2365	0.0123	0.2488	0.0687	0.0118	0.0805		1,069.9587	1,069.9587	0.0650		1,071.5837
Worker	0.6570	0.4510	4.5419	0.0120	1.2481	9.1400e-003	1.2573	0.3332	8.4200e-003	0.3416		1,198.2324	1,198.2324	0.0319		1,199.0307
Total	**0.7945**	**4.7389**	**5.7912**	**0.0221**	**1.4846**	**0.0214**	**1.5061**	**0.4019**	**0.0202**	**0.4221**		**2,268.1910**	**2,268.1910**	**0.0969**		**2,270.6143**

3.6 Paving - 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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3866**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 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	0.0000	0.0000	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	0.0554	0.0380	0.3827	1.0100e-003	0.1141	7.7000e-004	0.1149	0.0303	7.1000e-004	0.0310		100.9746	100.9746	2.6900e-003		101.0419
Total	**0.0554**	**0.0380**	**0.3827**	**1.0100e-003**	**0.1141**	**7.7000e-004**	**0.1149**	**0.0303**	**7.1000e-004**	**0.0310**		**100.9746**	**100.9746**	**2.6900e-003**		**101.0419**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3866**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 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	0.0000	0.0000	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	0.0554	0.0380	0.3827	1.0100e-003	0.1052	7.7000e-004	0.1060	0.0281	7.1000e-004	0.0288		100.9746	100.9746	2.6900e-003		101.0419
Total	**0.0554**	**0.0380**	**0.3827**	**1.0100e-003**	**0.1052**	**7.7000e-004**	**0.1060**	**0.0281**	**7.1000e-004**	**0.0288**		**100.9746**	**100.9746**	**2.6900e-003**		**101.0419**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	103.4708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**103.6897**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 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	0.0000	0.0000	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	0.1329	0.0912	0.9186	2.4300e-003	0.2739	1.8500e-003	0.2757	0.0726	1.7000e-003	0.0744		242.3391	242.3391	6.4600e-003		242.5006
Total	**0.1329**	**0.0912**	**0.9186**	**2.4300e-003**	**0.2739**	**1.8500e-003**	**0.2757**	**0.0726**	**1.7000e-003**	**0.0744**		**242.3391**	**242.3391**	**6.4600e-003**		**242.5006**

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	103.4708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**103.6897**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 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	0.0000	0.0000	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	0.1329	0.0912	0.9186	2.4300e-003	0.2524	1.8500e-003	0.2543	0.0674	1.7000e-003	0.0691		242.3391	242.3391	6.4600e-003		242.5006
Total	**0.1329**	**0.0912**	**0.9186**	**2.4300e-003**	**0.2524**	**1.8500e-003**	**0.2543**	**0.0674**	**1.7000e-003**	**0.0691**		**242.3391**	**242.3391**	**6.4600e-003**		**242.5006**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	1.8381	8.3662	22.8160	0.0633	5.6163	0.0594	5.6757	1.5017	0.0556	1.5573		6,410.1771	6,410.1771	0.3353		6,418.5592
Unmitigated	1.9233	8.9977	24.9110	0.0712	6.3677	0.0661	6.4338	1.7026	0.0619	1.7645		7,212.3701	7,212.3701	0.3687		7,221.5879

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,169.60	1,169.60	1169.60	3,001,321	2,647,165
City Park	0.00	0.00	0.00		
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,169.60	1,169.60	1,169.60	3,001,321	2,647,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
General Office Building	10.00	5.00	6.50	33.00	48.00	19.00	77	19	4
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	10.00	5.00	6.50	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
City Park	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Enclosed Parking Structure	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
General Office Building	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Parking Lot	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915
Recreational Swimming Pool	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sleep Train Apartments Project - 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					
NaturalGas Mitigated	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874
NaturalGas Unmitigated	0.0476	0.4077	0.1793	2.6000e-003		0.0329	0.0329		0.0329	0.0329		519.4008	519.4008	9.9600e-003	9.5200e-003	522.4874

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	4273.14	0.0461	0.3938	0.1676	2.5100e-003		0.0318	0.0318		0.0318	0.0318		502.7223	502.7223	9.6400e-003	9.2200e-003	505.7098
City Park	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
Enclosed Parking Structure	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
General Office Building	141.767	1.5300e-003	0.0139	0.0117	8.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003		16.6785	16.6785	3.2000e-004	3.1000e-004	16.7776
Parking Lot	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
Recreational Swimming Pool	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
Total		**0.0476**	**0.4077**	**0.1792**	**2.5900e-003**		**0.0329**	**0.0329**		**0.0329**	**0.0329**		**519.4008**	**519.4008**	**9.9600e-003**	**9.5300e-003**	**522.4874**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4.27314	0.0461	0.3938	0.1676	2.5100e-003		0.0318	0.0318		0.0318	0.0318		502.7223	502.7223	9.6400e-003	9.2200e-003	505.7098
City Park	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
Enclosed Parking Structure	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
General Office Building	0.141767	1.5300e-003	0.0139	0.0117	8.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003		16.6785	16.6785	3.2000e-004	3.1000e-004	16.7776
Parking Lot	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
Recreational Swimming Pool	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
Total		**0.0476**	**0.4077**	**0.1792**	**2.5900e-003**		**0.0329**	**0.0329**		**0.0329**	**0.0329**		**519.4008**	**519.4008**	**9.9600e-003**	**9.5300e-003**	**522.4874**

6.0 Area Detail

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	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095
Unmitigated	4.5196	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730	0.0000	23.8296	23.8296	0.0232	0.0000	24.4095

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	0.5670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5492					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	0.4035	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.8296	23.8296	0.0232		24.4095
Total	**4.5196**	**0.1530**	**13.2576**	**7.0000e-004**		**0.0730**	**0.0730**		**0.0730**	**0.0730**	**0.0000**	**23.8296**	**23.8296**	**0.0232**	**0.0000**	**24.4095**

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	0.5670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5492					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	0.4035	0.1530	13.2576	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.8296	23.8296	0.0232		24.4095
Total	**4.5196**	**0.1530**	**13.2576**	**7.0000e-004**		**0.0730**	**0.0730**		**0.0730**	**0.0730**	**0.0000**	**23.8296**	**23.8296**	**0.0232**	**0.0000**	**24.4095**

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

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

APPENDIX B: BIOLOGICAL RESOURCES CONSTRAINTS EVALUATION

LSA

BERKELEY
CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: May 23, 2018

TO: Carlos Yanez
Forward Planning Manager
Blue Mountain Communities

FROM: Anna Van Zuuk
Assistant Biologist/Botanist
LSA

SUBJECT: 4170 and 4190 E. Commerce Development Project, Natomas, Sacramento County, California – Biological Resources Constraints Evaluation

Per your request, LSA has prepared this Biological Resources Constraints Evaluation for the 4170 and 4190 E. Commerce Development Project in Natomas, Sacramento County, California (project site). The project site consists of two parcels, totaling 6.54-acres (ac), situated between E. Commerce Way to the west, Sports Parkway to the east, Sleep Train Arena Main Entry to the north, and the KSP Arena Corporate Center to the south (Figures 1 and 2).

The memorandum includes an explanation of the methods used during the survey, a description of the project site, and a discussion and mapping of vegetation communities and sensitive habitats. This evaluation also discusses the probability of special status plant and wildlife species to occur on the project site and provides recommendations to offset potential project effects to sensitive biological resources.

METHODS

LSA performed a database search of the California Native Plant Society (CNPS 2018) Electronic Inventory, the California Natural Diversity Database (CNDDB 2018), referencing the Knights Landing, Verona, Pleasant Grove, Grays Bend, Taylor Monument, Rio Linda, Davis, Sacramento West, and Sacramento East U.S. Geological Survey 7.5 minute quadrangles, and the United States Fish and Wildlife Service (USFWS) IPaC Resource List (USFWS 2018). These databases contain records of special status species that have been recorded in the general vicinity and provide an indication of what species may occur within the project site.

LSA biologist Anna Van Zuuk conducted a reconnaissance level survey of the project site on May 1, 2018. The survey focused on identifying any potential biological resources constraints including sensitive plant communities, potential habitat for special status wildlife or plant species, and wildlife movement corridors, and potential jurisdictional waters.

201 Creekside Ridge Court, Suite 250, Roseville, California 95678 916.772.7450 www.lsa.net

RESULTS

The project site consists entirely of California annual grassland, totaling 6.54 ac (Figure 3). This community consists primarily of non-native species, of which wild oats (*Avena fatua*) and milk thistle (*Silybum marianum*) dominate. Other common species include ripgut brome (*Bromus diandrus*), hairy vetch (*Vicia villosa*), short podded mustard (*Hirschfeldia incana*), field bindweed (C*onvolvulus arvensis*), annual yellow sweetclover (*Melilotus indicus*), and Italian rye (*Festuca perennis*). No special status plant species were observed on the project site during this survey effort. Due to the disturbed condition of the project site and the dominance of non-native species within the annual grassland habitat, no special status plant species are expected to occur.

Wildlife species observed in the vicinity of the project site include red-tailed hawk (*Buteo jamaicensis*), northern mockingbird (*Mimus polyglottos*), red-winged blackbird (*Agelaius phoeniceus*), rock pigeon (*Columba livia*), black-tailed jackrabbit (*Lepus californicus*), American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius*), and Brewer's blackbird (*Euphagus cyanocephalus*). No bird nests or nesting behaviors were observed during the survey. No special status wildlife species were observed on the project site during this survey effort.

Numerous CNDDB records for burrowing owl (*Athene cunicularia*) occur within 1 mile of the project site and this species has been confirmed present at another development approximately 0.25 mile northwest. However, the likelihood of burrowing owl occurring on the project site is limited, due in part to urban development surrounding the project site on all sides. Furthermore, there are no fossorial burrows on the site. The grassland habitat over much of the project site is not maintained, consisting of dense, thatch-like vegetation which precludes fossorial mammals such as California ground-squirrel (*Ammospermophilus beecheyi*) from utilizing the site. Therefore, the project site does not provide suitable habitat for burrowing owl which is dependent on fossorial mammal burrows for nesting and short vegetation for foraging.

No trees and shrubs suitable for nesting birds occur on the project site. However, the project site does provide marginally suitable foraging (annual grassland) habitat for Swainson's hawk (*Buteo swainsoni*) which is a State Threatened species and white-tailed kite (*Elanus leucurus*) which is a State Fully Protected species. Swainson's hawk is known to occur in the vicinity based on several CNDDB records, the closest record, where suitable nesting habitat still exists, is located approximately 2 miles west of the project site adjacent to Fisherman's Lake. White-tailed kite is known to occur in the vicinity based on numerous CNDDB records, the closest of which is located approximately 2.4 miles northeast of the project site. While foraging habitat is present on the project site, the area is predominantly surrounded by commercial and residential development and, considering the relatively small acreage of the site, dense vegetation and lack of fossorial mammals for a prey base, these species are not expected to occur within the project site.

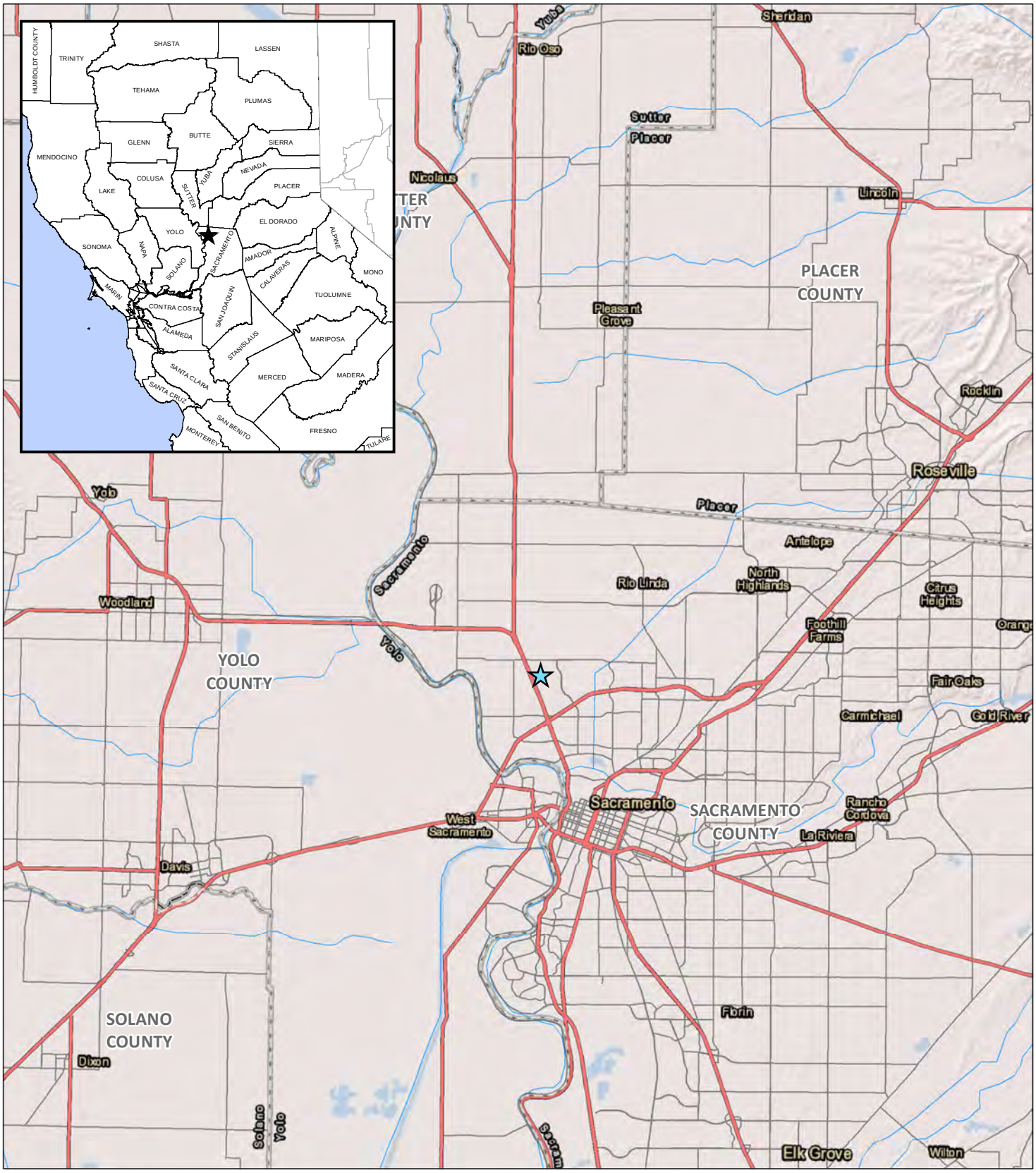
No aquatic features occur on the project site.

RECOMMENDATIONS

No special status species covered under the Natomas Basin HCP (NBHCP) are expected to occur on the project site or in the immediate vicinity. Therefore, no protective buffers for nesting birds or other mitigation measures required for coverage under the NBHCP would be necessary for development of the project site.

ATTACHMENTS

- Figures 1-3



LSA

LEGEND

Project Site

FIGURE 1

N

0 2.5 5

Miles

SOURCE: ESRI Imagery (2018)

I:\BLU1802\GIS\Reports\Stnd_Fig1_Regional_loc.mxd (5/23/2018)

4170 and 4190 E. Commerce Way
Natomas, Sacramento County, California
LSA Project No. BLU1802

Regional Location Map

LSA

LEGEND

Project Site - (6.54 ac)

FIGURE 2

4170 and 4190 E. Commerce Way
Natomas, Sacramento County, California
LSA Project No. BLU1802

Project Vicinity Map

0 500 1000
FEET

SOURCE: ESRI World Imagery (07/2016)

I:\BLU1802\GIS\Reports\Fig2_Prj_vicin_aerial.mxd (5/23/2018)

LSA

LEGEND

Project Site - (6.54 ac)

Plant Communities / Land Uses - (6.54 ac)

California Annual Grassland - (6.54 ac)

N

0 75 150

FEET

SOURCE: Basemap - ESRI World Imagery (07/2016); Mapping - LSA (5/2018)

I:\BLU1802\GIS\Reports\Fig3_Plant_comm.mxd (5/23/2018)

FIGURE 3

4170 and 4190 E. Commerce Way
Natomas, Sacramento County, California
LSA Project No. BLU1802

Plant Communities / Land Uses

APPENDIX C: NOISE MEASUREMENT SHEETS

Noise Measurement Survey

Project Number: BLU1806
Project Name: Sleep Train Apartments

Test Personnel: Chris / Kim
Equipment: LxT LxT_Data.125

Site Number: ST-1 Date: 10/11/2018 Time: From 10:49 am To 11:04 am

Site Location: Located on southern boundary of parcel - near commercial offices

Primary Noise Sources: Construction activity (grading) at parcel directly southwest across E. Commerce Way
Traffic noise from E. Commerce Way (speed limit 50mph)
Parcel lies underneath flight path of Sacramento Airport

Measurement Results

	dBA
L_{eq}	58.8
L_{max}	73.7
L_{min}	47.2
L_{peak}	93.3
L_2	
L_8	
L_{10}	
L_{25}	
L_{50}	
L_{90}	
SEL	

Atmospheric Conditions:

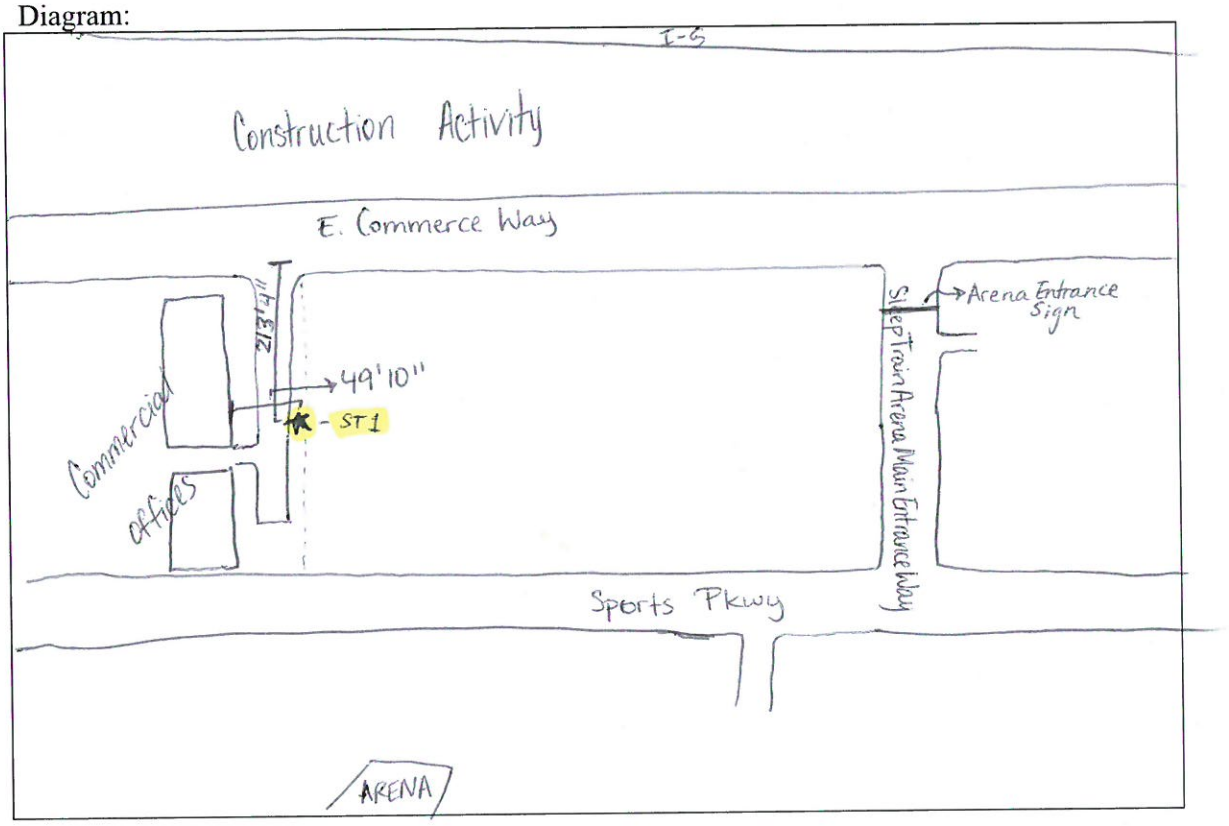
Maximum Wind Velocity (mph)	3.4
Average Wind Velocity (mph)	1.0
Temperature (F)	69.4
Relative Humidity (%)	48
Comments: mostly sunny	

Comments: Airplane passed at 11:02. Airplane passed nearby at 11:04.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Diagram:



Location Photo:

Noise Measurement Survey

Project Number: BLV1806
Project Name: Sleep Train Apartments

Test Personnel: Chris / Kim
Equipment: LxT LXT_Data.122

Site Number: ST-2 Date: 10/9/18

Time: From 9:24 am To 9:39 am

Site Location: Northeast side of parcel along Sports Parkway. Meter was placed approx. at center of northeast parcel boundary

Primary Noise Sources: Construction noise from parcel directly across E. Commerce Way (southwest side)
Traffic noise along E. Commerce Way. Minimal traffic on Sports Pkwy
Parcel lies underneath flight path of Sacramento Airport

Measurement Results

	dBA
L_{eq}	57.2
L_{max}	78.1
L_{min}	45.2
L_{peak}	102.1
L_2	
L_8	
L_{10}	
L_{25}	
L_{50}	
L_{90}	
SEL	

Atmospheric Conditions:

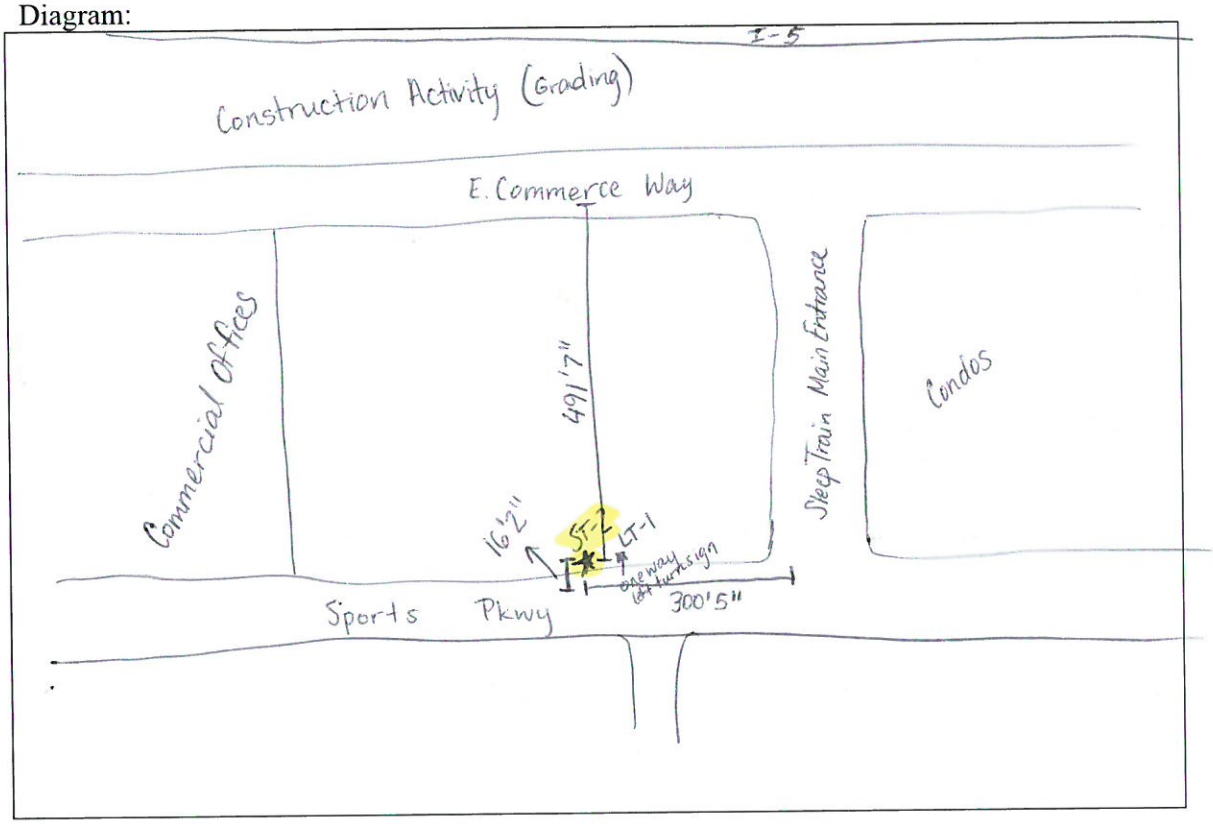
Maximum Wind Velocity (mph)	3.9
Average Wind Velocity (mph)	1.6
Temperature (F)	67
Relative Humidity (%)	73
Comments: partly cloudy -	

Comments: ~~Car passed along Sports Pkwy at 9:27.~~ ~~Dem~~ Small semi truck @ 9:28
Plane passed overhead at 9:32. Plane passed overhead at 9:35
Several cars (approx 6) passed along Sports Pkwy during monitoring

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Diagram:



Location Photo:

Noise Measurement Survey

Project Number: BLU1806
Project Name: ~~[illegible]~~ Sleep Train Apts

Test Personnel: Chris / Kim
Equipment: LxT LxT_Data.124

Site Number: ST-~~[illegible]~~3 Date: 10/11/18

Time: From 10:25 To 10:40

Site Location: Meter is located 100' northeast (inside parcel) from ~~[illegible]~~ center of parcel boundary along E. Commerce Way

Primary Noise Sources: Construction activity (grading) from parcel directly southwest across E. Commerce Way
Traffic noise along E. Commerce Way (speed limit 50 mph)
Parcel lies underneath flight path of Sacramento Airport

Measurement Results

	dBA
L_{eq}	58.1
L_{max}	68.6
L_{min}	49.5
L_{peak}	91.0
L_2	
L_8	
L_{10}	
L_{25}	
L_{50}	
L_{90}	
SEL	

Atmospheric Conditions:

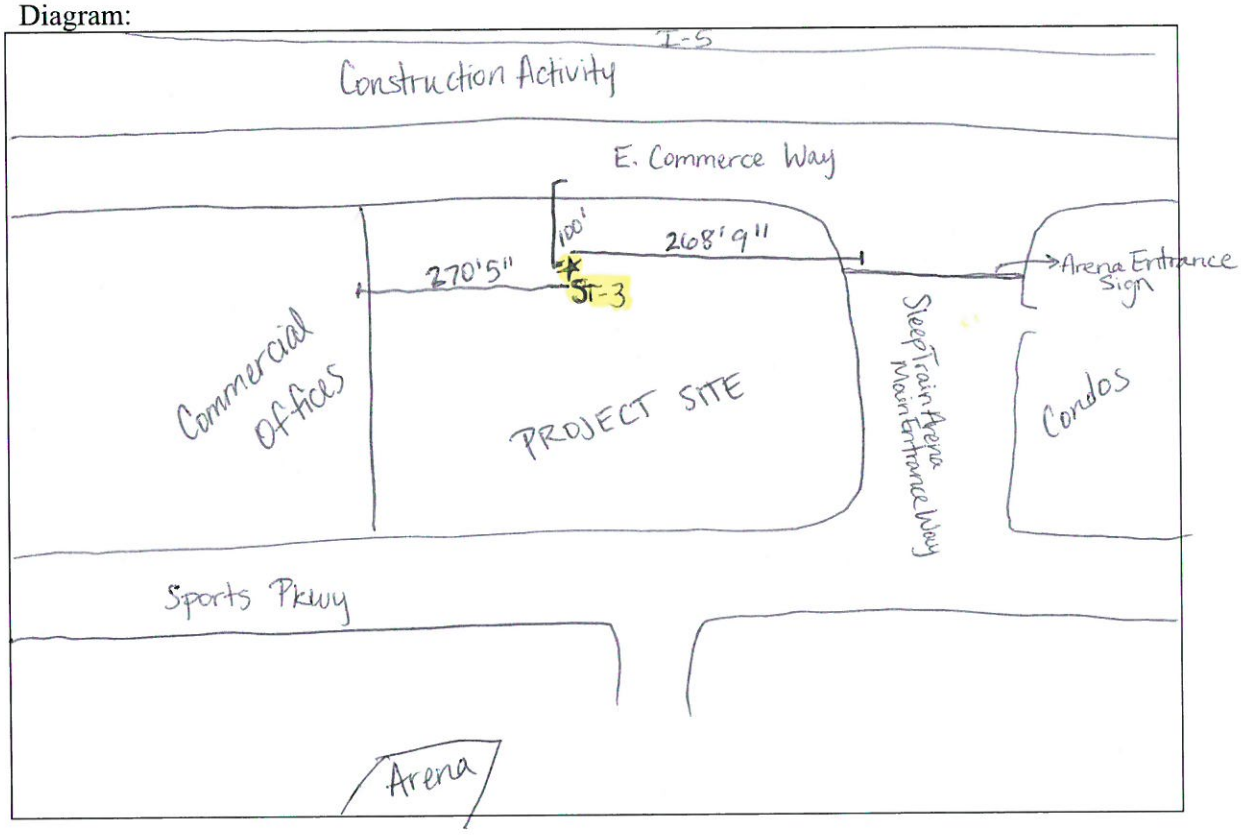
Maximum Wind Velocity (mph)	4.4
Average Wind Velocity (mph)	1.6
Temperature (F)	70.9
Relative Humidity (%)	47
Comments: Mostly sunny	

Comments: Plane passed overhead at 10:39 am

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Diagram:



Location Photo:

Noise Measurement Survey

Project Number: BLU1806
Project Name: Sleep Train Apartments

Test Personnel: Chris / Kim
Equipment: LxT LxT_Data.123

Site Number: ST-4 Date: 10/11/18 Time: From 9:55 To 10:10

Site Location: Meter is located on North side of parcel, north side of Main Entrance Way on West side of condo driveway, close to condo fence line
Traffic noise along E. Commerce Way. Minimal traffic on Main Entrance Way
Parcel lies underneath flight path of Sacramento Airport

Primary Noise Sources: Construction noise from parcel directly across E. Commerce Way

Measurement Results

	dBA
L_{eq}	56.7
L_{max}	71.3
L_{min}	48.8
L_{peak}	92.8
L_2	
L_8	
L_{10}	
L_{25}	
L_{50}	
L_{90}	
SEL	

Atmospheric Conditions:

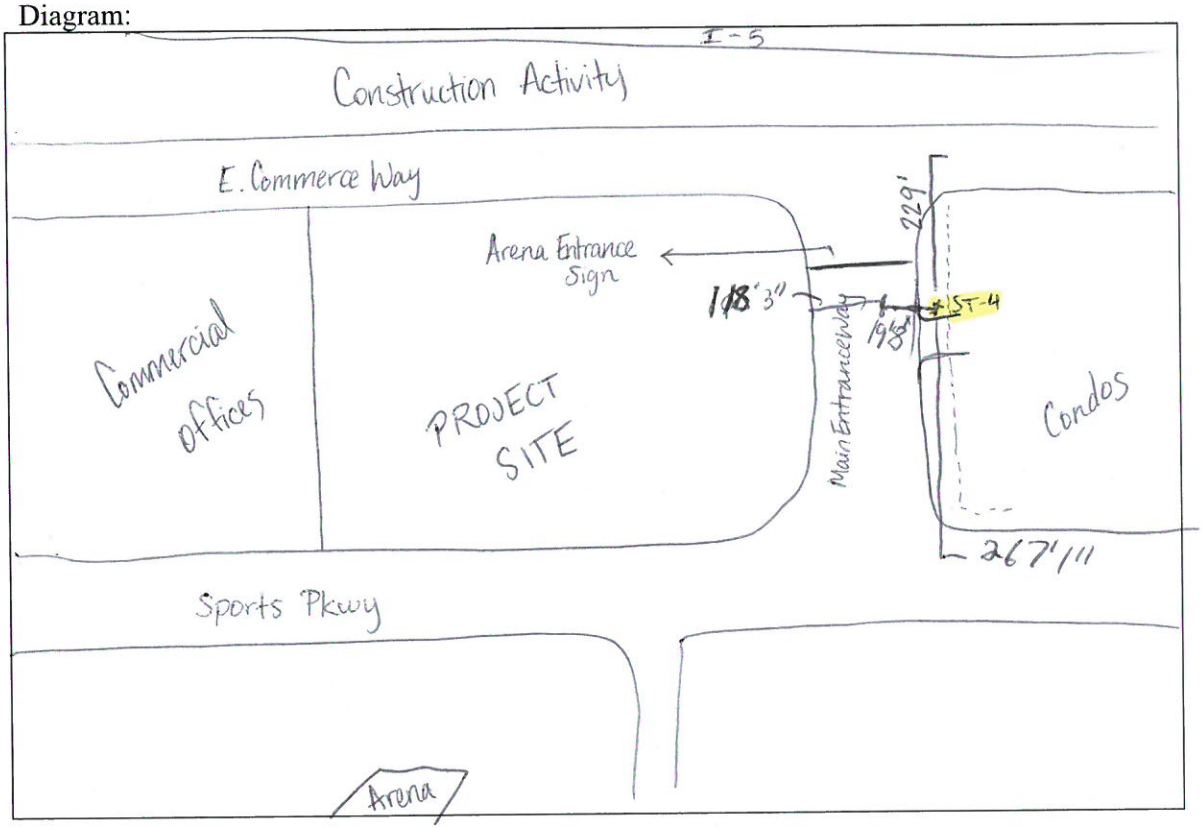
Maximum Wind Velocity (mph)	2.3
Average Wind Velocity (mph)	0.8
Temperature (F)	65.6
Relative Humidity (%)	59
Comments: mostly sunny	

Comments: Plane passed overhead at 10:02
Condo Driveway Gate opened / closed at 10:10

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Diagram:



Location Photo:

Noise Measurement Survey

Project Number: BLU 1806
Project Name: Sleep Train Apartments

Test Personnel: Chris / Kim
Equipment: & Dosimeter

Site Number: LT-1 Date: 10/11/18 Time: From 9:24 am 10/11/18 To 10:51 am 10/12/18

Site Location: Meter located on northeast side of parcel along Sports Parkway Approximately in the center of northeast parcel boundary

Primary Noise Sources: Construction activity (grading) at parcel directly southwest across E. Commerce Way
Traffic noise from E. Commerce Way (speed limit 50mph) Minimal traffic on Sports Pkwy
Parcel lies underneath flightpath of Sacramento Airport

Measurement Results

	dBA
L_{eq}	
L_{max}	
L_{min}	
L_{peak}	
L_2	
L_8	
L_{10}	
L_{25}	
L_{50}	
L_{90}	
SEL	

Atmospheric Conditions:

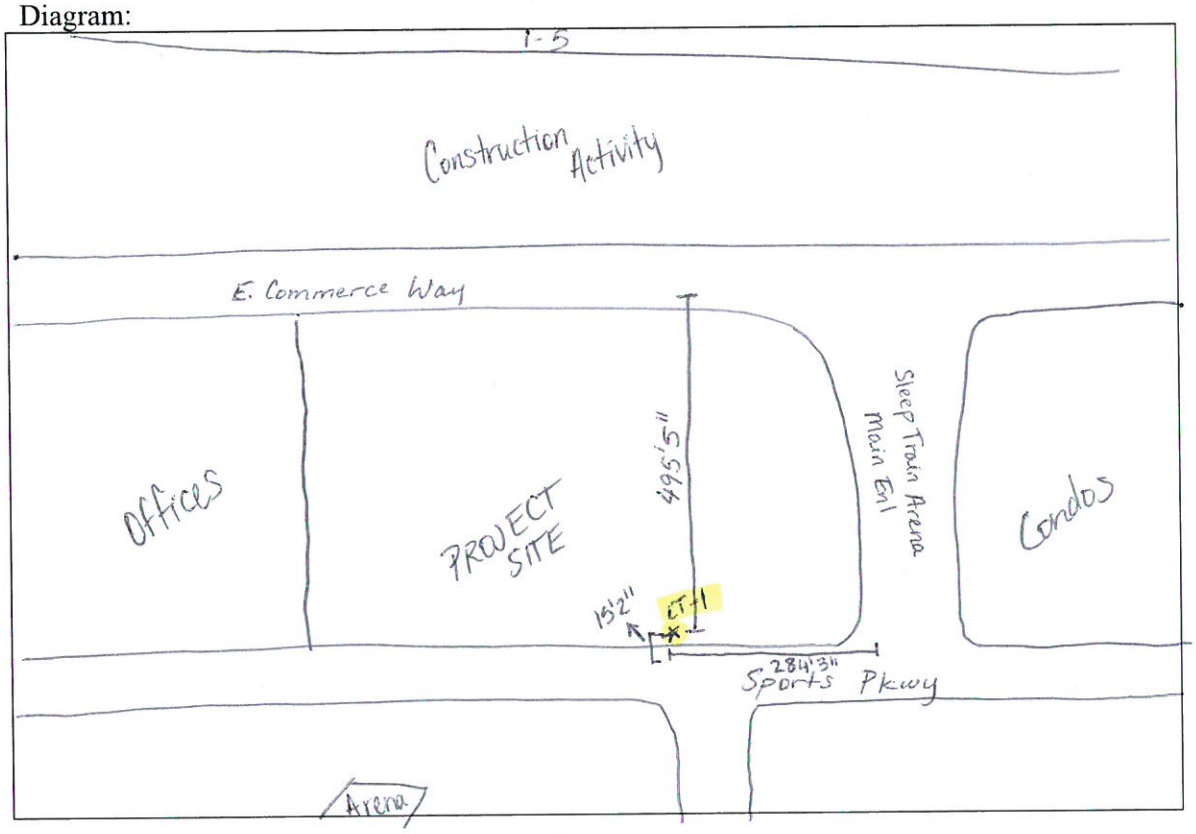
Maximum Wind Velocity (mph)	
Average Wind Velocity (mph)	
Temperature (F)	
Relative Humidity (%)	
Comments:	

Comments: TWA 60.3dB, Dose 1.642%
PTWA 52.0dB, PDOSE
> 115dB - U.L.
LAVG 52.0dBA

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Diagram:



Location Photo:

8-26-18

Hourly Leq	Edit			Hourly Leq	Weighting	
56.6		10	10:00 AM	56.6		453529.3307
		11	11:00 AM	54.7		294201.6721
	1	12	12:00 PM	55.3		342541.1111
		13	1:00 PM	53.9		246724.6206
		14	2:00 PM	49.8		94742.15467
		15	3:00 PM	52.0		159855.4423
		16	4:00 PM	51.6		144654.7551
		17	5:00 PM	51.2		132643.9399
		18	6:00 PM	51.9		156539.3977
		19	7:00 PM	50.6		115222.2551
		20	8:00 PM	56.2		419724.015
		21	9:00 PM	53.3		214812.7285
		22	10:00 PM	50.1	10.0	1022353.732
	1	23	11:00 PM	47.3	10.0	541136.4541
		0	12:00 AM	46.3	10.0	425540.6706
		1	1:00 AM	47.4	10.0	552773.2458
		2	2:00 AM	47.8	10.0	599121.4291
		3	3:00 AM	48.4	10.0	691220.1717
		4	4:00 AM	49.6	10.0	901895.0055
		5	5:00 AM	51.5	10.0	1420325.066
		6	6:00 AM	54.4	10.0	2722754.178
		7	7:00 AM	55.5		351356.5824
		8	8:00 AM	54.4		277481.7659
		9	9:00 AM	54.0		249848.263
				CNEL		57.2
				Peak Leq		56.6

Daytime	
Min	49.8
Max	56.6
Evening	
Min	50.6
Max	56.2
Night	
Min	46.3
Max	54.4
MIN	44.80
MAX	68.7